STOPHER

Rec'd 5/09/11 K Jones

COMMENTS ON THE 2011 SEIR DRAFT AND SUPPORTING DOCUMENTS

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Section 1-Intorduction

This draft is even more flawed than the first insipid attempt to draft a comprehensive EIR. Much more added hyperbole, misdirection and flat out falsifications. Mercury tests, hypothetical, that would make even a 1st year lab student cringe as total lack of scientific process and mandatory procedures in both EPA mandated sampling protocol and analytical lab process. Filled with you could---you might—and you have the capability?? I intend to completely blow this insanity off the map with exacting facts, figures, real studies , and statistics gleaned from state and federal files. There is nothing like beating the enemy in the head with their own documents. And yes after 50+ years of fantastic relations with CDFG the current situation has ruined my long standing support.

The second alternative, the return to the tried and true 1994 regulations and the adding of currently listed animals on the Federal endangered species list would legally satisfy both the Alameda court and SB 670 mandate. By no means would any other alternative be acceptable, legal or certifiable by the Secretary of The State or the Office of Administrative Law. I am thusly ready, willing and able to prove the question is NOT " Is dredging deleterious to fish" but are gill nets, fishermen, hunters and the CDFG insane policies deleterious to fish. And that dredgers are only the first group of outdoor users who will be mandated "GUILTY TILL PROVEN INNOCENT EVEN IN THE FACE OF THE LEGALLY BINDING 16 YEAR OLD PROVEN 1994 EIR. Given 4-5 years and millions of dollars to cook up tainted evidence has failed miserably, even the comic book called a dredgers survey is a lesson in absurdities.

Dredge SEASON proposal;

This insane 14 days a year , not within 3' of any bank or bar within any wetted parameter is total insanity. The below the wetted riparian habitat has worked since 68 when dredge permits were first introduced and cover all needs now as then.

These closures constitute a legal takings under the law. Let's do the math of this absurdity. The waters of California will be restricted to 1% of the prior areas open and 4% of the before mentioned time constraints also. Your proposal would leave ½ the 1% open during winter flows and snow and the other open areas when bone dry in the summer. Of the remaining ½% open 50% of that, is in waters devoid of gold, which ¼ of 1% open for 14 days a year. You are thus highly concentrating user actions and thus causing concentrated damage within a miniscule area. Biggest mistake CDFG makes in all forms of user conditions and controls is the usage concentration thus doing considerable more damage-continued later in MUCH more detail. Furthermore, a large segment of the non gold bearing areas are within the coastal ranges where mercury concentration far outstrip all the contamination levels in the old Motherlode region. Please see exhibit #1. Please see State Geology report #191 ON MERCURY MINING IN CALIFORNIA also pictures and text included as exhibit #1 . California just happens to

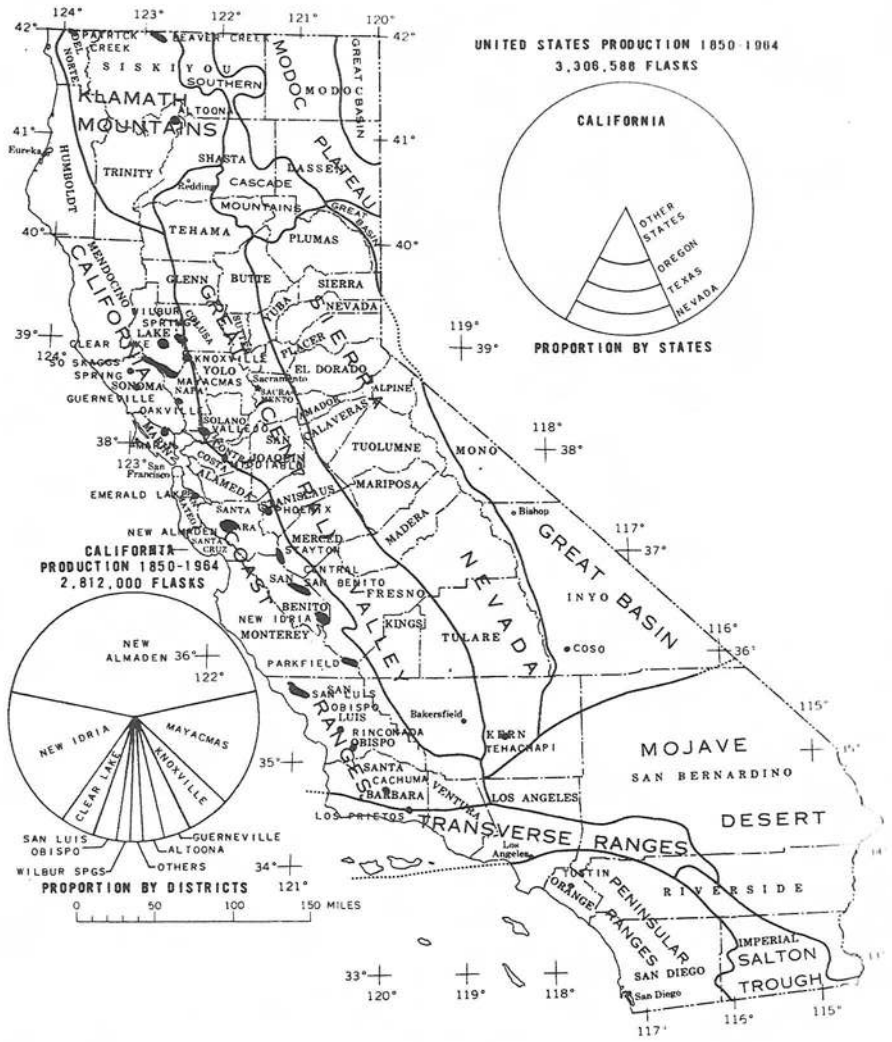


FIGURE 38. Mercury districts in California.

was the leading producer. It provides an example of a major producer having ore bodies in rocks other than silica-carbonate or Franciscan sedimentary rock, though both are present in the area. The major structure in the New Idria district consists of a pluglike mass of serpentine and Franciscan graywacke pushed up through shale and sandstone of the Panoche Formation (Upper Cretaceous) and Tertiary sedimentary rocks. The margins of the plug are steep faults which dip away from the central core, except in the New Idria mine area, where the contact dips inward to form the New Idria thrust fault. Beneath the New Idria thrust fault, the upper shales of the Panoche are crumpled and overturned; in some places highly broken Franciscan sandstone and, in other places, serpentine lie above the fault.

The ore bodies occur chiefly in altered and indurated Panoche rocks beneath the thrust fault, and irregularities in the plane of the fault have closely controlled zones of deposition. Cinnabar fills open spaces, forming veins and stockworks, and rich ore formed where the fracturing was most intensive. Some ore also occurs in the altered Franciscan rocks and in silica-carbonate rock. Known ore extends in places through a vertical range of more than 1,400 feet and a horizontal span of about ten miles. One ore body was 300 feet long, 25 to 150 feet thick, and extended through a depth of 800 feet. This ore shoot occupied a steep inverted trough at the intersection of the New Idria thrust fault with a tear fault.

The other mines of the Coast Ranges are too numerous to be discussed individually here, but reports on essentially all of them have been published (see references at the end of this article). Although formed under similar geologic conditions, the deposits show marked differences in the character, size, grade, and distribution of the ore bodies largely because of the diversity of rocks in which they formed.

The relatively few mercury mines in California that are outside of the Coast Ranges province are even less similar. The only large one is the Altoona mine in the Klamath Mountains, which has yielded about 35,000 flasks. The mine is in porphyritic diorite and serpentine, both of which are intensely altered and replaced by quartz and carbonate. Three major faults traverse the area, and cinnabar and some native mercury form irregular ore bodies in and near the fault gouge. Ore shoots average 5 feet in width, extend along the strike 100 to 300 feet, and down the dip for as much as 300 feet. The average grade has been about 1 percent mercury.

The Walibu (Cuddeback) mine, 10 miles northwest of Tehachapi in Kern County, exploits the southernmost of several small mercury occurrences in the Sierra Nevada province. Here, mercury ore occurs in a rhyolite dike which has intruded the granitic rocks of the Sierra Nevada batholith. Cinnabar encrusts fracture walls, fills small breccia veins, and is disseminated as minute crystals through the more altered rhyolite.

Farther east, in the Great Basin Province, small amounts of mercury have been obtained from Recent hot-spring deposits in the Coso district of southwestern Inyo County. These mercury deposits consist of small irregular cinnabar veins in silicified and kaolinized tuff and granite. Near Tustin, Orange County, cinnabar and native mercury are associated with small veins of barite in country rock of Tertiary sandstone.

One may expect that California will continue to provide most of the mercury recovered in the United States. Although known and indicated reserves are only sufficient to sustain production for a few years, the history of the industry indicates that with the price of mercury high enough to stimulate exploration, as it was in mid-1965, new ore bodies will be sought and discovered. Although most of these will be satellitic to known deposits, new exploration techniques involving geochemical sampling, or the use of the recently developed mercury detectors may be able to locate wholly new areas with sufficient mercury concentration to be minable at the high prices likely to prevail in the years to come.

EXHIBIT #1

occur in the less deformed sedimentary rocks of the Knoxville, Paskenta, Chico, and Panoche Formations of similar age. Tertiary sedimentary and volcanic rocks locally contain major deposits in California, as do also Quaternary volcanic rocks. Even a few small Recent placer deposits have been successfully exploited.

The history of the discovery and development of these deposits is as long and fully as colorful as the saga of California gold mining. In prehistoric time, cinnabar was used as a source of paint for war and tribal ceremonials by the California Indians, and they are known to have mined it at the site of the New Almaden mine, as well as elsewhere in the State, long before civilization reached California. The New Almaden deposit was rediscovered by white men in 1824, began producing in 1846, reached its peak in 1865 when nearly 50,000 flasks were recovered, and has been in production, though at a declining rate, almost ever since then. It is the oldest metal mine in California, and the first mercury deposit discovered in North America. In 1853 the deposit of the New Idria mine in San Benito County was discovered. It, too, has been mined almost continuously since its discovery, and, in 1965, was the most productive mercury deposit in the United States.

As the demand for mercury for amalgamation increased following the gold rush of the 1850's, exploration for mercury expanded northward in the Coast Ranges, and soon important new discoveries were made at Knoxville, Oat Hill, and Aetna Springs in Napa County; at Sulphur Bank and near Wilbur Springs in Lake County; and in the Mayacmas district of Lake and Sonoma Counties. During the 1860's, hydraulic mining for gold on a grand scale, and the discovery of the Comstock lode in Nevada, led to still greater demand for mercury, and exploration southward from New Almaden led to the discovery of new mercury deposits in Santa Barbara and San Luis Obispo Counties. Many of the mines reached their peak of production in the mid-1870's, which were also peak years for the State as a whole. The Sawyer decision of 1884 adversely affected the hydraulic mines and curtailed the need for mercury. As a result, mercury production declined almost continuously for the next 37 years and many mines closed. All the major deposits were discovered by 1895, although a rich short-lived open-pit mine was developed in the Emerald Lake district of San Mateo County in 1955, and a rich new ore body was found at the Buena Vista mine in San Luis Obispo County in 1957.

Since 1914, mercury production has been encouraged by five separate stimuli: the strategic demands of World War I, the industrial expansion of the late 1920's, the demands of World War II, the Korean War and Governmental aids of the late 1950's, and the industrial demands of 1964–1965. During each of these periods, the increased price led to renewed activity that resulted in an increase in production, but this came largely from deposits that had been known for many years. If history is repeated, we may expect many of the California mines now regarded as "worked out" to be successfully reactivated.

The worldwide unit of trade in mercury is the flask—a cast iron or steel cylinder about 5 inches in diameter and 12 inches long containing 76 pounds of liquid mercury. Total world production amounts to about 20 million flasks, and United States production is a little less than 3½ million flasks. Deposits in California have yielded

EXHIBIT #1 - Page #2

about 85 percent of the domestic production, or about 2⅘ million flasks valued at about $200 million. This value is exceeded among metallic mineral producers in California only by the value of the output of gold and copper mines.

Occurrences in California

The highly productive mercury deposits of California lie in a belt extending through the California Coast Ranges from central Lake County southward to Santa Barbara County. It contains the Nation's eight most productive mines, dominated by the great New Almaden mine with a production record of over one million flasks, and the New Indria mine, which has yielded more than half a million flasks. Also included are about a hundred other productive mercury mines, many prospects, and the major mercury reserves of the United States. These are clustered in 21 districts, shown on figure 38, most of which contain one, or at most two, prominent deposits and numerous smaller ones, though an exception is provided by the Mayacmas district, in Napa, Sonoma, and Lake Counties, which contains several major deposits.

One of the State's principal mercury mines, the Altoona in northeastern Trinity County, is in the Klamath Mountains province. Another less productive mine, the Walibu, is in the Tehachapi district at the southern end of the Sierra Nevada province. Relatively small amounts of mercury also have been obtained from outside the Coast Ranges province in the Patrick Creek and Beaver Creek districts in the Klamath Mountains, the Coso district in the Great Basin province of southwestern Inyo County, and the Tustin district of Orange County in the Peninsular Ranges province.

The New Almaden mine, a few miles south of San Jose in Santa Clara County, is the most productive mercury mine in North America and provides a good example of ores in silica-carbonate rock. The mine area is underlain mostly by graywacke, shale, and greenstone (altered mafic lavas) of the Franciscan Formation, and serpentine. The dominant structure is a northwest-trending anticline whose southwest limb has been highly sheared. Two major sills of serpentine appear to have been intruded up the north limb, to have converged near the crest, and to have continued down the southern flank. The serpentine was hydrothermally altered, particularly along its margins, to silica-carbonate rock. Cinnabar, the principal ore mineral, was introduced along a series of narrow northeast-trending fractures and replaced the silica-carbonate rock bordering them to form unusually rich ore bodies. The most productive ore bodies were formed along the margins of the two altered serpentine sills, and the largest was 200 feet wide, 15 feet thick, and extended 1,500 feet on the dip. Cobbed ore mined during the first 15 years of recorded production averaged more than 20 percent mercury, and the ore produced during the entire productive history of the mine averaged only a little less than four percent. The workings at the New Almaden mine reach a point 2,450 feet below the surface, making it the deepest mercury mine in the world, but almost half of the ore was removed above the 800-foot level.

The New Idria mine, in San Benito County, ranks second in production among mercury operations of North America and in 1965

have been the worlds largest historical producer but so much fun blaming dredgers. This reflects a complete lack of investigative skill in this SEIR report.

SEASONS CONTINUED-PAGE #2

The stringent closures are not in compliance with CEQA or any scientific protocol mandating all closures be accompanied by justifiable evidence to prove mitigating damages to any specific species. Closing 99 ¾% of the state to viable dredging and to just 4% of the time MUST be reported with accompanying certified documentation and NONE PROVIDED within this failed SEIR.

Furthermore the extremely dangerous mandate to have site specific notification open to public scrutiny opens a Pandora box of dangers to the dredgers. Any crankster gangster can then go online and see where we'll be-when we'll be there-and then have the information on when best to come and rob or kill us for our gold at will. Also then our homes will also be advertised empty and after they rob, rape, and pillage of my encampment, why then lets go and finish off and burglarrize the house too. No other user group is forced into this public disclosure of dangerous information including my home address also to make it easier for them also. Then they also know when you will NOT be on your claim and come and claimjump with impunity. Unfortunately this has proven true for me. Example in 2006 I went to the S.F.American on my claims and thieves monitored my internet picturess and postings and raped my Trinity claims with 5 guys and 3 dredges. End to end and took out over $500,000 in gold at todays prices. Public disclosure kills miners and leaves our homes open to invasion so this INSANE mandate is totally out of the question. Another friend (dredger) lost over 50 weapons, $250,000+ in gold/silver and family heirlooms due to the same exact situation Thanksgiving 2008.

As long as I have already touched upon the subject of mercury I would like to now address, with tongue in cheek, the 2 hypothetical mercury studies that are purported to address the evil dredgers massacre of the lakes, streams and rivers with our ungodly discharges of mercury laden tailings. The discredited Water Board American River purported study and the failed USGS study on dredge discharges.

Water Board- The completely flawed study was conducted upstream on Mr. Bill Centers' campground at Lotus, where the Hi Way 49er crosses the S.F.American. Mr. Center has allowed, for a hefty % cut, many of my associates to dredge this particular stretch of rivers utilizing larger 8" dredges during the seasons allowed by CDFG. Below the bridge is closed in the winter and open above the bridge with permission from Mr. Center. I just happen to have videos proving that that same EXACT AREA was and has been completely dredged, every rock moved, every crack, nook and crannie blasted absolutely clean and by god not a speck of mercury. I even have the largest specimens of my cut retained in my safe deposit box as proof. Very easy to examine under a electron microscope and prove absolutely no acids have been applied to remove any residual mercury. Also it is easy to prove that the specimens came from that EXACT locale also through spectrographic analysis as to composition. Gas chromaphatography is also a tool to prove origin as all gold has FINGERPRINTS that prove conclusively the point of origin. I would like to volunteer up my movies (to match to the water boards video) and gold for free to the Office of Administrative Law to prove beyond any doubt the falsification of this absurd study. The area was purposely contaminated with mercury to justify a end and that's all. The study area was purported to have been found in February

EXHIBIT #2

THE RECORD SEARCHLIGHT
redding.com

Mine cleanup lags while mercury continues to taint water

By By Jason Dearen Associated Press

Friday, September 18, 2009

NEW IDRIA - Abandoned mercury mines throughout central California's rugged coastal mountains are polluting the state's major waterways, rendering fish unsafe to eat and risking the health of at least 100,000 impoverished people.

But an Associated Press investigation found that the federal government has tried to clean up fewer than a dozen of the hundreds of mines - and most cleanups have failed to stem the contamination.

Although the mining ceased decades ago, records and interviews show the vast majority of sites have not even been studied to assess the pollution, let alone been touched.

While millions live in the affected Delta region, the pollution disproportionately hurts the poor and immigrants who rely on local fish as part of their diet, according to a study conducted by ecologist Fraser Shilling of the University of California at Davis. His research found that 100,000 people - which he calls a conservative estimate - regularly eat tainted fish at levels deemed unsafe by the U.S. Environmental Protection Agency.

"Tens of thousands of subsistence anglers and their (families) are consuming greater than 10 times the U.S. EPA-recommended dose of mercury, which puts them at immediate risk of neurological and other harm," Shilling said.

But neither the state nor the federal government has studied long-term health effects of mercury on the people who regularly eat fish from these waters.

The legacy of more than a century of mercury mining in California - which produced more of the silvery metal than anywhere else in the nation - harms people and the environment in myriad ways.

Near a derelict mine in this California ghost town, the water bubbling in a stream runs Day-Glo Orange and is devoid of life, carrying mercury toward a wildlife refuge and a popular fishing spot.

Far to the north, American Indians who live atop mine waste on the shores of one of the world's most mercury-polluted lakes have elevated levels of the heavy metal in their bodies and fears about their health.

5

And other mercury mines are the biggest sources of the pollution in San Francisco Bay and the Sacramento-San Joaquin River Delta, the largest estuary on the Pacific Coast.

In all, this metal known as quicksilver has contaminated thousands of square miles of water and land in the northern half of the state.

Records and interviews show that federal regulators have conducted about 10 cleanups at major mercury mines with mixed results, while dozens of sites still foul the air, soil and water. The AP's review also found that the government is often loathe to assume cleanup costs and risk litigation from a failed project.

Mercury from mine waste travels up the food chain through bacteria, which converts it to methylmercury - a potent toxin that can permanently damage the brain and nervous system, especially in fetuses and children.

The federal government calls methylmercury one of the nation's most serious hazardous waste problems, and the Centers for Disease Control and Prevention say it is a possible carcinogen.

Mercury is considered most harmful to people when consumed in fish. People who regularly consume tainted fish are at risk of headaches, tingling, tremors and damage to the brain and nervous system, according to the CDC.

The toxin is less of a threat in drinking water, which is filtered and monitored more closely.

Mining in California ceased decades ago, leaving behind at least 550 mercury mines, though no one knows for sure how many. One U.S. Geological Survey scientist says the total may be as high as 2,000.

"Mercury tops the list as the most harmful invisible pollutant in the (state's) watershed," said Sejal Choksi of San Francisco Baykeeper, an environmental watchdog group for the bay. "It has such widespread impacts, and the regulatory agencies are just throwing up their hands."

In the 19th and 20th centuries, California produced up to 90 percent of the mercury in the U.S. and more than 220 million pounds of quicksilver were shipped around the world for gold mining, military munitions and thermometers. Much of the liquid mercury was sent to Sierra Nevada gold mines, where miners spilled tons of it into streams and soil to extract the precious ore.

"There's probably a water body near everybody in the state that has significant mercury contamination," said Dr. Rick Kreutzer, chief of the state Department of Public Health's Division of Environmental and Occupational Disease Control.

Government officials blame mining companies for shirking their financial responsibilities to clean the sites, either by filing for bankruptcy or changing ownership.

When the government does target a site, success is not guaranteed.

The Sulfur Bank Mine has made the nearby Clear Lake the most mercury-polluted lake in the world, despite the EPA spending about $40 million and two decades trying to keep mercury contamination from the water. Pollution still seeps beneath the earthen dam built by the former mine operator, Bradley Mining Co.

For years, Bradley Mining has fought the government's efforts to recoup cleanup costs. An attorney for the company didn't return calls seeking comment.

For the Elem Band of Pomo Indians, whose colony is next to the lake and shuttered mine, the mercury has made it unsafe to eat local fish.

Their colony was built in 1970 by the federal government over waste from the mine. Officials knew it was contaminated, but were not aware at the time how dangerous mercury was to people. The mine is now a Superfund site.

State blood tests on 44 volunteer adult tribe members in the 1990s found elevated levels of mercury. The average level was three times higher than found in people who do not eat tainted fish, but regulators said only one man was at immediate risk of brain damage or other harm.

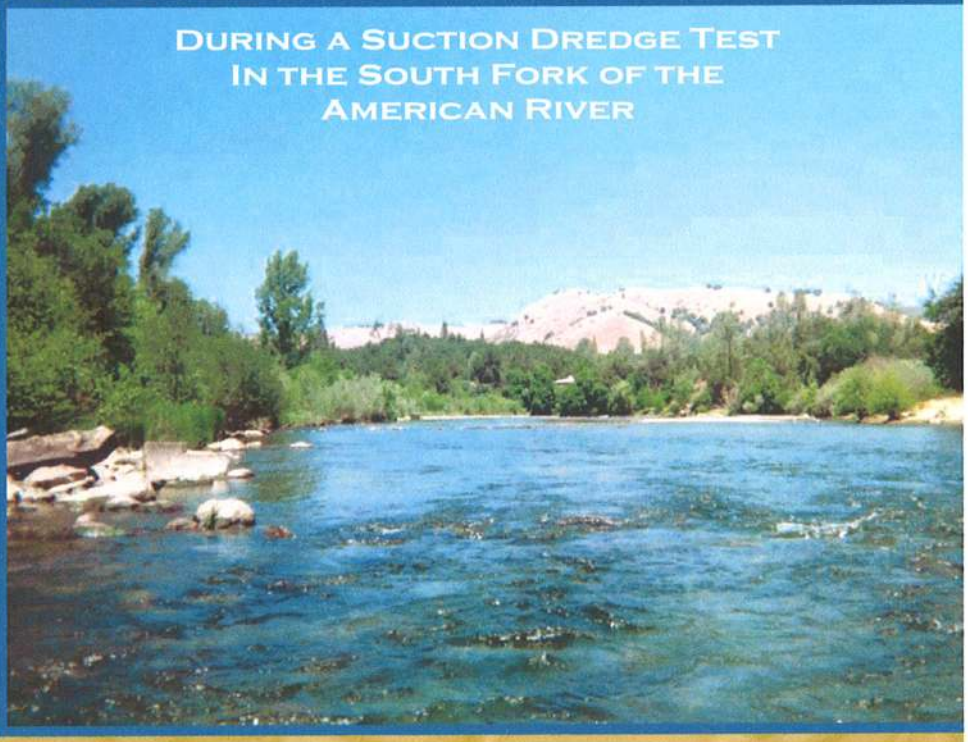
EXHIBIT #3

STAFF REPORT

MERCURY

LOSSES AND RECOVERY

DURING A SUCTION DREDGE TEST IN THE SOUTH FORK OF THE AMERICAN RIVER



CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

MAY 2005

ABOUT A KILOGRAM OF MERCURY

INTRODUCTION

Mercury has been used widely since the dawn of recorded history for gold mining. During California's gold rush, gold miners used about 6 million kilograms or 6.6 thousand tons of mercury (Churchill, 2000) to recover over 3.6 thousand tons of gold (Bulletin 193). **The weight of mercury used is roughly equal to the total weight of a 9-mile long line of 2,750, full sized pickup trucks (note: the pick up truck line equaling gold recovered would only be 5 miles long). The miners lost about half of the mercury to the environment.**

Using historical records, Churchill (2000) estimated that total mercury losses ranged between 2.3 million and 2.6 million kilograms for placer and lode mining in the Sierra Nevada Geomorphic Province. Consequently, elemental mercury from the gold rush is still found, sometimes in amounts that constitute a local hotspot (i.e., a location where visible elemental mercury is found) in Sierra Nevada watersheds where gold mining occurred. In March 2003, a recreational gold miner reported a mercury hotspot in the South Fork of the American River near Coloma, to State Water Resources Control Board staff. It was the first time a recreational gold miner had revealed a hotspot locations to agency staff. Coloma is California's historic "Gold Discovery" site as James W. Marshall's discovery there in January 1848 initiated the 1849 gold rush. Steve Franklin, the recreational gold miner who reported the hotspot, claimed to have recovered about a kilogram of mercury while gold mining from the hotspot during January and February 2003.

Finding a hotspot near Coloma raised questions about its potential threat to human health, effects on local fish, and threat to water quality. Moreover, its discovery presented an opportunity to test the notion that recreational gold miners effectively clean up mercury hotspots while suction dredging for gold. There is no record of any attempts by state or federal agencies to clean up a mercury hotspot in a California river. But State and federal agencies have discussed whether encouraging or even providing support for recreational gold miners to clean up hotspots is viable and wise. The pros are that there is a potentially large, volunteer workforce. The cons are that oversight would be difficult and, up to now, no data supported the notion that suction dredges could recover mercury efficiently.

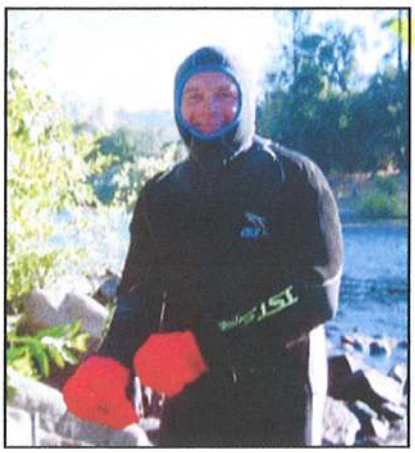


FIGURE 2: Steve Franklin and SWRCB staff sampled the hotspot on July 8, 2003, and recovered about 125 grams of mercury in about three hours from the river using simple suction recovery tools. Mercury was visible as droplets ranging from one to ten millimeters on bedrock in the river channel. (Photo by: Rick Humphreys, DWQ)

Recreational gold dredging on public and private lands is a moderately popular activity in California. The Department of Fish and Game (DFG) issues several thousand permits annually to recreational gold dredgers. Along with gold, recreational dredgers recover iron (nails bolts, etc.), lead (fishing weights, buckshot, and spent bullets) and mercury (elemental mercury, mercury/gold amalgam, and mercury stained gold). Over the past several years, United States Forest Service (USFS), Bureau of Land Management (BLM) and State agency staff have discussed setting up a mercury recovery program for recreational dredgers. Incentives (e.g., cash for mercury, free dredging permits, new areas opened for dredging) were proposed in exchange for mercury turned in by recreational dredgers. Offering such incentives was and remains controversial for a variety of reasons and a mercury recovery program was not started. **Moreover, an important drawback was that the efficiency of a standard suction dredge at recovering mercury was unknown.** Consequently, no one knew if mercury would be lost along with waste sediment from a suction dredge. Clearly, a mercury recovery program that dispersed elemental mercury back into a stream in substantial amounts would be unacceptable. The hotspot presented an opportunity to determine the mercury recovery efficiency of a suction dredge.

FIGURE 3: Under water photograph showing river sediment, bedrock, and mercury droplets. (Photo by: Rick Humphreys, DWQ)

Studying the hotspot may also reveal bedrock characteristics and sediment transport conditions that cause hotspots, and the effects that concentrated mercury has on local fish. This report documents the results of a suction dredge test that was completed in September 2003 by State Water Board, USFS, and DFG staff.

HOTSPOT SETTING

The hotspot is located mid-channel in the South Fork of the American River, a few miles downstream from the Marshall Gold Discovery State Park at Coloma. Surface placers and in-river gravel accounted for most gold produced from the area during the gold rush and in-river dredging recovered more gold during the 1930s and 1940s (Bulletin 193). These historic mining operations are the likely mercury source.

The hotspot is located on the downstream side of a low bedrock hump that extends across the river channel perpendicular to its flow. Because the hotspot remains underwater under all observed flow conditions, State Water Board skin divers recorded how the mercury occurred on bedrock and in river sediment visually. The bedrock hump is shaped like a low-pitched roof. River sediment forms wedge-shaped deposits on the up and downstream sides of the hump. Easily visible, small (e.g., 1mm)

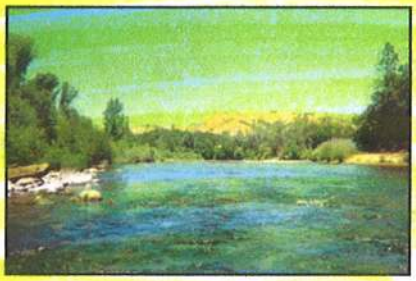


FIGURE 4: "The hotspot is located mid-channel in the South Fork of the American River, a few miles downstream from the Marshall Gold Discovery State Park at Coloma." (Photo by: Rick Humphreys, DWQ)

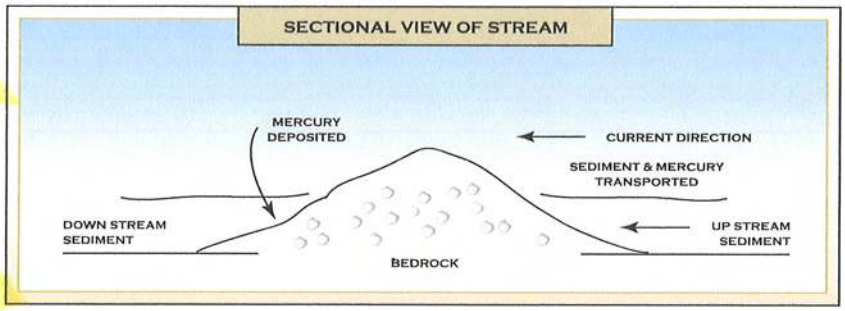


FIGURE 5: Cross-sectional view of stream graphic showing where mercury deposits on bedrock.

mercury droplets permeate the sediment at the thin upstream edge of the downstream wedge (see fig.2). Hand "fanning" stirs up fine-grained sediment, which is carried away by the river current. Elemental mercury, however, remains on bedrock, and continued fanning causes small mercury droplets to fall into bedrock depressions and fractures. When mercury droplets touch, they fuse into much **large** droplets (up to 25 millimeters). **Hand fanning the upstream sediment wedge also exposes elemental mercury in bedrock depressions and fractures** but in much smaller amounts than on the downstream side.

River flow at the hotspot is uncontrolled during winter and spring runoff but controlled for hydroelectric and recreational rafting purposes for the rest of the year. During controlled flow periods, flows typically range from 200 to 1,200 cubic feet per second (cfs) daily. High runoff coincides with winter storms, and these flows have ranged to 80,000 cfs as recently as 1997. Post dredge test inspections show that during low flow periods (200 cfs), sediment does not travel over the bedrock hump. But post dredge test inspections also showed that mercury had re-deposited on bedrock that had been dredged clean. Higher controlled flows may be moving sediment and mercury over the hump but attempts to observe sediment movement directly at higher flows proved too dangerous.

Mercury may concentrate at the hotspot because after it is carried over the bedrock hump during high flows, it encounters a low flow velocity zone on the downstream side of the bedrock hump. The river current on the downstream side lacks the power to move mercury anymore so it drops out on bedrock on the downstream side. If this scenario is correct, **periodic mercury recovery from this location might be practical.** A mercury removal system's design would depend on the site's the physical characteristics which are unknown. A detailed evaluation of mercury and sediment transport and flow velocity at the hotspot surface would be necessary if periodic mercury removal from this site is considered.

Suction Dredge Test

The USFS volunteered their mineral evaluation team, based in Redding (Rich Teixeiria, Jim DeMaagd, and Tera Curren), to perform the test. According to Rich Teixeiria, the team's dredge is a Keene Engineering floating 4 inch dredge powered by a Honda 5.5 horsepower engine. It is similar to those used by recreational dredgers to recover gold (see fig.3). A single sluice box used carpet and riffles but no "miners" moss (i.e., woven nylon fabric placed between the riffles and carpet for enhanced gold recovery).

The team performed the dredge efficiency test on Sept.15, 2003. The 63.5kg sediment sample used in the test had been collected by State Water Board staff from the hotspot and characterized for grain size and mercury content. State Water Board staff analyzed the sample's grain size at the Cal Trans Laboratory in Sacramento. The sample classifies as a "clean gravel with sand" under Unified Soil Classification System. Visual inspection of size fractions showed that almost all the liquid mercury rested in the fraction that passed a 30-mesh sieve (0.6mm). The mercury content of this fraction served as a surrogate for the mercury content of the entire sample. Chris Foe of the Central Valley Regional Water Quality Control Board had two 30-mesh passing fractions of the sample analyzed for mercury by ALS Chemex Laboratory in Reno, NV. Two suspended sediment samples of the bulk sample (i.e., samples of sediment that settled out of water used for sieving after an hour) were sent to ALS Chemex Laboratory for mercury analysis. A second set of samples from archived material was sent to Frontier Geosciences in Seattle, WA after reliability problems were discovered with analyses performed on standards by ALS Chemex. During the test, the USFS team captured sediment lost off the sluice in a catch basin for later analysis. Small mercury droplets and fine, barely discernable droplets (i.e., floured mercury) were characteristic of these samples. After the test, 30 mesh and finer dredge concentrates and "waste" sediment were sent to ALS Chemex Laboratory. ALS Chemex Laboratory used an analytical method that could not quantify the high mercury concentration in the mercury-rich samples. So a second set of samples was sent to Frontier Geosciences for analyses.

The team (USFS and State Water Board staff) dredged the hotspot the next day on Sept. 16, 2003, and DFG staff recorded the test on video.

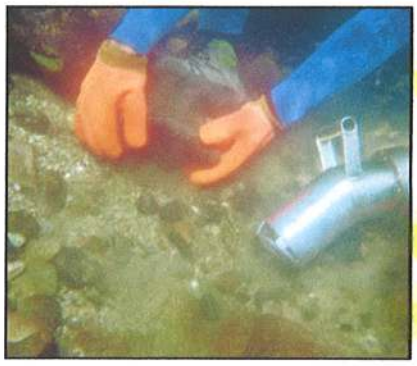


FIGURE 6. Dredging the hotspot. (Photo by: Rick Humphreys, DWQ)

THE MERCURY CONTENT OF THIS FRACTION SERVED AS A SURROGATE FOR THE MERCURY CONTENT OF THE ENTIRE SAMPLE.

Results - Laboratory Data

ALS Chemex reported that the mercury content of the samples received exceeded the upper detection limit of the analysis used and did not reanalyze the samples. As a result, the Frontier Geosciences analyses were used for this report. The bulk sample mercury concentration was 1,170ppm; the mercury concentration of the sediment captured by the dredge was 1,550ppm, and the mercury concentration of the sediment lost by the dredge was 240ppm. The suspended sediment sample mercury concentration was 298ppm. Note that these mercury concentrations are quite high. **Mercury concentrations of the waste and suspended sediment are over an order of magnitude higher than the minimum concentration necessary for classification as a California hazardous waste (20mg/kg).** The suspended sediment's high mercury content is problematic because after resuspension by dredging, it can be carried long distances by stream current.

Results - Suction Dredge Efficiency

It is necessary to know how elemental mercury, which is a dense liquid, behaves physically when evaluating the laboratory results. During dredging, large mercury droplets were broken up into small droplets by turbulence. The phenomenon is called "flouring" and it is described as a major cause of mercury loss by historic hydraulic gold mining operations. Confounding matters is mercury's ability to form large droplets from small droplets. This causes mercury enrichment of sediment captured on the sluice because small mercury droplets that are caught in the low velocity area behind the sluice riffles fuse into large droplets just as they do on the downstream side of the bedrock hump. Sluice sediment samples had large and small mercury droplets. Such samples are subject to analytical bias from either a single large mercury droplet, or the absence of any mercury droplets.

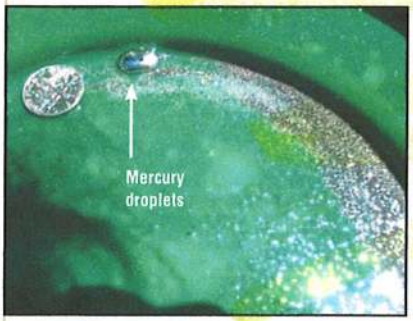


FIGURE 7: Mercury panned from a small creek below the Sailor Flat Hydraulic Mine, Nevada County. (Photo by: Rick Humphreys, DWQ)

Bias probably is affecting the analytical results for the efficiency test. The mercury concentration for the captured sediment is 32 percent higher than that of the parent sample, and that may be because the captured sediment sample analyzed had one or two large mercury droplets. However, in absolute terms, the mercury concentration of both samples agrees fairly well. Mercury concentrations in sediment lost by the dredge was averaged (30-mesh and finer and suspended sediment). The mercury concentration of the lost sediment fractions is about 2 percent that of the test sediment's mercury concentration. Thus, the dredge removed about 98 percent of the mercury from the test sample based on concentration. Unfortunately, a mass balance of sediment captured and lost, as part of the test was not performed because we did not have an accurate total mass for the lost fraction.

The test showed that a typical suction dredge set up to recover gold recovered about 98 percent of the mercury in the high-mercury, test sediment sample. However, the loss was in sediment that had high mercury content and is easily transported away by the river.

Results - In-River Test

The team dredged about four yards or about 5,900 kilograms (6.5 tons) of sediment from the hotspot. Team members used special care to find and dredge large liquid mercury droplets as well as mercury-laden sediment from the site. During clean up after the test, team members noted large mercury droplets captured on the sluice. From the 30-mesh passing fraction, SWRCB staff separated about 0.5kg liquid mercury (see fig. 4). The remaining 2.2kg of sediment retained a substantial amount of liquid mercury as small (e.g., 1mm) and fine droplets of floured mercury, which floated on water used to immerse the sediment. Separating residual mercury from the sediment by physical means proved impossible. The mercury content of a 1.1kg sample was determined directly heating the sample and recovering the mercury vapor (i.e., retorting). The retorted sample contained 20gm of mercury or 1.8 percent. The dredge concentrate contained 540gm of mercury (liquid mercury + retorted mercury/ 1.1kg x 2), which accounted for about 20 percent of the sample mass (540gm mercury/2.7kg sieved sample x 100). Note that the mercury concentration of captured sediment from the in river test is about ten times higher than that reported for the efficiency test. The difference likely reflects the success of the dredge team in finding and dredging up mercury droplets during the in river test.

FIGURE 8: Jim DeMaagd and Rich Teixeiria setting up the dredge. (Photo by: Rick Humphreys, DWQ)

Page #3---continued MERCURY--and left to dredge in September(7 months) in direct violation of EPA, State Haz /mat laws, State Water Board rules and regulations, and state water quality act and numerous other agencies legal mandates also. Every scientific rule/law and protocol was violated during the collection of a pre concentrated sample, 63+ kilograms of concentrates as collected and posted in this ridiculous hypothetical study. Please see exhibit #3. This report goes into exacting detail as to the rerunning of waters utilized for concentration which taints all scientific studies and violates water quality board accepted, and EPA, mandated protocol for certifiable results. The samples were concentrated utilizing contaminated water thus negating any credibility in any scientific arena.

The absolutely insidious laughable study conducted by Mr. Churchill-(not even credible enough to be published anywhere except here of coarse) makes some of the most outrageous assertions about mercury, truck bed volume ,and miles of mercury and barely any gold found. 100% blue sky and CENSORED. Anyone with a 5th grade math knowledge and a periodic table can easily prove these assertions to be absolute hogwash. He would purport that the miners lost over half the mercury to get the gold. When in fact, at that particular time and place , the mercury was almost as valuable as GOLD itself. What idiot would throw away a product—any product needed in gold recovery at a rate of 50% consisting of not only the mercury but the GOLD that was the object of their ungodly labors and desires from the get go. This hypothetical report was conducted to scare little children in the middle of the night and not a single dredger with any experience could give these absurd assertions any credibility.

Now for Mr. Flecks laboratory study conducted at the USGS lab. Here again all –see example #4--scientific protocol for sampling was thrown out the window completely. They sent the Mc Cracken boys(reported) up the hill with a dirty shovel and 10 regular buckets (for $3,000 or so) to collect samples for a certifiable study on mercury discharge. No sample site sealed containment, no gps positioning for accountability, and no proof of process and procedures utilized in sampling techniques either. Then the contaminated samples were run in a lab test, ludicrous without free flowing waters, and again utilizing re-circulated water, the samples were thus contaminated and concentrated to achieve the results mandated by Water Board. Complete and total violation of all federally and state analysis procedures. I will leave the math of the chemistry to a very hardworking engineer in Auburn-J.R.L-as he has gone completely through the laughable results and rightly so deserves the credit as I must press on with even more pressing matters in this hypothetical EIR study. Unfortunately the USGS lab is now relying on outside projects to stay open and after a protracted discussion with Mr. Fleck , PRIOR to these tests being performed, I can indeed see his plight. Do or die-pure, simple and unholy. Conducting biological testing utilizing pre-conceived results is the largest growth industry , according to the federal department of economics, in the 21st century. The radical enviromental community hysteria has worked righteously in fund raising for their goals and here in California we have the best legislators ,judges and labs for sale in the country—or was that the world??

This ludicrous attempt at a EIR would also have you believe that there is no process, procedure or protocol for mercury containment, refinement and reclamation. The EPA and the various states have mandated that programs exist for the collection of mercury. Please view exhibits #4-the EPA mandate and exhibit #5 the Oregon mandate. The state

of California also has the exact same programs through our local county environmental departments. But of coarse this EIR asserts just the opposite. Time constraints prevented me-health for 3 weeks- so that I didn't have time to find and copy to post here but easily verifiable to any that doubt the worthiness of my ascertains.

In light of this purported mercury mania the state has mandated , in all it's great wisdom, that we fill our homes with squiggly bulbs full of mercury to environmentally light our homes, offices, factories and indeed every standing structure with mercury laden bulbs. A look at this forced mercury insanity deserves a closer look. This is needed to put dredgers purported ability to flour miniscule amounts of mercury ,when utilizing antiquated methods, in low water flows, in a couple of hot spots ,not really, and terrorize the state with mercury. Each and every squiggly bulb contains between 5-7 mg. of mercury and long florescent bulbs 10-14mg. so to average I'll use the mean of 6mg and 12 mg. to be safe .Please see example #7- California statistics on homes , factories and miscellaneous structures.

There are ,in 2009, 13,433,718 homes in the state and allowing for the average of only 38 bulbs in the average home at 6 mg. each the figure is a startling 3,062,887,704 milligrams of hot fuming mercury contained within a thin fragile glass shell. In all truth this figure must be divided by 1,000 to obtain grams and again by 28 to get ounces and lastly by 16 to get pounds. Which leaves 6,838 pounds of mercury in our homes in it's most deadly form. Now lets add in businesses and farms to get a much more realistic picture of the absurdity of the state approach to dredgers mercury flouring capabilities. There are , in 2008, 879,025 non farming establishments, 2,688,453 private businesses, and , in 2002, 2,908,758 firms for a grand total of 6,475,236 which utilize at least 4-6(using 5 dozen so 60 bulbs) dozen long bulbs so lets do some more math utilizing the 9 mg as the mean average and viola 3,264,022,944 mg. of murderous mercury where you eat , work, and shop, buy your junk foods and take your leisure. Now the math so I am not guilty of the states mercury madness policy. Divided by 1000 and then 28 for ounces and then 16 for pounds we have 7,286 pounds of mercury added to the 6838 pounds in homes your grand total is 14,183 pounds or well over 7 TONS mandated dangerously into our everyday life. And then the state CDFG tries to utilize the mercury hysteria that we dredgers might definitely willingly, never proven, mix up a few micro milligrams 100's a miles from your homes and contaminate your earth mother ship even though the coastal ranges do it daily in 1,000,000's times larger quantities by that evil mistress mother nature. Absolutely ludicrous contention in another failed EIR.

MINERS ABSURD SURVEY—or how I lost that 50lb. bass and that 50 point buck.

Dredgers failed survey -- I absolutely refused to participate in such a farce. It was a numbered survey and anything and everything can and will be used against you in a court of law. BLIND study is the mandate and when fishermen, rafters, hunters ,kayakers and such are required to take such a survey—then I will and until then CENSORED.

Right off the bat on the very first page this laughable survey lost all proven accuracy and accountability. I have melded the out a state with the instate figures to compact the absurdities and try to make this comment less duplicative of facts. Please see examples #6 for both in/out state statistics.

EX #4

EPA United States Environmental Protection Agency

Mercury Recovery from Recreational Gold Miners

The Challenge:

Looking for gold in California streams and rivers is a recreational activity for thousands of state residents. Many gold enthusiasts simply pan gravels and sediments. More serious recreational miners may have small sluice boxes or suction dredges to recover gold bearing sediments. As these miners remove sediments, sands, and gravel from streams and former mine sites to separate out the gold, they are also removing mercury.

This mercury is the remnant of millions of pounds of pure mercury that was added to sluice boxes used by historic mining operations between 1850 and 1890. Mercury is a toxic, persistent, and bioaccumulative pollutant that affects the nervous system and has long been known to be toxic to humans, fish, and wildlife.

The Solution:

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

In 2000, EPA and California's Division of Toxic Substance Control worked in concert with other State and local agencies to find the regulatory flexibility needed to collect mercury in a simple and effective manner. One approach was to add mercury to the list of materials that are collected at regularly scheduled or periodic household hazardous waste collection events sponsored by local county agencies.

Another mercury collection approach was to set up collection stations in areas where mercury is being found by recreational miners.

The Results:

In August and September, 2000 the first mercury "milk runs" collected 230 pounds of mercury. Not only was mercury received from recreational gold miners, but others such as retired dentists. The total amount of mercury collected was equivalent to the mercury load in 47 years worth of wastewater discharge from the city of Sacramento's sewage treatment plant or the mercury in a million mercury thermometers. This successful pilot program demonstrates how recreational gold miners and government agencies can work together to protect the environment.

EX #5

Land Quality

Mercury Information

Free Mercury Collection Program

To reduce harmful exposure to mercury, DEQ and local household hazardous waste programs collect mercury and mercury-containing devices from Oregon residents free of charge. Here's how the program works:

From your home

- **Participating collection programs**
  If you have elemental mercury or mercury-containing devices at home, you can take them free of charge to a household hazardous waste (HHW) facility or collection event. Statewide HHW programs are listed here:
  - Locally-Sponsored Household Hazardous Waste Services, By County
- **Free home pick-up**
  If there is no household hazardous waste disposal program available in your county or nearby counties, call the DEQ solid waste technical assistance staff member in the nearest DEQ regional office regarding free pick-up of mercury from your home by a DEQ hazardous waste contractor. To be eligible for free pick-up of mercury, you must meet the following criteria:
  1. Mercury must be in the elemental (liquid) form.
  2. There must be at least 3 pounds of mercury to be picked up (about ½ cup). If you have less than 3 pounds, DEQ may be able to pick it up in special circumstances (call DEQ regional office to check on this).
  3. You must be willing to hold on to the mercury and store it safely until the DEQ contractor is available to pick it up.

From a business or other non-household source (CEGs, including schools)

A conditionally exempt generator (CEG) creates less than 220 pounds of hazardous waste and 2.2 pounds of acutely hazardous waste per calendar month and does not accumulate more than 2,200 pounds of hazardous waste (2.2 pounds of acutely hazardous waste) at one time.

It specifically states that there were over 3,026.75 hours of dredging on the Sacramento River. At the hypothetical 5.5 hours a day a miner dredges that is stated in this study this constitutes over 850 days of work on a river that has been closed below the Shasta Dam forever. Also as Mr. Stopher well knows, since he illegally mandated the Cantara Spill forever closure almost 20 years ago, everything above the dam to the point of inception is also closed down to every square inch, and all tributaries also. You are thus led to believe that this is a comprehensive scientifically conducted survey. For that insane ascertain you thusly must believe in Harry Potters cloak of invisibility or perhaps Mr. Frodos cloak of invisibility as well. 850 days of dredging adjacent to a I-5 and in full view for at least 95% of its' length, the Sacramento River is not dredgeable without detection. I dredged it 1,000's of times and always visited by my friendly CDFG wardens and checked religiously yet you are led to believe otherwise. And it degrades from there into yet more ludicrous assertions. You are led to believe that the dredge ban has not had any lasting socio-economic ramifications AND that a total ban on dredging will actually create 50 jobs?? Where? in CDFG enforcement maybe, but the total desecration of all river economy. The figures state that in 2008 there were 1,823 camping night moneys pumped into local hard hit even in the depression economy. This lack of income has closed over half the Klamath River establishments and campgrounds. The illegal closures on the Sacramento system has decimated Dunsmuir, Pollard Flats, Lakehead and Redding economic viability. Businesses have sat for over 15 years empty and the towns look like ghost towns for years. My own business Oates Services were closed due to the ungodly loss of our most viable dredging asset, the Sacrament River and the tributaries. 3 miner businesses went under, homes lost, families torn asunder, suicide ran rampant and folks just gave up and moved elsewhere. The resultant loss of claim tax monies collected, annual reporting fees and resultant loss of revenues cost our broke county millions throughout the years. This purported total ban will finish off the rest and kill the river folks who scrape a living off of tourism.

On and on the survey goes with fantastic pie in the sky hypothetical facts and figures. A 4" dredge will consistantly move ¾ of a yard of material a hour. In your wildest dream maybe but after 38 years a sucking gravel this is indeed someones pipe dream(or a manufactures advertising hyperbole) and should be filed along with the purported 50lb bass and the 50 point buck. Page 4# first article has absolutely no question as no amount of square inches or cubic feet or cubic yards, just the ascertion that you dredged 4 or 5 or 6 WHAT??? Page 7 has scaled up mystically on the 3rd chart down from 56 to 734 which is a factor of 25 X times the original figure, scaled up, no BLOWN out of all proportion is more appropriate. Page 7 first chart is yet another incomplete question with no basis in fact-mercury-where ?? Home , lab, grocery store, river where??? Flawed beyond any practicality with egotistic mine is bigger than yours and I'm badder than you mentality of the newbie who wants to be a dredger.

Oil and Gas pollution—

You are lead to believe in this EIR that we spray oil and gas all over the environment through our simple ability to do so. Complete hysteria once again. Oil ruins golds' ability to settle out and indeed floats the gold right out of your dredge recovery box. Gas is the bane of dredging as once spilled, exactly like oil, it is immediately pumped down to us to breathe through our air compressors and diving regulators. Once gas or oil is spilled your

EX #6

Suction Dredger Survey Results

Non-California Resident Responses

LOCATIONS

Counties Visited For Suction Dredging

County Name	Frequency Mentioned
Siskiyou	172
Sierra	45
Plumas	43
Placer	20
Trinity	15
Tuolumne	14
Yuba	10
Calaveras	7
Humboldt	6
Nevada	6
El Dorado	5
Mariposa	5
Butte	4
Kern	4
Lassen	2
Los Angeles	2
Shasta	2
Stanislaus	2
Amador	1
Del Norte	1
Madera	1
Total responses	*367*

(Over the 334 response total since some survey respondents visited multiple counties)

SUCTION DREDGING INTENSITY BY BASIN

Basin	Estimated Dredging Days	Category	Intensity*
Klamath River	7124.07	Over 1500	3
Yuba River	1993.26	Over 1500	3
Feather River	1624.14	Over 1500	3
Scott River	1587.23	Over 1500	3
Salmon River	1439.58	200 to 1500	2
Trinity River	1033.54	200 to 1500	2
American River	701.33	200 to 1500	2
Stanislaus River	590.60	200 to 1500	2
Cosumnes River	295.30	200 to 1500	2
Merced River	221.47	200 to 1500	2
Sacramento River	184.56	0 to 200	1
Kern River	147.65	0 to 200	1
Mokelumne River	147.65	0 to 200	1
San Gabriel River	73.82	0 to 200	1
Fresno River	36.91	0 to 200	1
Tuolumne River	36.91	0 to 200	1
Calaveras River	0	0	0
Honey Lake	0	0	0
San Joaquin River	0	0	0
Santa Ana River	0	0	0
Smith River	0	0	0
Suisun Bay	0	0	0

**Intensity: 0=No Dredging, 3=Most Dredging*
For Mapping Purposes, Basins With Zero Intensity Left Out

River 100% closed Every Inch but 184.5 days of dredging

184.5
2843.24
3,026.75

They must have Harry Potters cloak of invisibility.

STUDY FLAWED BEYOND Any COHERENT Relevance

Suction Dredger Survey Results
Non-California Resident Responses

TRANSPORTATION

Number Who Drive Off Paved Roads

	Count	Percent
Yes, typically drive off paved roads	212	67.95
No, don't typically drive off paved roads	109	34.94

Of 212 "Yes, typically drive off paved roads":

	Count	Percent
Car/Truck	186	87.74
Off-Highway Vehicle	14	6.60
Other	12	5.66

ESTIMATED TRANSPORTATION IMPACTS

Estimated Vehicle Miles Traveled	850.65	Miles
Average number of trips in 2008	4.10	trips
Average Number of Miles Driven in 2008	6969.19	Miles per Year
Average Number of SD Permits Issued (ES-2)	450.00	Permits
Estimate of VMT	3136136	Miles per Year

Camping/Overnight
LOCATIONS STAYED AT WHILE SUCTION DREDGING

Percent Who Stayed Overnight When Dredging

Stayed Overnight	315	People
Didn't Stay Overnight	6	People
Percent Who Stayed Overnight When Dredging	98.13	Percent

Of 315 "Yes, stay overnight":

	Count	Percent
Developed Campground	162	51.43
Undeveloped Campsite	171	54.29
Hotel/Motel	86	27.30
Friends or Family	25	7.94
Other	58	18.41

**Percentages add up to over 100 since multiple selections allowed*

Types of Developed Campsites Stayed In:

	Count	Percent
Developed State Campground:	57	37.75
Developed Federal Campground:	39	25.83
Developed Private Campground:	94	62.25
Total Who Specified Type of Developed Campground:	151	

**Percentages add up to over 100 since multiple selections allowed*

Types of Undeveloped Campsites Stayed In:

	Count	Percent
Undeveloped State Campground:	60	36.8
Undeveloped Federal Campground:	93	57.1
Undeveloped Private Campground:	46	28.2
Total Who Specified Type of Undeveloped Campground:	163	

**Percentages add up to over 100 since multiple selections allowed*

758 nights of lost revenue income

1823 In/out staters

Socio-economic ramifications are huge!

Suction Dredger Survey Results
Non-California Resident Responses

TIME SPENT DREDGING, VOLUME DREDGED

Average number of days spent dredging	33.39	days per year
Average number of hours spent dredging per day	5.43	hours per day
Average Area Dredged	37.03	square feet per trip
Average Depth Dredged	4.49	feet
Average Cubic Feet Dredged per trip	166.28	cubic feet per trip
Average Cubic Yards Dredged per trip	6.16	cubic yards per trip
Average number of trips in 2008	4.10	trips
Average Cubic Yards Dredged per dredger, 2008	25.23	cubic yards

DREDGE CHARACTERISTICS

	Count	Percent
Total Who Used Only One Dredge	210	67.09
Total Who Used One Dredge Over 75% of Time	253	80.83
Total Who Gave Information About Dredger	313	

Suction Dredge Nozzle Size Distribution for All Dredges	Count	Percent
1" to <2"	4	0.96
2" to <3"	53	12.74
3" to <4"	40	9.62
4" to <5"	173	41.59
5" to <6"	80	19.23
6" to <7"	59	14.2
7" to <8"	2	0.48
8"	5	1.20
*43% Use Multiple Dredges	*Total=416*	

Average Nozzle Size	4.19	Inches

Dredge Horsepower Distribution

Nozzle Size	Mean	Horsepower Median	Min	Max
1" to <2"	2	2.25	1.0	2.5
2" to <3"	3.38	2.56	0.5	16
3" to <4"	5.49	5.5	3.0	10
4" to <5"	6.55	6.5	4	16
5" to <6"	10.01	9.5	4	18
6" to <7"	15.97	14	3	46
7" to <8"	34	33.5	22	45
8"	40.20	40	36	45

Overall Average Horsepower:	8.53

Suction Dredger Survey Results

Non-California Resident Responses

Average Volume Dredged Per Day By Nozzle Size for Suction Dredges Used 100% of the Time

Nozzle Size	Count	Average Volume Dredged*
1" to <2"	2	25
2" to <3"	19	76.20
3" to <4"	21	39.74
4" to <5"	114	160.15
5" to <6"	39	105.09
6" to <7"	26	493.81
7" to <8"	0	N/A
8"	0	N/A

**Average volume dredged is based on average area and depth provided specific to dredge sizes*

cubic inch
cubic foot
cubic yard
NO UNIT of MEASUREMENT

INCOME FROM DREDGING

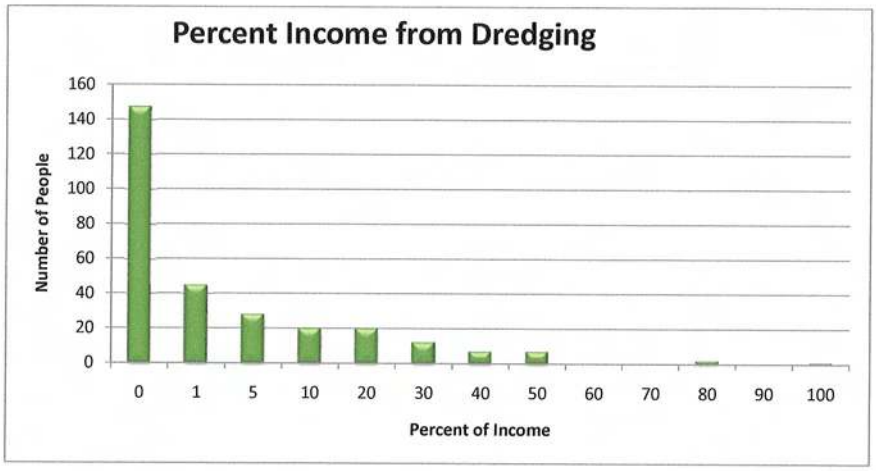
Dredger Self- Identification

	Count	Percent
Recreational Dredger (Not significant source of income)	237	73.83
Semi-commercial dredger (Supplementary source of income)	77	23.99
Commercial dredger (Primary source of income, commercial enterprise)	7	2.18
Total	321	

Portion of Income from Dredging

Percentage Bracket	Bin*	Frequency
0	0	147
<=1	1	45
1<x<=5	5	28
5<x<=10	10	20
10<x<=20	20	20
20<x<=30	30	12
30<x<=40	40	7
40<x<=50	50	7
50<x<=60	60	0
60<x<=70	70	0
70<x<=80	80	2
80<x<=90	90	0
<=100	100	1

*A number is counted in a particular bin if it is equal to or less than the bin number down to the bin below it (Example: the 80 bin contains all values greater than 70 and less than or equal to 80)



Average Percent of Income from Dredging	6.38 %
Median Percent of Income from Dredging	0 %

Suction Dredger Survey Results
Non-California Resident Responses

MERCURY USE AND RECOVERY

Proportion Who Used Mercury And/Or Nitric Acid to Process Concentrates in 2008

	Count	Percent
Used Mercury and/or Nitric Acid to Process Concentrates in 2008	5	1.56
Did Not Use Mercury and/or Nitric Acid to Process Concentrates in 2008	315	98.44

AT HOME
AT RIVER

Removed Mercury?

	Count	Percent
Removed Mercury from Streams During Suction Dredging	192	60
Did Not Remove Mercury from Streams During Suction Dredging	128	40

OPEN Question with NO DATA AS TO LOCATION

Average Amount of Mercury Removed	1.59	Ounces
Median Amount of Mercury Removed	0.28	Ounces

SOUTH YUBA WATERSHED ANALYSIS

Number of Responses for People Dredging in S Yuba:	12	people
Average Time Spent Dredging in S Yuba Basins:	5.21	hours per day
Estimate of Number of Dredging Days in S Yuba Basins (for those surveyed):	443	days
Estimated Dredging Hours in S Yuba Basin:	2307.29	hours
Scaled Upwards (3,200 permits/734 responses=4.359 times)	3108.63	hours

Nozzle Size in Inches

Mean	3.70	Inches
Median	4	Inches
Min	2	Inches
Max	5	Inches

Nozzle Size Distribution

Number Who Used More than One Dredge: 3

Size	Count	Percent
1" to <2"	0	0
2" to <3"	2	13.33
3" to <4"	3	20
4" to <5"	8	53.33
5" to <6"	2	13.33
6" to <7"	0	0
7" to <8"	0	0
8"	0	0
TOTAL	*15*	

*25% Used Multiple Dredges

EXHIBIT #6

Suction Dredger Survey Results

California Resident Responses

LOCATIONS

Counties Visited for Suction Dredging

Counties	Frequency Mentioned
Sierra	115
Plumas	112
Siskiyou	110
Placer	94
El Dorado	68
Trinity	65
Mariposa	64
Tuolumne	62
Nevada	55
Yuba	41
Butte	35
Los Angeles	34
Amador	29
Shasta	29
Calaveras	22
Madera	20
Kern	18
Stanislaus	16
Merced	10
Fresno	8
Humboldt	6
San Bernardino	5
Del Norte	4
Lassen	4
Sacramento	3
Sutter	2
Contra Costa	1
Modoc	1
San Benito	1
Solano	1
Tehama	1
Yolo	1
Total responses	*1,037*

(Over the 732 response total since some survey respondents visited multiple counties)

SUCTION DREDGING INTENSITY BY BASIN

Basin	Estimated Dredging Days	Category	Intensity*
Yuba River	13985.64	>10,000	6
Feather River	12295.07	>10,000	6
American River	9144.46	5,000 to 10,000	5
Klamath River	6839.13	5,000 to 10,000	5
Trinity River	6608.60	5,000 to 10,000	5
Merced River	6531.76	5,000 to 10,000	5
Stanislaus River	5379.09	5,000 to 10,000	5
Cosumnes River	4610.65	2,000 to 5,000	4
Sacramento River	2843.24	2,000 to 5,000	4
San Gabriel River	2766.39	2,000 to 5,000	4
Tuolumne River	2074.79	2,000 to 5,000	4
Salmon River	2074.79	2,000 to 5,000	4
Mokelumne River	1921.10	1000 to 2000	3
Scott River	1690.57	1000 to 2000	3
Fresno River	1613.73	1000 to 2000	3
Kern River	1383.20	1000 to 2000	3
San Joaquin River	845.29	500 to 1000	2
Calaveras River	461.07	0 to 500	1
Santa Ana River	307.38	0 to 500	1
Smith River	307.38	0 to 500	1
Honey Lake	153.69	0 to 500	1
Suisun Bay	76.84	0 to 500	1

**Intensity: 1 is lowest, 6 is highest*

The complete Sacramento Season has been closed since 1991 by the Cantara Spill committee 19 years of "Absolutely NO DREDGING ANYWHERE

YET 2843.24 days reported Absolute worthless misinformation / lies

Suction Dredger Survey Results
California Resident Responses

TRANSPORTATION

Number Who Drive Off Paved Roads

	Count	Percent
Yes, typically drive off paved roads	492	72.14
No, don't typically drive off paved roads	190	27.86

Of 492 "Yes, typically drive off paved roads":

	Count	Percent
Car/Truck	428	86.99
Off-Highway Vehicle	32	6.50
Other	32	6.50

ESTIMATED TRANSPORTATION IMPACTS

Estimated Vehicle Miles Traveled	132.66	Miles
Average number of trips in 2008	14.69	trips
Average Number of Miles Driven in 2008	3897.55	Miles per Year
Average Number of SD Permits Issued (ES-2)	3200	Permits
Estimate of VMT	12472173	Miles per Year

Just residents so less than ½ accura

Camping/Overnight
LOCATIONS STAYED AT WHILE SUCTION DREDGING

Percent Who Stayed Overnight When Dredging

Stayed Overnight	495	People
Didn't Stay Overnight	190	People
Percent Who Stayed Overnight When Dredging	72.26	Percent

Of 495 "Yes, stay overnight":

	Count	Percent
Developed Campground	216	43.64
Undeveloped Campsite	266	53.74
Hotel/Motel	90	18.18
Friends or Family	35	7.07
Other	110	22.22

**Percentages add up to over 100 since multiple selections allowed*

[redacted] 610 days of lost revenue

Types of Developed Campsites Stayed In:

	Count	Percent
Developed State Campground:	99	48.29
Developed Federal Campground:	59	28.78
Developed Private Campground:	97	47.32
Total Who Specified Type of Developed Campground:	*205*	

**Percentages add up to over 100 since multiple selections allowed*

205 day of lost revenue.

Types of Undeveloped Campsites Stayed In:

	Count	Percent
Undeveloped State Campground: Developed Federal Campground:	81	32.4
Undeveloped Private Campground:	131	52.4
Total Who Specified Type of Undeveloped Campground:	79	31.6
	250	

**Percentages add up to over 100 since multiple selections allowed*

250 days of lost revenue

1,065 nights of lost income revenue

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Suction Dredger Survey Results
California Resident Responses

TIME SPENT DREDGING, VOLUME DREDGED

Average number of days spent dredging	30.06	days per year
Average number of hours spent dredging per day	5.24	hours per day
Average Area Dredged	45.97	square feet per trip
Average Depth Dredged	4.44	feet
Average Cubic Feet Dredged per trip	204.15	cubic feet per trip
Average Cubic Yards Dredged per trip	7.56	cubic yards per trip
Average number of trips in 2008	14.69	trips
Average Cubic Yards Dredged per dredger, 2008	111.08	cubic yards

So A 3½" dredge in 150 hours processes 111 cu. yards.

lose a day setup & teardown

lose a day always to setup camp & teardown so 148 days.

Over ¾ cu. yd. a hour absolutely consistantly is akin to that 4' bass or the 12 point buck.

Ego / Hyperbole

DREDGE CHARACTERISTICS

	Count	Percent
Total Who Used Only One Dredge	468	69.64
Total Who Used One Dredge Over 75% of Time	574	85.42
Total Who Gave Information About Dredger	*672*	

Suction Dredge Nozzle Size Distribution for All Dredges

	Count	Percent
1" to <2"	21	2.25
2" to <3"	214	22.94
3" to <4"	126	13.50
4" to <5"	313	33.55
5" to <6"	135	14.47
6" to <7"	98	10.5
7" to <8"	3	0.32
8"	23	2.47
*41% Use Multiple Dredges	*Total=933*	

Average Nozzle Size	3.87	Inches

Dredge Horsepower Distribution

Nozzle Size	Mean	Horsepower Median	Min	Max
1" to <2"	2.81	2.5	1.1	5
2" to <3"	3.37	3	0.5	6.5
3" to <4"	5.20	5	2.5	8
4" to <5"	6.18	6	2	13
5" to <6"	9.90	9	5	18
6" to <7"	15.18	13	4	37
7" to <8"	24	18	18	36
8"	38.17	40	16	65

Overall Average Horsepower:	*7.65*

Suction Dredger Survey Results
California Resident Responses

Average Volume Dredged Per Day By Nozzle Size for Suction Dredges Used 100% of the Time

Nozzle Size	Count	Average Volume Dredged*
1" to <2"	10	42.05
2" to <3"	103	56.4781553
3" to <4"	58	132.141379
4" to <5"	162	137.814814
5" to <6"	70	280.082142
6" to <7"	28	177.07142
7" to <8"	0	N/A
8"	8	1829.625

**Average volume dredged is based on average area and depth provided specific to dredge sizes*

NO UNIT of Volume cu.ft.- cu.in - cu. yard NO relation to nothing

INCOME FROM DREDGING

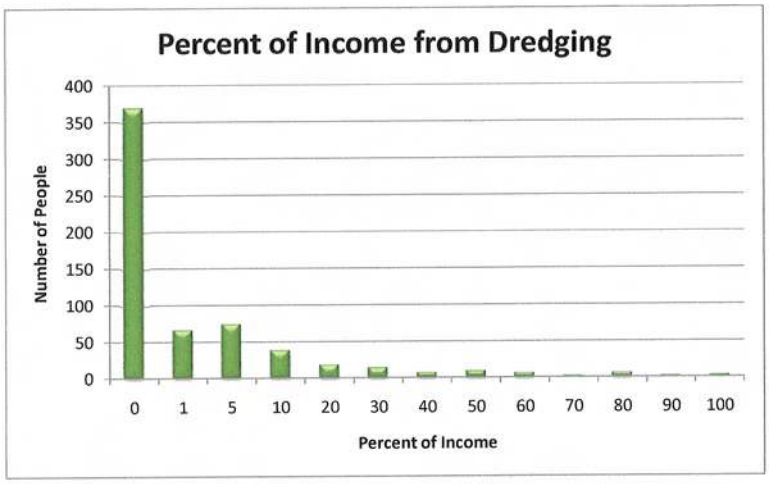
Dredger Self- Identification

	Count	Percent
Recreational Dredger (Not significant source of income)	546	81.74
Semi-commercial dredger (Supplementary source of income)	107	16.02
Commercial dredger (Primary source of income, commercial enterprise)	15	2.25
Total	*668*	*100*

Portion of Income from Dredging

Percentage Bracket	Bin*	Frequency
0	0	369
<=1	1	66
1<x<=5	5	74
5<x<=10	10	38
10<x<=20	20	18
20<x<=30	30	14
30<x<=40	40	7
40<x<=50	50	9
50<x<=60	60	6
60<x<=70	70	2
70<x<=80	80	6
80<x<=90	90	2
<=100	100	3

*A number is counted in a particular bin if it is equal to or less than the bin number down to the bin below it (Example: the 80 bin contains all values greater than 70 and less than or equal to 80)



Average Percent of Income from Dredging	5.70 %
Median Percent of Income from Dredging	0 %

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Suction Dredger Survey Results
California Resident Responses

MERCURY USE AND RECOVERY

WHERE-AT HOME WHERE SAFE & LEGAL

Proportion Who Used Mercury And/Or Nitric Acid to Process Concentrates in 2008

	Count	Percent
Used Mercury and/or Nitric Acid to Process Concentrates in 2008	17	2.49
Did Not Use Mercury and/or Nitric Acid to Process Concentrates in 2008	667	97.51

Removed Mercury?

	Count	Percent
Removed Mercury from Streams During Suction Dredging	380	56.13
Did Not Remove Mercury from Streams During Suction Dredging	297	43.87

Average Amount of Mercury Removed	2.69	Ounces
Median Amount of Mercury Removed	0.5	Ounces

SOUTH YUBA WATERSHED ANALYSIS

Scaled upwards by 54 to 734 X25 factor

Number of Responses for People Dredging in S Yuba:	56	people
Average Time Spent Dredging in S Yuba Basins:	5.54	hours per day
Estimate of Number of Dredging Days in S Yuba Basins (for those surveyed):	4458	days
Estimated Dredging Hours in S Yuba Basin:	24718.02	hours
Scaled Upwards (3,200 permits/734 responses=4.359 times)	107762.48	hours

Nozzle Size in Inches

Mean	3.90	Inches
Median	4	Inches
Min	1.5	Inches
Max	8	Inches

Nozzle Size Distribution

SO WHAT Relevent to what Mindless drivel

Number Who Used More than One Dredge	24

Size	Count	Percent
1" to <2"	1	1.15
2" to <3"	18	20.69
3" to <4"	9	10.34
4" to <5"	37	42.53
5" to <6"	14	16.09
6" to <7"	6	6.90
7" to <8"	0	0
8"	2	2.30
TOTAL	*87*	

**43% Used Multiple Dredges*

day is ruined and extreme caution is utilized to absolutely contain and control all petroleum products. Get gas fumes in your air supply and you'll spend many MANY hours scouring it clean trying to regain clean air. But once again the truth is inconvenient for this absurd EIR attempt and we just love to lose days, ruin costly equipment, and throw up gas fumes all day from diving in gas and cleaning the subsequent mess. You are led to believe a lousy 3,200 dredges with a average 5 hp engine and a 4" nozzle that sips gas at less than ¼ gallon a hour is some horrendous environmental hazard. Well time for yet another comparative analysis as in boaters. Please see example #8. California DMV boat registration statistics. There were in 2000- 928,000 boats and adjusted annually utilizing departmental figures a total of over 1,200,000 in 2010, rounded down to make the numbers smaller. These boats run 15-1,000 hp engines that inhale gas, AND SOME A OIL MIX, at many gallons a hour for at least 26 days a year and 6 hours a day for a total of 187,200,000 hours of NOISE and pollution . But this EIR mandates that we dredgers at 1/1,000,000 the gas and oil usage are a immediate danger and thus must be eliminated and with less than 1/10000th of 1% of the hours dredging also in comparison to boating hours. I've never seen a single boat quieter than a dredge. Sounds travels 16 times faster in water and is magnified expotentialy so noise will drive you crazy under water.

Now let's throw in some hunting facts to bring some true perspective as to our dredging footprint in relation to sheer numbers, noise and pollution. Please see example #9.

There were over 1,630,723 hunting licenses issued under 150 differing kinds of game programs to kill hundreds of millions of varying animals in our once robust state. But this is indeed just the tip of the ice burgh as the stamps issued (read kills performed) is mind bogglingly massive. And the average trips at over 22 a year an average of 4 days and 9 hours a day equals 127,292,616 hours versus the dredgers miniscule dredge hours at less than 1/100th of 1/10000000 of the hours and we do not CRUISE around in gas guzzling ear deafening monster trucks full of guns hooting and a hollering and shooting at anything with a heartbeat , and anything that doesn't also, BUT we diminish their experience by our mere presence?? I think not. Again just more smoke screen and hyperbole to diminish our rights to dredge.

FISHERMEN AND GILL NETS- Instant death to the salmonoid and steelhead species by the millions. But ban the dredgers simply because we have a miniscule capacity and yet AGAIN-show me the tickets for killing salmon, steelhead, tromping through the reds beds, or netting fish EVER?

CDFG website has a great heading called –YUM YUM COME AND EAT'M UP see example #10 and #11 for the current approved slaughter . Please see example #12 In 2005 the CDFG sold 47,397 stamps for steelhead for $236,985 and 30,043 stamps for salmon at $45,064 and 15,890 10 day permits for $504,507 and 153,057- 2 day permits for $2,448,912 and 553,209-1 day permits for $5,670,392 and 11,299 non resident sport fishing permits for $963,239 and 1,224,668 resident sport fishing permits for $39,518,644 for a grand total of 2,035,563 LICENSING TO KILL MULTIPLE FISH ON MANY OUTINGS. This wholesale slaughter put over " $57,507,047 in their coffers and yet even though absolutely no tickets, infractions or other damning evidence is produced ALL DREDGERS are banned simply because a miniscule 3,200 dredgers have the capacity, never proven, to hurt fish?? Or is it really just the old adage of "SHOW ME THE BENJAMINS?" If you have cash the killing is not only approved but

EXHIBIT #7

State & County QuickFacts

California

People QuickFacts	California	USA
Population, 2009 estimate	36,961,664	307,006,550
Population, percent change, April 1, 2000 to July 1, 2009	9.1%	9.1%
Population estimates base (April 1) 2000	33,871,648	281,424,602
Persons under 5 years old, percent, 2009	7.5%	6.9%
Persons under 18 years old, percent, 2009	25.5%	24.3%
Persons 65 years old and over, percent, 2009	11.2%	12.9%
Female persons, percent, 2009	49.9%	50.7%
White persons, percent, 2009 (a)	76.4%	79.6%
Black persons, percent, 2009 (a)	6.6%	12.9%
American Indian and Alaska Native persons, percent, 2009 (a)	1.2%	1.0%
Asian persons, percent, 2009 (a)	12.7%	4.6%
Native Hawaiian and Other Pacific Islander, percent, 2009 (a)	0.4%	0.2%
Persons reporting two or more races, percent, 2009	2.6%	1.7%
Persons of Hispanic or Latino origin, percent, 2009 (b)	37.0%	15.8%
White persons not Hispanic, percent, 2009	41.7%	65.1%
Living in same house in 1995 and 2000, pct 5 yrs old & over	50.2%	54.1%
Foreign born persons, percent, 2000	26.2%	11.1%
Language other than English spoken at home, pct age 5+, 2000	39.5%	17.9%
High school graduates, percent of persons age 25+, 2000	76.8%	80.4%
Bachelor's degree or higher, pct of persons age 25+, 2000	26.6%	24.4%
Persons with a disability, age 5+, 2000	5,923,361	49,746,248
Mean travel time to work (minutes), workers age 16+, 2000	27.7	25.5
Housing units, 2009	13,433,718	129,969,653
Homeownership rate, 2000	56.9%	66.2%
Housing units in multi-unit structures, percent, 2000	31.4%	26.4%
Median value of owner-occupied housing units, 2000	$211,500	$119,600
Households, 2000	11,502,870	105,480,101
Persons per household, 2000	2.87	2.59
Median household income, 2008	$61,017	$52,029
Per capita money income, 1999	$22,711	$21,587
Persons below poverty level, percent, 2008	13.3%	13.2%

Business QuickFacts	California	USA
Private nonfarm establishments, 2008	879,025[1]	7,601,169
Private nonfarm employment, 2008	13,742,925[1]	120,903,551
Private nonfarm employment, percent change 2000-2008	6.7%[1]	6.0%
Nonemployer establishments, 2008	2,688,453	21,351,320
Total number of firms, 2002	2,908,758	22,974,655
Black-owned firms, percent, 2002	3.9%	5.2%

Table 6-10
California Boat Registration Trends

	Actual 1981 (000s)	Actual 1985 (000s)	Actual 1990 (000s)	Actual 1995 (000s)	Actual 2000 (000s)	YR. 2000 Percent Boats	Annual Growth Number 81-00	Annual Growth Rate[1] 81-00	Annual Growth Number 90-00	Annual Growth Rate[1] 90-00	Annual Growth Number 95-00	Annual Growth Rate[1] 95-00
Boats Under 26 Feet												
DMV Registered Boats												
Canoes	1	1	1	1	1	0	4	0.37%	-14	-1.14%	-19	-1.55%
PWC	8	20	68	114	175	0	8,818	17.88%	10,744	9.96%	12,317	9.05%
Power Boats (Incl. Pontoon & Hse. Bts.)	433	491	585	613	605	0	9,026	1.77%	2,014	0.34%	-1,713	-0.28%
Sail Boats	54	56	54	49	43	0	-560	-1.16%	-1,090	-2.24%	-1,149	-2.48%
Row and Other hand Propelled Boats	15	17	17	16	15	0	-21	-0.14%	-199	-1.25%	-293	-1.87%
Other DMV Registered Boats	16	17	19	20	20	0	227	1.27%	141	0.72%	-2	-0.01%
Sub Total DMV Registered Boats	527	603	743	813	859	0						
Documented Vessels				185	326	0.04%	NA	NA	NA	NA	28	12.00%
Total Boats Under 26 Feet	**527**	**603**	**743**	**814**	**859**	93%	**17,511**	2.61%	**11,628**	1.46%	**9,169**	1.10%
Total Boats Under 26 Feet w/o PWC	**519**	**582**	**675**	**700**	684		**8,693**	1.46%	**884**	0.13%	**-3,148**	-0.45%
Boats 26 Feet or Over												
DMV Registered Boats												
Canoes	0	0	0	0	0	0.00%	0	-1.50%	0	11.61%	0	0.00%
PWC	0	0	0	0	0	0.00%	0	NA	0	NA	0	NA
Power Boats (Incl. Pontoon & Hse. Bts.)	26	29	32	29	28	43.09%	146	0.54%	-324	-1.07%	-53	-0.19%
Sail Boats	13	15	17	15	14	21.04%	46	0.34%	-305	-1.97%	-221	-1.52%
Row and Other hand Propelled Boats	0	0	0	0	0	0.07%	1	2.93%	1	3.47%	1	2.90%
Other DMV Registered Boats	1	1	1	1	1	1.85%	16	1.47%	17	1.48%	12	1.03%
Sub DMV Registered Boats	40	46	50	45	44	66.05%						
Documented Vessels				16	22	33.95%	NA	NA	NA	NA	1,207	6.47%
Total Boats Over 26 Feet	**40**	**46**	**50**	**61**	**66**	7%	**208**	2.72%	**-611**	2.88%	**947**	1.50%
All Boats												
DMV Registered Boats												
Canoes	1	1	1	1	1	0.12%	4	0.36%	-14	-1.12%	-19	-1.55%
PWC	8	20	68	114	175	18.93%	8,818	17.88%	10,744	9.96%	12,317	9.05%
Power Boats (Incl. Pontoon & Hse. Bts.)	459	521	616	642	633	68.41%	9,172	1.71%	1,690	0.27%	-1,766	-0.28%
Sail Boats	67	71	71	64	57	6.14%	-514	-0.83%	-1,395	-2.17%	-1,370	-2.25%
Row and Other hand Propelled Boats	15	17	17	16	15	1.61%	-20	-0.13%	-198	-1.24%	-292	-1.85%
Other DMV Registered Boats	17	18	20	21	22	2.32%	243	1.28%	157	0.76%	10	0.05%
Sub Total DMV Registered Boats	566	648	793	858	903	97.54%	17,702	2.48%	10,985	1.31%	8,881	1.01%
Documented Vessels				17	23	2.46%	NA	NA	NA	NA	1,236	6.54%
Total all Boats	**566**	**648**	**793**	**875**	926	100.00%	18,900	2.62%	21,969	1.56%	18,998	1.13%
Total Boats Excluding PWC	**559**	**628**	**725**	**761**	750		10,082	1.56%	11,225	0.34%	6,680	-0.29%
California Boater Population (000's)	2,883		3,029		3,584		37	1.15%	55	1.69%		
Avg. No. Boats Per 1,000 CA Boaters	196.5		261.7		258.2		512.0		396.2			
Total California Population (000's)	23,668		29,760		33,872		537	1.90%	411	1.30%		
Avg. No. Boats Per 1,000 CA Pop	23.9		26.6		27.3							

Note:
1. Annual compound interest rate

Source: CA DMV Records 1981 - 2000
Sailboard and kayaks not included in DMV records

EX #8

EXAMPLE #9

Hunting

Items Reported by License Year
As Of February 28, 2011

Licenses	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Resident Hunting	280,682	270,310	263,218	262,229	265,030	261,511	258,173	254,502	246,419	0
Lifetime Hunting	2,053	2,749	2,793	3,144	3,568	3,887	4,193	4,559	4,874	0
Junior Hunting	25,025	24,897	23,932	22,884	22,442	21,693	20,857	20,596	19,654	0
Lifetime Junior Hunting	N/A	N/A	379	459	516	524	589	636	656	0
Disabled Veteran Hunting	686	793	998	1,195	1,292	1,464	1,550	1,784	1,974	0
Non-Resident Hunting	3,850	3,907	3,954	4,210	4,457	4,351	3,995	3,834	3,315	0
Special 1-Day Non-Resident Hunting	1,110	1,145	1,054	921	938	857	931	730	565	0
Special 2-Day Non-Resident Hunting	2,843	2,946	2,965	3,170	3,425	3,351	2,973	2,952	2,516	0
Sub Total - Hunting Licenses	*316,249*	*306,747*	*299,293*	*298,212*	*301,668*	*297,638*	*293,261*	*289,593*	*279,973*	*0*
Duplicate Hunting License	2,159	1,879	2,036	1,929	1,892	1,449	1,767	1,484	1,492	0
Duplicate Hunter Education Cert. (see no	No Data	No Data	1,310	1,665	1,697	1,700	1,830	1,731	1,775	0
Harvest Information Program Stamp	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	Not Avail.	0
Discontinued Item:										
Hunter Education Validation Stamp	22,225	21,446	20,887	20,130	19,241	16,474	N/A	N/A	N/A	N/A
Resident Bear Tags	22,661	21,483	22,325	22,653	23,771	24,602	25,103	24,439	24,590	0
Non-Resident Bear Tags	257	257	294	283	288	293	265	285	268	0
Sub Total - Bear	*22,918*	*21,740*	*22,619*	*22,936*	*24,059*	*24,895*	*25,368*	*24,724*	*24,858*	*0*
Resident 1-Deer Tag	147,329	142,715	142,443	141,674	138,652	139,165	141,454	141,639	139,236	0
Non-Resident 1-Deer Tag	698	667	849	965	887	871	1,011	955	982	0
Resident 2-Deer Tag	48,576	46,948	45,574	45,279	44,433	45,028	44,286	43,107	40,603	0
Non-Resident 2-Deer Tag	70	60	64	89	85	101	79	62	69	0
Lifetime Deer Tag	Not Avail.	Not Avail.	1,174	1,365	1,519	1,729	1,888	2,036	2,160	0
Duplicate Deer Tag	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Exchange Deer Tag	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
Discontinued Item:										
Duplicate/Exchange Deer Tags	1,842	1,283	1,412	1,198	1,252	1,307	1,248	1,120	556	N/A
Sub Total - Deer Tags	*198,515*	*191,673*	*191,516*	*190,570*	*186,828*	*188,201*	*189,966*	*188,919*	*183,606*	*0*
Resident Wild Pig Tag (See Note Below)	44,744	43,430	45,600	47,400	49,357	45,066	47,476	45,764	40,202	0
Non-Resident Wild Pig Tag	2,293	2,103	1,220	1,299	1,369	1,184	1,060	904	650	0
Lifetime Wild Pig Tags (See Note Below)	Not Avail.	Not Avail.	6,530	7,255	8,285	9,115	9,790	10,610	11,130	0
Sub Total - Wild Pig Tags	*47,037*	*45,533*	*53,350*	*55,954*	*59,011*	*55,365*	*58,326*	*57,278*	*51,982*	*0*
Resident Antelope Tag	269	251	261	268	263	225	228	260	231	0
Non-Resident Antelope Tag	N/A	N/A	N/A	N/A	N/A	2	1	1	0	0

EXAMPLE #9

Hunting

Items Reported by License Year
As Of February 28, 2011

Licenses	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Resident Bighorn Sheep Tag	12	10	12	14	17	21	21	19	21	0
Non-Resident Bighorn Sheep Tag	2	0	1	2	1	0	2	0	1	0
Resident Elk Tag	298	275	316	329	313	374	385	390	418	0
Non-Resident Elk Tag	N/A	N/A	N/A	N/A	N/A	0	4	5	7	0
EAS Applications	42,570	43,951	48,656	52,904	54,516	56,704	57,946	58,620	61,034	0
EAS Nonrefundable Tag Return Proc. Fe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	0
Sub Total - Big Game	*43,151*	*44,487*	*49,246*	*53,517*	*55,110*	*57,326*	*58,587*	*59,295*	*61,723*	*0*
Bobcat Hunting Tags (Set of 5)	2,306	2,316	2,424	2,527	2,836	3,215	3,196	3,271	3,656	0
Bobcat Shipping Tags	382	450	487	723	903	797	670	473	978	0
Sub Total - Bobcat Tags	*2,688*	*2,766*	*2,911*	*3,250*	*3,739*	*4,012*	*3,866*	*3,744*	*4,634*	*0*
Duck Stamp	71,551	69,700	69,882	67,617	69,650	71,223	68,885	68,785	66,440	0
Lifetime Duck Stamp	Not Avail.	Not Avail.	1,477	1,667	1,876	2,067	2,231	2,403	2,565	0
Waterfowl Application	599,008	639,242	667,122	698,212	714,665	778,649	737,285	760,502	739,157	0
1-Day Waterfowl Area Permit	11,843	36,792	36,609	33,913	35,613	36,940	36,759	34,374	33,284	0
2-Day Waterfowl Area Permit	15,473	3,985	3,414	3,047	3,089	3,027	3,190	3,333	3,007	0
Type B Waterfowl Permit	1,153	1,157	1,156	1,068	1,239	1,209	1,073	902	771	0
Type A Waterfowl Permit	2,802	2,917	3,186	3,393	3,381	3,607	3,515	3,870	3,717	0
Upland Game Bird Stamp	201,840	196,908	190,263	189,996	193,888	192,513	185,799	179,786	169,151	0
Lifetime Upland Game Bird Stamp	Not Avail.	Not Avail.	1,471	1,726	1,944	2,116	2,280	2,444	2,588	0
Sub Total - Game Bird Hunting	*903,670*	*950,701*	*974,580*	*1,000,639*	*1,025,345*	*1,091,351*	*1,041,017*	*1,056,399*	*1,020,680*	*0*
TOTAL HUNTING	**1,536,387**	**1,565,526**	**1,596,861**	**1,628,672**	**1,659,349**	**1,721,937**	**1,673,988**	**1,683,167**	**1,630,723**	**0**

Notes:
Duplicate Hunter Education Certificate - May be incomplete because some of the revenue may have been sent directly to Accounting

Resident Wild Pig Tags - 2003 and prior stats are for the number of books sold containing 5 tags (hunters could not buy 1 tag, they had to buy a book of 5 tags), 2004 and after stats are for 1 tag
Lifetime Wild Pig Tags are issued in books of 5. The number of items listed above are the number of tags not books issued.

Example #10

Anadromous Fishes

Anadromous fishes begin their lives in fresh water, migrate to the ocean to grow and mature, and eventually swim back to fresh water to spawn. Some migrate from hundreds of miles out at sea to hundreds of miles upriver, while others only move from brackish water a short distance into fresh water to spawn.

The anadromous fish that most people are familiar with is the Chinook salmon. Because they're fun to catch and very tasty to eat, they are highly valued by both recreational anglers and commercial fishermen. Chinook salmon spawning runs are well-known events, and in some places crowds gather just to watch them in their upstream journeys to spawn. In addition to salmon, there are numerous other anadromous game fishes living in California's rivers, streams, deltas, and ocean waters, including sturgeon, striped bass, trout, and shad.

California provides many unique fishing opportunities for anadromous fishes. The extensive Sacramento-San Joaquin Delta and the San Francisco Bay estuary system both provide anglers with good access to anadromous fishes at various geographic locations throughout the year.

Example #11

California Department of Fish and Game News Release
April 21, 2011

Media Contacts:
Scott Barrow, DFG Fisheries Branch, (916) 445-7600
Larry Hanson, DFG Northern Region, (530) 225-2866
Harry Morse, DFG Communications, (916) 322-8962

California Ocean and Inland Salmon Seasons Set by Fish and Game Commission

The Fish and Game Commission today adopted ocean salmon fishing regulations that allow for a season this year. Inland salmon season regulations were also adopted for the Central Valley, and Klamath and Trinity rivers. This represents a restoration of the traditional salmon fishery throughout California, the first since major closures were enacted in 2008 for both ocean and inland waters.

"It is excellent news that we can set ocean and inland salmon seasons that allow commercial and recreational fishing while still protecting stocks of salmon that need special considerations," said John McCamman, Director of the Department of Fish and Game (DFG). "Anglers will again be able to enjoy salmon fishing, while individuals and communities that rely on income from this industry will hopefully begin to recover from the economic losses they've experienced over the past few years."

The newly adopted ocean salmon sport fishing regulations conform to those adopted by the Pacific Fisheries Management Council. They are now available on DFG's website at www.dfg.ca.gov/marine/oceansalmon.asp.

Please note, on all Central Valley rivers, the daily bag limit and possession limit is two Chinook salmon, and anglers on the Trinity and Klamath rivers must have Salmon Harvest Cards in their possession when fishing for salmon.

Details of the newly adopted inland salmon seasons and regulations for Central Valley rivers and the Klamath and Trinity rivers are as follows:

SACRAMENTO RIVER

Upper Sacramento Zone: Open Aug. 1 through Dec. 18 from the Deschutes Road Bridge near Anderson downstream to 500 feet upstream from Red Bluff Diversion Dam.

may be retained (anglers may still retain a limit of Chinook salmon under 22 inches in length). A weekly DFG status report will be available by calling 1-800-564-6479.

Open to spring-run Chinook salmon fishing from Jan. 1 through Aug. 14 with a daily bag and possession limit of two salmon. The take of salmon is prohibited on the Klamath River from Iron Gate Dam downstream to Weitchpec from Jan. 1 through Aug. 14.

TRINITY RIVER

Open to fall-run Chinook salmon fishing from Sept. 1 through Dec. 31 with a daily bag limit of three Chinook salmon, of which no more than two may be more than 22 inches in length. The possession limit is nine Chinook salmon, of which no more than six may be over 22 inches. The 2011 quota for the Klamath River basin is 7,900 fall-run salmon more than 22 inches in length. Once this quota has been met, no Chinook salmon greater than 22 inches in length may be retained (anglers may still retain a limit of Chinook salmon under 22 inches in length). A weekly DFG status report will be available by calling 1-800-564-6479. The Trinity River main stem downstream of the Highway 299 bridge at Cedar Flat to the Denny Road bridge in Hawkins Bar is closed to all fishing Sept. 1 through Dec. 31.

Open to spring-run Chinook salmon fishing from Jan. 1 through Aug. 31. The daily bag and possession limit is two Chinook salmon. The take of salmon is prohibited from the confluence of the South Fork Trinity River downstream to the confluence of the Klamath River from Jan. 1 through Aug. 31.

All other regulations for bag and possession limits for trout, salmon and other species, as well as general information about restrictions on fishing methods and gear on the above rivers, are available on the DFG website at www.dfg.ca.gov/regulations.

EXAMPLE #12

:PARTMENT OF FISH AND GAME — LA470PR0
BY COUNTY FOR ITEM 20050103 — PAGE 1
STEELHEAD REPORT CARD

STAMPS SOLD QTY	STAMPS SOLD AMT
289	1,445.00
896	4,480.00
87	435.00
2,582	12,910.00
85	425.00
78	390.00
785	3,925.00
3,287	16,435.00
291	1,455.00
131	655.00
101	505.00
6,024	30,120.00
51	255.00
211	1,055.00
59	295.00
102	510.00
12	60.00
707	3,535.00
4	20.00
1,376	6,880.00
23	115.00
8	40.00
1	5.00
488	2,440.00
458	2,290.00
456	2,280.00
90	450.00
852	4,260.00
34	170.00
18	90.00
5,398	26,990.00
25	125.00
31	155.00
98	490.00
341	1,705.00
704	3,520.00
189	945.00
380	1,900.00
36	180.00
1,349	6,745.00
894	4,470.00
3,812	19,060.00
1	5.00
2,346	11,730.00
332	1,660.00
3,330	16,650.00
227	1,135.00
429	2,145.00
599	2,995.00
2,324	11,620.00
22	110.00
104	520.00

DEPARTMENT OF FISH AND GAME
SALES BY COUNTY FOR ITEM 20050103
STEELHEAD REPORT CARD

	COUNTY	STAMPS SOLD QTY	STAMPS SOLD AMT
56	VENTURA	18	90.00
57	YOLO	172	860.00
58	YUBA	317	1,585.00
99	UNDISTRIBUTED INVENTORY	4,333	21,665.00
TOTAL SOLD FOR 2005 STEELHEAD REPORT CARD		47,397	236,985.00

*** END OF REPORT ***

STAMPS SOLD QTY	STAMPS SOLD AMT
394	591.00
631	946.50
25	37.50
288	432.00
38	57.00
18	27.00
453	679.50
2,996	4,494.00
85	127.50
112	168.00
75	112.50
8,697	13,045.50
22	33.00
9	13.50
164	246.00
30	45.00
104	156.00
13	19.50
213	319.50
1	1.50
217	325.50
50	75.00
6	9.00
124	186.00
200	300.00
196	294.00
41	61.50
401	601.50
5	7.50
18	27.00
834	1,251.00
9	13.50
37	55.50
20	30.00
306	459.00
69	103.50
229	343.50
22	33.00
847	1,270.50
162	243.00
2,558	3,837.00
1,479	2,218.50
325	487.50
1,050	1,575.00
166	249.00
7	10.50
154	231.00
2,463	3,694.50
42	63.00
61	91.50
2	3.00
97	145.50

DEPARTMENT OF FISH AND GAME
SALES BY COUNTY FOR ITEM 20050100
SPRT SALMN PUNCH CARD

	COUNTY	STAMPS SOLD QTY	STAMPS SOLD AMT
58	YUBA	43	64.50
99	UNDISTRIBUTED INVENTORY	3,435	5,152.50
TOTAL SOLD FOR 2005	SPRT SALMN PUNCH CARD	30,043	45,064.50

*** END OF REPORT ***

STAMPS SOLD QTY	STAMPS SOLD AMT
997	31,654.75
152	4,826.00
69	2,190.75
45	1,428.75
257	8,159.75
96	3,048.00
35	1,111.25
221	7,016.75
201	6,381.75
288	9,144.00
231	7,334.25
55	1,746.25
195	6,191.25
43	1,365.25
967	30,702.25
202	6,413.50
11	349.25
460	14,605.00
353	11,207.75
268	8,509.00
70	2,222.50
55	1,746.25
535	16,986.25
295	9,366.25
49	1,555.75
37	1,174.75
1,639	52,038.25
75	2,381.25
55	1,746.25
347	11,017.25
219	6,953.25
201	6,381.75
367	11,652.25
171	5,429.25
307	9,747.25
4	127.00
203	6,445.25
661	20,986.75
23	730.25
179	5,683.25
93	2,952.75
91	2,889.25
120	3,810.00
178	5,651.50
60	1,905.00
1,434	45,529.50
22	698.50
547	17,367.25
125	3,968.75
241	7,651.75
47	1,492.25
31	984.25

	COUNTY	STAMPS SOLD QTY	STAMPS SOLD AMT
52	TEHAMA	63	2,000.25
53	TRINITY	205	6,508.75
54	TULARE	87	2,762.25
55	TUOLUMNE	114	3,619.50
56	VENTURA	83	2,635.25
57	YOLO	57	1,809.75
58	YUBA	82	2,603.50
99	UNDISTRIBUTED INVENTORY	1,572	49,911.00
TOTAL SOLD FOR 2005	10-DAY NONRES FISHING LIC	15,890	504,507.50

*** END OF REPORT ***

STAMPS SOLD QTY	STAMPS SOLD AMT
6,578	105,248.00
2,100	33,600.00
1,299	20,784.00
908	14,528.00
1,781	28,496.00
1,255	20,080.00
201	3,216.00
1,782	28,512.00
1,144	18,304.00
2,053	32,848.00
4,713	75,408.00
288	4,608.00
1,137	18,192.00
503	8,048.00
7,501	120,016.00
6,321	101,136.00
834	13,344.00
1,458	23,328.00
1,843	29,488.00
6,820	109,120.00
1,166	18,656.00
621	9,936.00
2,224	35,584.00
1,907	30,512.00
1,253	20,048.00
260	4,160.00
12,544	200,704.00
930	14,880.00
433	6,928.00
2,056	32,896.00
2,679	42,864.00
1,618	25,888.00
3,458	55,328.00
3,954	63,264.00
4,423	70,768.00
104	1,664.00
8,123	129,968.00
4,913	78,608.00
275	4,400.00
2,998	47,968.00
1,127	18,032.00
585	9,360.00
2,622	41,952.00
1,948	31,168.00
410	6,560.00
5,184	82,944.00
404	6,464.00
2,056	32,896.00
1,799	28,784.00
1,800	28,800.00
2,438	39,008.00
286	4,576.00

	COUNTY	STAMPS SOLD QTY	STAMPS SOLD AMT
52	TEHAMA	746	11,936.00
53	TRINITY	1,017	16,272.00
54	TULARE	1,651	26,416.00
55	TUOLUMNE	2,155	34,480.00
56	VENTURA	1,421	22,736.00
57	YOLO	775	12,400.00
58	YUBA	728	11,648.00
99	UNDISTRIBUTED INVENTORY	17,447	279,152.00
TOTAL SOLD FOR 2005 2-DAY SPORT FISH PRMT		153,057	2,448,912.00

*** END OF REPORT ***

PARTMENT OF FISH AND GAME
BY COUNTY FOR ITEM 20050104
ONE-DAY SPORT FISHING

STAMPS SOLD QTY	STAMPS SOLD AMT
11,068	113,447.00
15,771	161,652.75
1,525	15,631.25
1,808	18,532.00
3,092	31,693.00
1,830	18,757.50
231	2,367.75
15,015	153,903.75
2,146	21,996.50
9,292	95,243.00
10,331	105,892.75
350	3,587.50
3,376	34,604.00
481	4,930.25
3,676	37,679.00
12,378	126,874.50
1,285	13,171.25
1,651	16,922.75
1,376	14,104.00
80,492	825,043.00
2,922	29,950.50
8,361	85,700.25
971	9,952.75
6,680	68,470.00
3,157	32,359.25
211	2,162.75
8,617	88,324.25
10,329	105,872.25
1,159	11,879.75
3,056	31,324.00
55,022	563,975.50
3,643	37,340.75
6,494	66,563.50
10,734	110,023.50
10,811	110,812.75
639	6,549.75
22,366	229,251.50
76,881	788,030.25
2,448	25,092.00
9,169	93,982.25
10,922	111,950.50
5,873	60,198.25
9,231	94,617.75
5,636	57,769.00
7,888	80,852.00
4,998	51,229.50
398	4,079.50
2,323	23,810.75
5,850	59,962.50
6,900	70,725.00
4,931	50,542.75
791	8,107.75

	COUNTY	STAMPS SOLD QTY	STAMPS SOLD AMT
52	TEHAMA	4,107	42,096.75
53	TRINITY	678	6,949.50
54	TULARE	3,594	36,838.50
55	TUOLUMNE	2,161	22,150.25
56	VENTURA	19,612	201,023.00
57	YOLO	1,438	14,739.50
58	YUBA	1,372	14,063.00
99	UNDISTRIBUTED INVENTORY	33,662	345,035.50
TOTAL SOLD FOR 2005	ONE-DAY SPORT FISHING	553,209	5,670,392.25

*** END OF REPORT ***

DEPARTMENT OF FISH AND GAME
SALES BY COUNTY FOR ITEM 20050102
SPRT FISH NONRES LIC

	COUNTY	STAMPS SOLD QTY	STAMPS SOLD AMT
00	OUT OF STATE	5,577	475,439.25
01	ALAMEDA	46	3,921.50
02	ALPINE	151	12,872.75
03	AMADOR	22	1,875.50
04	BUTTE	97	8,269.25
05	CALAVERAS	12	1,023.00
06	COLUSA	20	1,705.00
07	CONTRA COSTA	76	6,479.00
08	DEL NORTE	300	25,575.00
09	EL DORADO	166	14,151.50
10	FRESNO	49	4,177.25
11	GLENN	10	852.50
12	HUMBOLDT	80	6,820.00
13	IMPERIAL	79	6,734.75
14	INYO	152	12,958.00
15	KERN	38	3,239.50
17	LAKE	51	4,347.75
18	LASSEN	173	14,748.25
19	LOS ANGELES	92	7,843.00
20	MADERA	13	1,108.25
21	MARIN	24	2,046.00
22	MARIPOSA	125	10,656.25
23	MENDOCINO	82	6,990.50
24	MERCED	18	1,534.50
25	MODOC	44	3,751.00
26	MONO	251	21,397.75
27	MONTEREY	24	2,046.00
28	NAPA	28	2,387.00
29	NEVADA	305	26,001.25
30	ORANGE	61	5,200.25
31	PLACER	69	5,882.25
32	PLUMAS	600	51,150.00
33	RIVERSIDE	70	5,967.50
34	SACRAMENTO	208	17,732.00
35	SAN BENITO	1	85.25
36	SAN BERNARDINO	46	3,921.50
37	SAN DIEGO	249	21,227.25
38	SAN FRANCISCO	8	682.00
39	SAN JOAQUIN	69	5,882.25
40	SAN LUIS OBISPO	33	2,813.25
41	SAN MATEO	13	1,108.25
42	SANTA BARBARA	23	1,960.75
43	SANTA CLARA	56	4,774.00
44	SANTA CRUZ	14	1,193.50
45	SHASTA	304	25,916.00
46	SIERRA	7	596.75
47	SISKIYOU	209	17,817.25
48	SOLANO	56	4,774.00
49	SONOMA	74	6,308.50
50	STANISLAUS	28	2,387.00
51	SUTTER	19	1,619.75
52	TEHAMA	33	2,813.25

	COUNTY	STAMPS SOLD QTY	STAMPS SOLD AMT
53	TRINITY	14	1,193.50
54	TULARE	12	1,023.00
55	TUOLUMNE	22	1,875.50
56	VENTURA	27	2,301.75
57	YOLO	17	1,449.25
58	YUBA	36	3,069.00
99	UNDISTRIBUTED INVENTORY	816	69,564.00
TOTAL SOLD FOR 2005	SPRT FISH NONRES LIC	11,299	963,239.75

*** END OF REPORT ***

DEPARTMENT OF FISH AND GAME
SALES BY COUNTY FOR ITEM 20050101
SPRT FISH RES LIC

	COUNTY	STAMPS SOLD QTY	STAMPS SOLD AMT
00	OUT OF STATE	3,141	99,726.75
01	ALAMEDA	31,719	1,007,078.25
02	ALPINE	937	29,749.75
03	AMADOR	7,184	228,092.00
04	BUTTE	23,903	758,920.25
05	CALAVERAS	7,187	228,187.25
06	COLUSA	2,011	63,849.25
07	CONTRA COSTA	30,944	982,472.00
08	DEL NORTE	3,956	125,603.00
09	EL DORADO	13,505	428,783.75
10	FRESNO	35,329	1,121,695.75
11	GLENN	3,344	106,172.00
12	HUMBOLDT	13,684	434,467.00
13	IMPERIAL	3,287	104,362.25
14	INYO	16,379	520,033.25
15	KERN	35,906	1,140,015.50
16	KINGS	4,951	157,194.25
17	LAKE	8,613	273,462.75
18	LASSEN	5,745	182,403.75
19	LOS ANGELES	77,790	2,469,832.50
20	MADERA	7,840	248,920.00
21	MARIN	10,052	319,151.00
22	MARIPOSA	3,377	107,219.75
23	MENDOCINO	11,432	362,966.00
24	MERCED	11,619	368,903.25
25	MODOC	1,594	50,609.50
26	MONO	18,309	581,310.75
27	MONTEREY	9,945	315,753.75
28	NAPA	7,262	230,568.50
29	NEVADA	11,927	378,682.25
30	ORANGE	39,036	1,239,393.00
31	PLACER	19,136	607,568.00
32	PLUMAS	6,524	207,137.00
33	RIVERSIDE	30,162	957,643.50
34	SACRAMENTO	70,630	2,242,502.50
35	SAN BENITO	1,893	60,102.75
36	SAN BERNARDINO	39,545	1,255,553.75
37	SAN DIEGO	69,875	2,218,531.25
38	SAN FRANCISCO	3,734	118,554.50
39	SAN JOAQUIN	38,354	1,217,739.50
40	SAN LUIS OBISPO	13,752	436,626.00
41	SAN MATEO	9,487	301,212.25
42	SANTA BARBARA	12,628	400,939.00
43	SANTA CLARA	28,039	890,238.25
44	SANTA CRUZ	11,330	359,727.50
45	SHASTA	29,644	941,197.00
46	SIERRA	946	30,035.50
47	SISKIYOU	8,952	284,226.00
48	SOLANO	20,852	662,051.00
49	SONOMA	26,036	826,643.00
50	STANISLAUS	26,826	851,725.50
51	SUTTER	5,519	175,228.25

	COUNTY	STAMPS SOLD QTY	STAMPS SOLD AMT
52	TEHAMA	7,711	244,824.25
53	TRINITY	3,630	115,252.50
54	TULARE	13,376	424,688.00
55	TUOLUMNE	10,594	336,359.50
56	VENTURA	17,655	560,546.25
57	YOLO	6,933	220,122.75
58	YUBA	7,704	244,602.00
99	UNDISTRIBUTED INVENTORY	241,313	7,661,687.75
TOTAL SOLD FOR 2005 SPRT FISH RES LIC		1,244,688	39,518,844.00

*** END OF REPORT ***

encouraged. Now lets get into the many MULTI- MILLIONS of trips, noisy trucks, gas belching oil eating 4 x 4 monsters to access the great outdoors and hundreds of million of camp sights befouled, riparian habitat destruction, reds beds destroyed and the list is never ending –as long as you have the cash that is it's cool we'll just blame then 3,200 dredgers. Please see example #13 The effects of Angler wading on Survival of Trout Eggs and Pre-emergent fry is just yet another miniscule eye opener of what 2,035,563 X 21 trips a year=42,746,832 X 6 day trip average =256,480,938 minimum trips down the road—through the riparian habitat, down the bank and sloshing through the environment. With every step some critter gets squashed , but pay the cash and the right is yours.

In the 1994 dredge committee meetings the sole representative for the environmental movement and fishermen only credential was that he fell into a dredgers hole and almost drowned. Admittedly after a few beers, but damn them dredgers all to hell. To this I could only point out that Mr. M. Ward published a outstanding study called "Adult Summer Steelhead Trout Utilization of Summer Holding Pools in the Middle Fork of The Eel River". This behavior is mirrored and applies to all indigenous fisheries. Please see example #14 as deep pools are a mandate of a healthy fish population. To layover, rest and eat is imperative to all migratory patterns established by all indigenous fish that migrate. Please see example #15 - Furthermore this is also examined in more detail within a article by Dylan Darling on October 23,2009 in the Record Searchlight titled " Salmon stranded by low north state river levels". Guess what- they sure could have used a few 1,000 of the deep, cool dredger holes to layover in and survive. But death to the fish was preferable in 2009 rather than have a few dredgers around. And even now the radical environmental movement is desperately trying to remove the dams on the Klamath and no matter that clean renewable resources for electricity are a state mandate, tear'm out anyway. Please see example #16- In the Record Searchlight June 3,2008 is yet a article by Frank Galusha on the subject" Dam removal advocates ignore lethal consequences". Also losing control of the water flows to facilitate fish migration and river levels does not matter to the radicals, just pretty insanity. Please see examples #17-#18-#19-#20-# 21. 5 articles from the Record Searchlight by Ryan Sabelow , Dylan Darling, Jeff Barnard and the associated press also. This series of articles are in a long time span dealing with the biological mess on the Klamath . The Klamath is already an extremely sick river beset by green algae and deadly bacteria and without controls the insidious bio-organisms will finish off what remains from the fishermen onslaught and the tribes insidious gill netting practices. But yet again we will not allow any dredging.

Gill nets are decimating the fisheries with the total annihilation of the species and even the fishermen are throwing a fit as they pay many hundreds of millions of dollars to fish what's left. I utilized GOOGLE to document this horrendous slaughter and will include $1/1000^{th}$ of the genocide by fishermen AND gill nets. Please see examples #22 and #23 and do so at your own peril as it is NOT pretty. I am also adding an appendix of articles backing my contention that this wholesale slaughter ABSOLUTELY MUST STOP or the species will perish along with us dredgers. Appendix #1-Nov. 06, 2009-The Fishing Report –Gillnets Take Most of the Trinity Salmon Run " . Appendix #2-Also Record Searchlight Nov. 6,2009 by D. Darling titled "Are Gill Nets decimating Klamath and Trinity salmon runs" . Also Sports Illustrated article from June 1979 titled" Clamor Along The Klamath by Robert Jones see appendix #3. Also From the south Bay Riders-a motorcycle club from April 26,2009 titled" Trinity & Klamath Salmon Doomed because

EXAMPLE #13

Effects of Angler Wading on Survival of Trout Eggs and Pre-emergent Fry

BRUCE C. ROBERTS[1] AND ROBERT G. WHITE

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Abstract.—The effects of angler wading on trout eggs and pre-emergent fry in artificial redds depended on wading frequency and stage of egg or fry development and was similar for brown trout *Salmo trutta*, rainbow trout *Oncorhynchus mykiss*, and cutthroat trout *O. clarki*. Twice-daily wading throughout development killed up to 96% of eggs and pre-emergent fry. A single wading just before hatching killed up to 43%. Wading killed fewest eggs between fertilization and the start of chorion softening (except for a short period during blastopore closure when mortality increased slightly). It killed the most eggs or fry from the time horion softening to the start of emergence from the gravel. Restriction of wading could be a. ctive management tool if trout spawning habitat is limiting and angler use is high during egg development.

A variety of environmental factors can limit trout populations. Spawning habitat is known to limit inadromous salmonid populations but rarely limits resident trout (McFadden 1969). As the popularity of trout fishing has increased, however, questions have arisen about the effect of angler wading on trout recruitment. This question was brought to the forefront in Montana when the State Supreme Court granted public access to all flowing waters. The 1983 ruling allows anglers to wade and fish in all streams between the "ordinary highwater marks" if access is gained legally.

In May 1985, the State Legislature directed the Montana Department of Fish, Wildlife and Parks to adopt rules for the management of recreational use of rivers and streams. A process was established by which persons may petition the Fish and Game Commission to restrict public access to streams if probable detrimental effects of recreational use can be demonstrated.

The first petition filed requested that Nelson Spring Creek be closed to recreational use without permission of the landowners because unlimited wading through important spawning areas would adversely affect recruitment to the trout fishery in both Nelson Spring Creek and the nearby Yellowstone River. We designed this study to test the effects of angler wading on the survival of trout eggs and pre-emergent fry. The null hypothesis to be tested was that angler wading would not reduce survival in redds of brown trout *Salmo trutta*, rainbow trout *Oncorhynchus mykiss*, and cutthroat trout *O. clarki* containing eggs or pre-emergent fry.

Methods

Multiple-Wading Experiments

To evaluate the effects of wading on the survival of eggs and pre-emergent fry of brown trout, rainbow trout, and cutthroat trout, we conducted three laboratory experiments at the U.S. Fish and Wildlife Service Fish Technology Center, Bozeman, Montana. To reduce variability inherent in natural stream channels, we experimented in three constructed channels, each 1.2 m wide × 2.4 m long. Each channel was subdivided into eight chambers, 1.2 m long × 0.3 m wide × 0.33 m deep and filled with rounded stream gravel (Figure 1). Washed stream gravel from local gravel quarries was mixed in a portable cement mixer to match the mean particle-size distribution of five McNeil substrate samples (McNeil and Ahnell 1964) from known spawning areas in Nelson Spring Creek (Table 1). Water flow through each chamber was adjusted to 0.14 ± 0.005 L/s. Gradient in each chamber was near 2%. Dissolved oxygen concentrations (mg/L) in the inflow and outflow were measured periodically. A Taylor recording thermograph monitored water temperature continuously. We calculated Celsius temperature units (CTUs)—the sum of mean daily temperatures above 0°C—to monitor development rates and predict stages of development.

To prepare for planting eggs, we placed a 10-cm layer of gravel in the bottom of each chamber

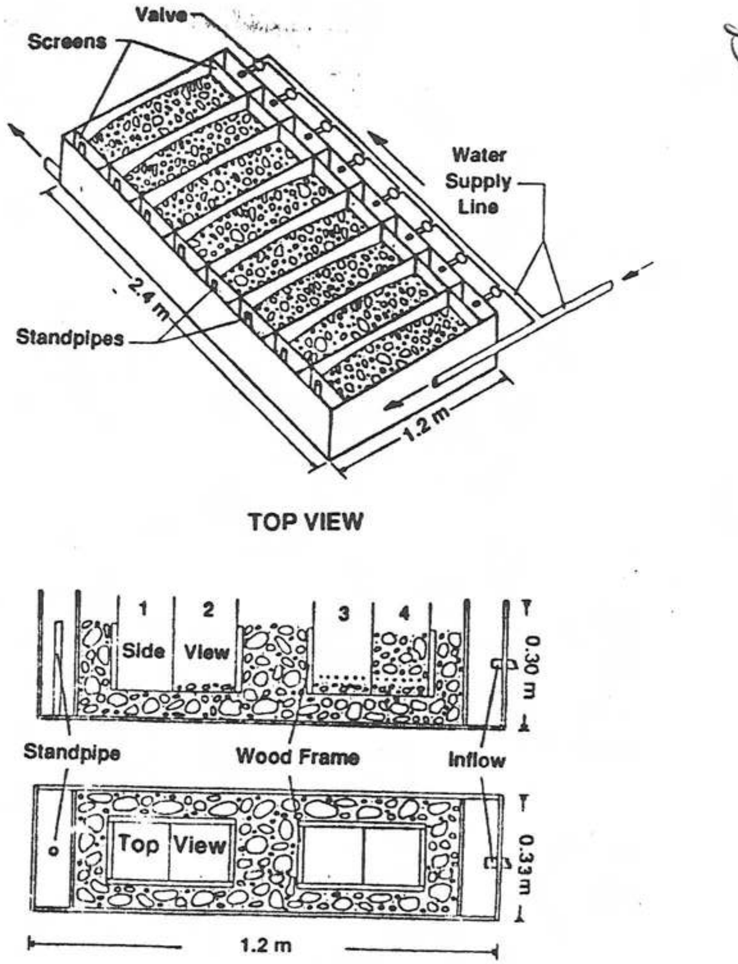

FIGURE 1.—Diagram of incubation chambers and the process used to plant eggs in the substrate. (1) Egg baskets were placed in the substrate in wood retaining frames. (2) A 2-cm layer of substrate was placed in each basket. (3) Two hundred eggs were evenly distributed over the substrate. (4) Egg baskets were carefully filled with substrate mixture before the wood retaining frames were removed.

(Figure 1). Two wooden retaining frames (15.5 cm × 31 cm, inside dimensions) were positioned within each chamber and the area around the frames was filled with the substrate mixture (Table 1). Two open-topped, plastic-screen egg baskets (15.5 cm long × 15.5 cm wide × 15.5 or 23 cm deep) were placed in each set of frames to facilitate the recovery of eggs or pre-emergent fry; tall baskets (23.0 cm) extended above the water surface and were used for treatments that included fry emergence. We placed substrate mix in the bottom of each egg basket to a depth of about 2 cm to prevent eggs from resting on the plastic screen. Fertilized eggs from all females of a given species used in an experiment were thoroughly mixed before they were planted (to eliminate possible differential survival related to egg quality) and were disinfected in a Betadine solution (20 mL/L water) for 15 min. We counted 200 eggs using a 100-hole plexiglas egg counter, and evenly distributed them over the substrate mix in each egg basket. Egg baskets were then carefully filled with substrate mix and the wooden frames were removed. Eggs were buried approximately 15 cm ...

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[2] Cooperators are the U.S. Fish and Wildlife Service, Montana Department of Fish, Wildlife and Parks, Montana State University.

ABLE 1.—Mean particle-size distribution used in experimental chambers as determined from five McNeil ıtrate samples taken from known spawning areas of ›on Spring Creek, Montana, October 1985.

Particle size-class (mm)	Percent
>38.10	30.8
19.05–38.10	32.4
12.70–19.05	9.6
6.35–12.70	10.4
4.76–6.35	2.4
2.00–4.76	5.0
0.76–2.00	3.0
0.42–0.76	3.0
<0.42	3.4

Ottaway et al. 1981). Spawning cutthroat were obtained from tributaries to Yellow- Lake, Wyoming, brown trout from the Har- Lake and Bighorn River, Montana, and rain- ·out from Ennis National Fish Hatchery and on Lake, Montana.

r replicates of six wading treatments were ted for each species of trout to determine ect of angler wading on survival during dif- periods of development (Figure 2).

ient 1: wading between fertilization and the of the eyed-egg stage.
ent 2: wading between the start of the eyed- tage and the start of hatching.
ent 3: wading between fertilization and the of hatching
ent 4: wading between the start of hatching he start of emergence
ent 5: wading between the start of the eyed- age and the start of emergence.
ent 6: wading between fertilization and the of emergence.

tments were randomly assigned to 1 of 24 s to reduce possible chamber effects. The straint was that each treatment would have one of its four replicates in each of the s (channels) of eight chambers. Each rep- nsisted of (and each chamber contained) nd two control (no-wading) egg baskets. nate location effects, we placed control ts near the inflow in two replicates and outlet in the other two. We used a Mann– test (Zar 1984) to examine effects of lo-

g person waded twice-daily and in alter- rections to eliminate effects of uneven istribution between the and toe por- ion. To allow for delayed mortality, we

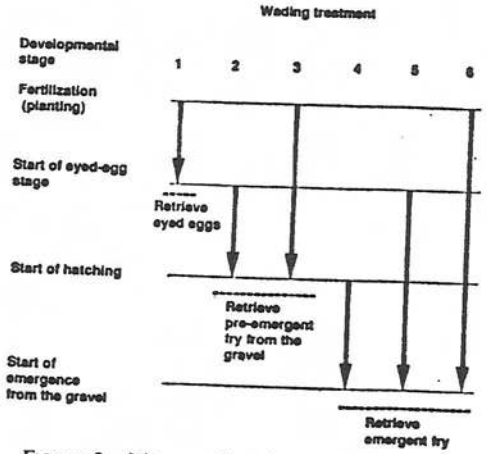

FIGURE 2.—Diagram of wading treatments and egg basket retrieval relative to stages of development.

removed egg baskets 7 d after completion of each treatment. We placed contents of each basket in a white enamel pan and counted dead eggs and (if present) fry. Eggs and pre-emergent fry (<200) that were not retrieved were assumed to have decomposed after being crushed during the experiments.

To determine the percent fertilization and to provide a second type of control for determining mortality unrelated to wading, we incubated eggs, handled identically to those used in wading tests, in a vertical tray incubator. Percent mortality 7 d after the start of the eyed-egg stage, hatching, and emergence from the gravel was used to adjust mortality in both control and test egg baskets. Observations of egg development in the vertical tray incubator (Table 2) were also used to determine when to begin or end the wading treatments. Treatments that were conducted up to fry emergence were ended when the first fry emerged from the gravel in the control egg baskets.

Single-Wading Experiments

To examine channel width ("wall") effects, and effects of one wading event, we conducted additional tests in narrow (0.3 m) and wide (1 m) chambers (Figure 3). Experimental conditions and planting procedures remained the same. The wide chamber was assumed to more closely simulate a natural spawning bed. Brown trout, rainbow trout, and cutthroat trout eggs and pre-emergent fry were tested in experimental design "A"; brown trout and rainbow trout were also tested in experimental

TABLE 2.—Embryonic development rates (Celsius temperature units[a] and days) of cutthroat, brown, and rainbow trout in the laboratory.

Stage of development	Cutthroat trout		Brown trout		Rainbow trout	
	Temperature units (°C)	Days (number)	Temperature units (°C)	Days (number)	Temperature units (°C)	Days (number)
Start of the eyed-egg stage	176	24	240	30	185	24
Hatching						
1%	302	41	433	54	337	44
50%			449	56		
100%	331	45	465	58	374	49
Start of emergence	497	67	710	88	606	80

[a] Celsius temperature units = the sum of mean daily temperatures above 0°C.

design "B" (Figure 3). Each experiment consisted of six tests. Two tests were conducted on green (pre-eyed) eggs, two on eyed eggs, and two on pre-emergent fry for each species. Eggs or pre-emergent fry (from the vertical tray incubator) were placed in the substrate, waded on once that day, and retrieved the following day. Green eggs that were waded on between days 7 and 15 were placed in the gravel before day 7 and retrieved after day 15 because of the extreme sensitivity of eggs during this period of development. Eggs and pre-emergent fry tested during other stages of development were held in a vertical tray incubator for 7 d after treatment to assess delayed mortality.

Percent mortality in four egg baskets after one wading event in the narrow and wide chambers was combined, because chamber width had no significant effect on mortality (Roberts 1988). A Mann–Whitney test (Zar 1984) was used to test for differences ($P \leq 0.05$) in mortality between test egg baskets ($N = 8$) and control egg baskets ($N = 4$) at various stages of development. Hardware cloth surrounded the four control egg baskets that were placed in the 1-m-wide chamber during each test (Figure 3) to protect against possible horizontal substrate movement caused by wading.

Knowledge of the time of blastopore closure for embryos of each species was important in design of single-wading experiments, because embryos are extremely sensitive to disturbance during this developmental period (see Johnson et al. 1983). To determine time of blastopore closure, we gently netted a precounted sample of eggs from a vertical tray incubator compartment and placed them in a 100-mL graduated cylinder of water. The cylinder was covered, inverted, and returned to the upright position three times; eggs were allowed to settl r each inversion. Handled eggs were returne o the same compartment and allowed to develop through hatching. Dead

odically counted and removed. A sample of 300 live eggs was handled daily from fertilization until the start of the eyed-egg stage, except for cutthroat trout (200 eggs were handled). Eggs were incubated at the following water temperatures: brown trout, 7.5°C and 10.5°C; rainbow trout, 8.1–8.4°C and 10.5°C; and cutthroat trout, 7.3–7.5°C.

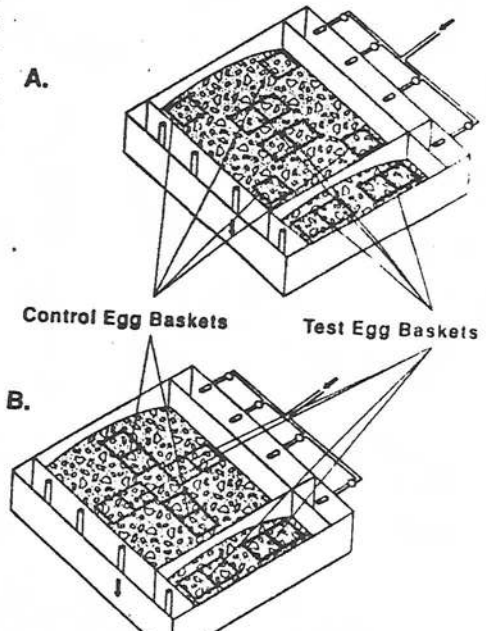

FIGURE 3.—Diagram of the wide (1 m) and narrow (0.3 m) incubation chambers used in wall effect and single-wading experiments. Experimental desi was used in brown trout, rainbow trout and cut t trout experiments. Brown trout and rainbow trout embryos and pre-emergent fry were also tested

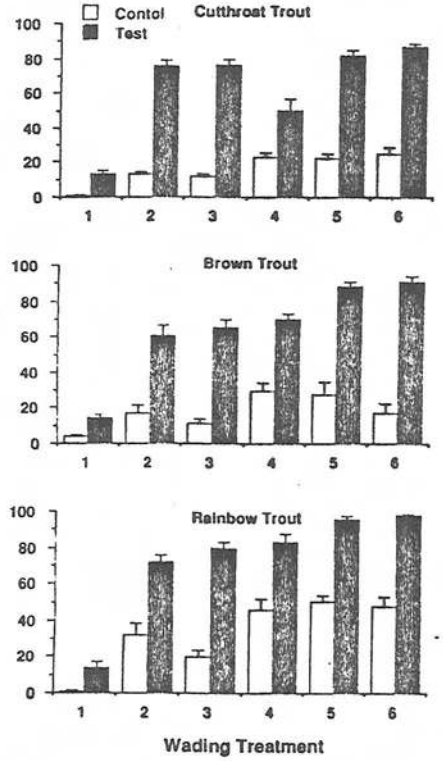

FIGURE 4.—Adjusted mean mortality (%) and standard errors for cutthroat trout, brown trout, and rainbow trout eggs and pre-emergent fry in the control ($N = 8$) and test ($N = 8$) egg baskets exposed to wading treatments 1–6 in the laboratory. Test egg baskets were waded on twice daily. Treatments were as follows: (1) fertilization to start of eyed-egg stage; (2) start of eyed-egg stage to start of hatching; (3) fertilization to start of hatching; (4) start of hatching to start of emergence; (5) start of eyed-egg stage to start of emergence; (6) fertilization to start of emergence.

Results and Discussion

Multiple-Wading Experiments

All multiple-wading treatments resulted in a significant reduction in the survival of trout eggs or pre-emergent fry. Twice daily wading from egg fertilization to fry emergence (treatment 6) killed 83% of eggs and pre-emergent fry of cutthroat trout, 89% of brown trout, and 96% of rainbow trout (Figure 4).

Mortality resulting from treatment 1 (fertilization to the start of the eyed-egg stage) ranged from 1 to 13%, treatment 2 (start of the eyed-egg stage to the start of hatching) killed 52–72% of the eggs, and treatment 4 (start of hatching to the start of emergence) killed 35–69% of the fry. Mortality from treatment 3 (fertilization to the start of hatching) was 1–16% higher than that from treatment 2 (start of the eyed-egg stage to the start of hatching). Although daily wading from fertilization to the start of emergence (treatment 6) always killed more eggs and fry, mortality was only 5–6% higher than observed from treatment 5 (start of the eyed-egg stage to the start of emergence). These results show that wading-related mortality was lowest for green eggs and highest during the eyed-egg and pre-emergent fry stages.

Our simulated spawning bed had no characteristics suspected of biasing results with the possible exception of particle-size distribution in the egg baskets. Chamber width (0.3 m and 1 m) and location of egg baskets relative to inflow and outflow did not significantly influence egg or pre-emergent fry mortality (Roberts 1988). During all experiments, water temperatures (7.3–8.3°C) and dissolved oxygen concentrations (8.9–10.0 mg/L) remained within the optimum ranges for incubation of trout eggs (Phillips and Campbell 1961; Timoshina 1972; Kwain 1975).

The particle-size distribution in egg baskets may not have replicated egg pocket conditions of a newly constructed redd in Nelson Spring Creek. During redd construction, quantities of fine sediment are substantially reduced (McNeil and Ahnell 1964; Everest et al. 1987; Ringler and Hall 1988; Young et al. 1989) and the largest particles remain, forming the egg pocket centrum (Chapman 1988). The centrum commonly contains two to four large gravel particles, which lie on undisturbed substrate (Hobbs 1937; Burner 1951; Gustafson-Marjanen and Moring 1984) and around which the ova are concentrated (Chapman 1988).

The substrate particle-size mix in the incubation chambers and egg baskets (simulated egg pockets) replicated substrate samples taken in known spawning areas of Nelson Spring Creek before spawning occurred. Although this probably resulted in more fine particles in our experimental mix than would occur in a newly constructed redd, we found no evidence that these levels of fine sediment would influence the physical trauma to eggs and pre-emergent fry caused by wading.

We did not systematically place large "centrum" particles in egg baskets. However, because a random sample of the experimental gravel mixture (Table 1) was placed in the bottoms of the egg baskets before eggs were introduced, larger particles were often present. In theory, larger particles could protect associated eggs and pre-emergent fry lying near the undisturbed substrate by absorbing the downward pressure applied by the wader. However, low standard errors associated with mean percent mortality (Figures 4, 5) suggest that the particle-size distributions in the simulated egg pockets had little influence on results.

The solid base of experimental chambers was another potential source of error. The wood floor was covered with a layer of gravel mix, upon which the egg baskets rested. This is not thought to have influenced results because undisturbed substrate beneath natural redds forms a solid base.

In multiple-wading experiments, direct vertical pressure or physical disturbance, or both, killed eggs or pre-emergent fry. Pressure on the substrate directly above the eggs and pre-emergent fry by the 75-kg wader was equivalent to 460 g/cm^2 if all the body weight was evenly distributed over an entire boot, to 644 g/cm^2 if weight was concentrated over the toe portion, or to 1,613 g/cm^2 if all weight was applied to the heel. Substrate compaction of 1–2 cm was observed in each test egg basket (as compared to control egg baskets). It took about seven or eight wadings to reach maximum observable compaction.

Direct mortality from crushing or physical disturbance may result in further mortality caused by the spread of *Saprolegnia* fungi from dead eggs to live eggs (Smith et al. 1985). Compaction of substrate may also result in mortality due to reduced intragravel flow. Coble (1961) showed a close relation between apparent velocity and dissolved oxygen concentrations in intragravel water. Alderdice et al. (1958) demonstrated that dissolved oxygen requirements of trout embryos increase as development progresses. Mortality from reduced dissolved oxygen concentrations should start to increase near hatching, when oxygen requirements of the embryo are highest.

Single-Wading Experiments

Mortality from one wading event ranged from 0 to 43% (compared to control), depending on stage of egg or fry development. Mortality was lowest (0–10%) among green eggs and for eggs between the start of the eyed-egg stage and the start of chorion softening, and highest (5–43%) among pre-emergent fry and for eyed eggs between the start of chorion softening and hatching. Results of rainbow trout embryo and pre-emergent fry tests (Figure 5) illustrate the pattern of mortality found in all five experiments.

Mortality of green eggs waded on once did not differ significantly from that of controls, except when wading occurred during a brief period of increased sensitivity (i.e., blastopore closure). Mortality during this period ranged from 4 to 14%. The blastopore closed between 80 and 100 °C Units

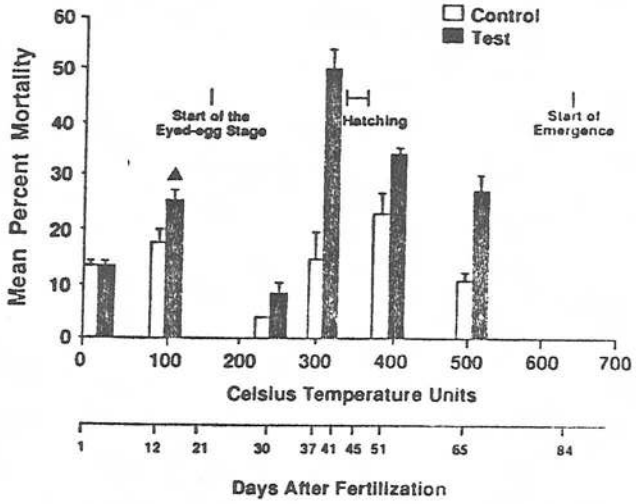

FIGURE 5.—Mean percent mortality and standard errors for control ($N = 4$) and test ($N = 8$) rainbow trout eggs and pre-emergent fry waded on once in relation to Celsius temperature units, stage of development and days after fertilization. The triangle marks the period of blastopore closure.

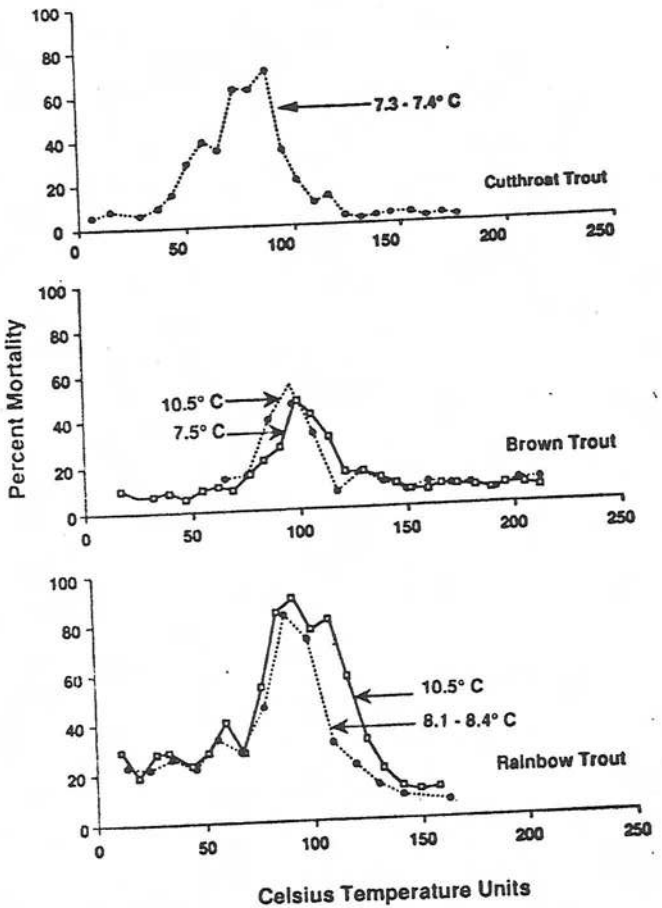

FIGURE 6.—Percent mortality to hatching of cutthroat trout, brown trout, and rainbow trout green eggs incubated two water temperatures and handled daily between fertilization and the start of the eyed-egg stage. Each point presents percent mortality from one handling test.

r brown trout and rainbow trout, and between) and 95 CTUs for cutthroat trout as defined by andling tests (Figure 6). For brown trout and rain- ow trout eggs incubated under different water mperatures, sensitivity to handling was highest -3 d earlier in warmer than in colder water. The TUs associated with highest mortality, however, ere similar. These data support those of Johnson t al. (1983), who demonstrated that green eggs of teelhead (anadromous rainbow trout) undergo a ensitive period between 90 and 110 CTUs.

Mortality ranged from 2 to 43% (compared to ontrols) for eyed eggs waded on once. Mortality was highest between the start of chorion softening (about midway between the start of the eyed-egg stage and the start of hatching) and hatching. Mortality of eyed eggs waded on during this period was always significantly higher than that of controls.

Mortality as high as 19% was observed for pre-emergent fry waded on once. Variability in mortality was relatively high for tests conducted on pre-emergent fry with large yolk sacs (i.e., immediately after hatching); hence we found no significant differences in mortality between control fry and test fry. Tests conducted on pre-emergent fry with small yolk sacs (i.e., nearing emergence) resulted in significantly greater mortality of test fry than of controls.

Differences in observed mortality between wading treatments can be related to trout embryonic development. After fertilization, the permeable chorion allows the perivitelline space to fill with fluids (water hardening). The chorion then hardens, increasing protection of the embryo (Blaxter 1969). Inside the hardened chorion, the embryo is buoyed in a dorsal position by lipid droplets and is free to rotate, reducing effects of environmental disturbances (Knight 1963). About midway between fertilization and the start of the eyed-egg stage, during the period of blastopore closure, trout embryos become more sensitive to physical disturbance (Smirnov 1955; Jensen and Alderdice 1983; Johnson et al. 1983). Post et al. (1974) attributed increased mortality from physical shock during this short developmental period to detachment of the newly formed blastoderm from the perivitelline membrane, which results in yolk contents spilling into the perivitelline space and death of the embryo.

Inherent characteristics of green eggs protect them from the effects of wading, except during the period of blastopore closure. Mortality of green eggs from wading during this period of development was 4–10%, compared to 76–94% from handling (Figure 6). Probably the mortality from wading during blastopore closure is low because there is relatively little physical disturbance in the substrate.

After the eggs are eyed, they remain protected until the start of chorion softening. About midway between the start of the eyed-egg stage and the start of hatching, softening enzymes are secreted into the perivitelline fluid from the ectodermal gland of the developing embryo to soften the chorion for hatching (Blaxter 1969). Eyed eggs hatch prematurely if chorions are ruptured. The high mortality of prematurely hatched fry probably results from lack of physical development necessary to survive and from the crushing of fragile body parts (especially the large yolk sac and the only partly developed circulatory, muscular and skeletal systems). Fragile body parts also make pre-emergent fry vulnerable to angler wading. In single-wading experiments, mortality began to increase about midway between the start of the eyed-egg stage and hatching (which coincides with the release of softening enzymes from the ectodermal glands) and remained high until emergence.

Hayes (1949) and Hein (1907, cited by Hayes 1949) showed that susceptibility of eggs to crushing follows a distinct pattern between fertilization and hatching; the force required to crush salmon and trout eggs is less than 0.25 kg before water hardening, 3–5 kg between water hardening and the start of chorion softening, and less than 1 kg between the start of chorion softening and hatching. These data support the pattern of wading-related mortality that we demonstrated. Before water hardening, trout eggs would be extremely vulnerable to mortality if subjected to wading. However, because water hardening requires no more than 20 min (Leitritz and Lewis 1976), few trout eggs would be affected by human wading. Few eggs were crushed from wading treatments applied between water hardening and the start of chorion softening, whereas eggs at later stages of development were often crushed. Mortality just prior to blastopore closure probably resulted from wading-related physical disturbances.

Management Implications

Managers often restrict angling in time and space to protect spawning trout, but not to protect developing eggs and pre-emergent fry. Where spawning habitat is limiting, benefits of protecting spawners could later be nullified by high-intensity angler wading in incubation areas.

Although spawning is expected to ultimately limit cutthroat trout in the middle Yellowstone River, the present adult population appears to be below "spawning carrying capacity," as evidenced by the low number of spawners, small amount of redd superimposition, and incomplete use of spawning substrate (Roberts 1988). Low spawner abundance probably results from a combination of overharvest in the Yellowstone River and angler wading in spawning tributaries. Restricting angler wading, without more restrictive creel limits, would probably not substantially increase the recruitment of cutthroat trout. In combination, however, harvest and wading restrictions should allow substantial improvements in recruitment.

Wading should be restricted to protect resident trout only in situations where the population is suspected to be limited by insufficient or degraded spawning habitat and where intensive angler wading in spawning areas occurs during the development of the eggs and pre-emergent fry. It seems safe to assume that wading by cattle would result in mortality of eggs and pre-emergent fry at least equal to that demonstrated for human wading. Thus, restricting livestock access may be important if the full benefit of wading restrictions is to be realized.

EXAMPLE #14

ADULT SUMMER STEELHEAD TROUT UTILIZATION OF SUMMER HOLDING POOLS, MIDDLE FORK EEL RIVER, CALIFORNIA.

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Arcata, California

Abstract

Utilization of summer holding pools by adult summer steelhead trout (Salmo gairdneri Richardson) was studied during the summer of 1987, in the Middle Fork Eel River, Californa. Adult summer steelhead behavior in holding pools was compared with characteristics of each pool. Seven pools were observed during five observation trips from June 1 to September 21, 1987. Diurnal patterns of adult summer steelhead behavior and location in each pool were quantified by direct observation techniques.

Adult summer steelhead occupied deep shaded areas of holding pools. Resting and schooling behaviors were described. Migratory patterns of adult summer steelhead were dramatically affected by diver presence in each pool. Numbers of summer steelhead holding in the study pools dropped sharply between 18 to 48 hours after initial diver disturbance in June and July. Numbers of summer steelhead holding in study pools remained constant in August and September, despite diver prescence, when low river flows impeded upstream migration. Most adult summer steelhead migrated at night.

This report should be cited as:

Ward, M... 198?: Adult summer steelhead trout utilization of ... summer holding pools, Middle Fork Eel River, California. I. Proceedings of the 1988 Conference of the ... Chapter ... of the American Fisheries Society, July 10-13, 1988. 10 pp

Summer steelhead trout are a race of anadromous rainbow trout (Salmo gairdneri) which ascend streams during spring and summer months and spawn in winter. During their residence in freshwater, adult summer steelhead inhabit remote portions of rivers. In rivers such as the Middle Fork Eel River, adult summer steelhead prefer to hold in deep, cool and often isolated pools. Because of their summer holding habits and their reputation as a prized fish by anglers, adult summer steelhead are very susceptible to human interaction. This study identified adult summer steelhead behavior within holding pools and the patterns of migration between holding pools as influenced by human interaction.

Relatively little is known about behavior and migration patterns of adult summer steelhead . Roelofs (1983) reported that studies of adult summer steelhead behavior in holding pools have generally been limited to observations made during annual surveys to count adult summer steelhead. Preliminary observations of the effects of human presence on migrating summer steelhead have indicated that diver presence may cause migrating summer steelhead to leave holding pools early in the migrating season (Roelofs 1983). Daily movements and summer steelhead behavior have been documented by Everest (1973), Puckett (1975), Dunn (1981), and Freese (1982).

The Middle Fork Eel River contains as many as 80% of the native summer steelhead in Californa (Puckett 1975). The large runs of adult summer steelhead on the Middle Fork Eel River (1,500 in 1987) and the Middle Fork Eel River's unique summer steelhead holding habitat have led to the protection of this population by the only management plan for summer steelhead in California (Jones and Ekman 1980).

Methods

In May, 1987, seven adult summer steelhead holding pools were studied from June to September, 1987 (Table 1). These pools were located on a 13 km section of the Middle Fork Eel River in Mendocino National Forest. All pools were located above barriers to non-game fish migration. Rainbow trout and Pacific lamprey (Entophenus tridentatus) were the only species of fish present in the study area.

The seven study pools were divided into working pairs. Each pair was observed for 48 h during each observation trip. Five observation trips were scheduled for the summer; in early June, late June, late July, late August and late September. During the late September trip, each pair of pools was observed for only 24 h.

Table 1. Maximum depth, pool length at longest axis and surface area of seven adult summer steelhead holding pools on the Middle Fork Eel River, California, August 22-24, 1987.

Pool Name	Maximum Depth (meters)	Maximum Length (meters)	Surface Area (square meters)
Helicopter	5.7	45	539
Rattlesnake	4.4	120	1123
Pool 39	2.2	80	837
Pool 45	1.9	130	2735
Pothole	3.1	89	1008
Bear Creek	4.7	97	1184
Kidney	4.7	46	342

Direct observation was used to describe summer steelhead distribution, abundance and behavior in the sampled pools. Several categories of behavior were identified in order to quantify certain behavioral types (Table 2). Adult summer steelhead distribution in pools was defined by general locations of summer steelhead with respect to pool characteristics of shade, tributaries, cover and degree of thermal stratification.

During each observation trip, observation of a pair of pools began at 12:00 pm and was repeated at six hour intervals for 48 h. The dusk observation began at 6:00 pm, the midnight observation began at 12:00 am, and the dawn dive at 6:00 am. Six of the pools were observed at nighttime using dive lights but above surface observation and fish counts were omitted because of poor nighttime visibility.

Pool observation began with above surface observation from a vantage point selected to provide the best view of the pool and to minimize fish disturbance. During above surface observation, notes about adult behavior and location were made by two observers. Above surface observations lasted for ten minutes.

After above surface observations, an upstream pass was made through the pool by both observers. Counts of adults summer steelhead were made and fright responses to divers were observed. On the downstream pass, counts were repeated if upstream counts differed by five or more fish. Counts at each time of day for the seven study pools were graphed using three dimensional histograms using the Boeing Graphics software (Compu Classics, version 2.0).

During summer months, river flows decreased and current within holding pools was slight. Deeper holding pools stratified thermally. Water temperatures were measured with a hand held thermometer at the head, tail, surface and bottom of the pools during each dive to determine the extent of thermal stratification.

Table 2. Descriptions of six types of adult summer steelhead behavior in summer holding pools on the Middle Fork Eel River, California.

Behavior	Description
Breaching	Splashed or jumped at the surface of the pool; generally over deep, open water.
Hanging parallel	The majority of adult summer steelhead in a pool rested in groups and would remain motionless for as long as several hours; all fish were oriented in the same direction, usually facing upstream or downstream; hanging parallel occurred in open water at depths varying from 0.5 m to 5 m.
Hanging randomly	Similar to hanging parallel but adult summer steelhead were oriented in seemingly random fashion.
Cruising the mid pool	The majority of adult summer steelhead in a pool swam slowly in a group around the deep, open mid pool at varying depths.
Cruising the whole pool	The majority of adult summer steelhead in a pool swam in a group throughout the deeper areas of the pool but were not restricted to open, mid pool areas.
Exploring	Small groups of individual adult summer steelhead swam deliberately around the extreme margins of the pools, conforming to the contours of the pool, often splashing through water as shallow as 10cm; often seen at the same times as the hanging and cruising behaviors.

Results

Behavior

The most visible behavior was breaching (Table 2). These splashes or jumps at the surface of the pool occurred occasionally throughout the study. The number of breaches for a particular time of day was fairly consistent throughout the study. The numbers of breaches at a pool was also fairly consistent from season to season. Breaching was exhibited in conjunction with all other behavior types and was positively related to numbers on summer steelhead in a pool.

The behaviors of cruising the mid pool, cruising the whole pool and exploring the pool followed no discernable diurnal or seasonal trends of occurrence (Table 2). These behaviors were not specifically associated with any other activity nor were they correlated to any specific pool characteristics.

The summer steelhead were less active at times and could be found hanging motionless in the water column in large groups (Table 2). Groups of hanging adults tended to be in deeper, shaded portions of pools. Of the two types of hanging, hanging randomly was more common. During both activities, however, individual adults would occasionally swim rapidly away from the group and return slowly. When the groups were hanging parallel to each other, the swimming individuals usually left the front of the group and returned to the rear of the group.

Adult summer steelhead exhibited a series of fright responses to divers during observations. At first, the summer steelhead would swim away from divers and would school in compact groups. If sufficiently frightened, summer steelhead would seek cover under rocks, in crevices, along rock walls or in surface turbulence at the heads of the pools. Frightened summer steelhead exited study pools only twice throughout the study. Frightened summer steelhead could be approached and even touched but would leave cover if harassed.

Adult summer steelhead were most often found in the deepest, mid pool areas of the study pools. This distribution was diurnally and seasonally consistent. Exceptions to this pattern occurred when fish migrated or explored or cruised the whole pool. Cruising or hanging adults were frequently seen at depths ranging from 0.5 m to the bottom of the pool in open water away from ledges or boulders. Most hanging adults occupied the upper 2 m of the pool while most cruising adults were closer to the bottom of the pool.

Migratory Patterns

During June and July, number of adults in each pool invariably decreased over time (Figure 1). Mass migration of adults from study pools did not occur in August or September, but summer steelhead were observed unsuccessfully attempting to ascend upstream barriers in the August. In September, numbers of summer steelhead in all pools remained fairly constant and were approximately equal to the numbers in the pools at the end of the August trip (Figure 1).

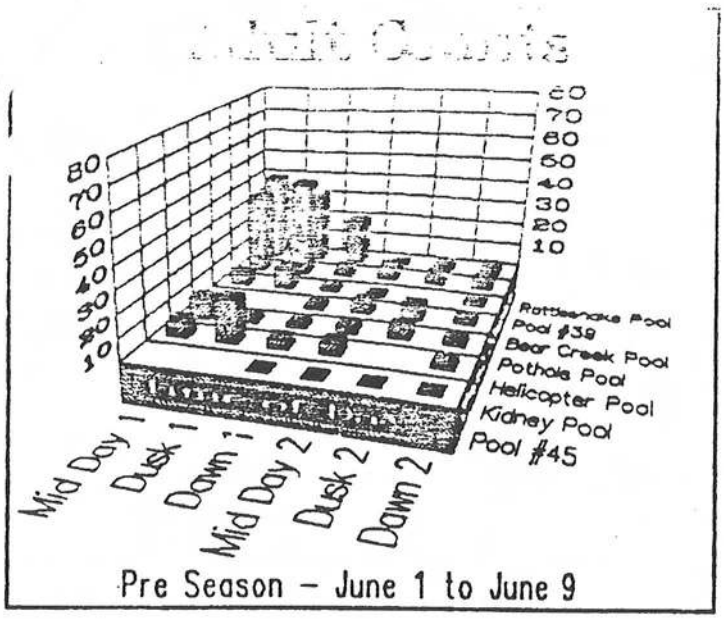
Evidence that low flows impeded migration was noted at several pools. At Helicopter Pool during a dawn dive in August, four summer steelhead attempted to ascend a set of riffles that had been ascended by summer steelhead in July. In August, these summer steelhead were impeded by water depths a low as 10 cm at the base of a small fall.

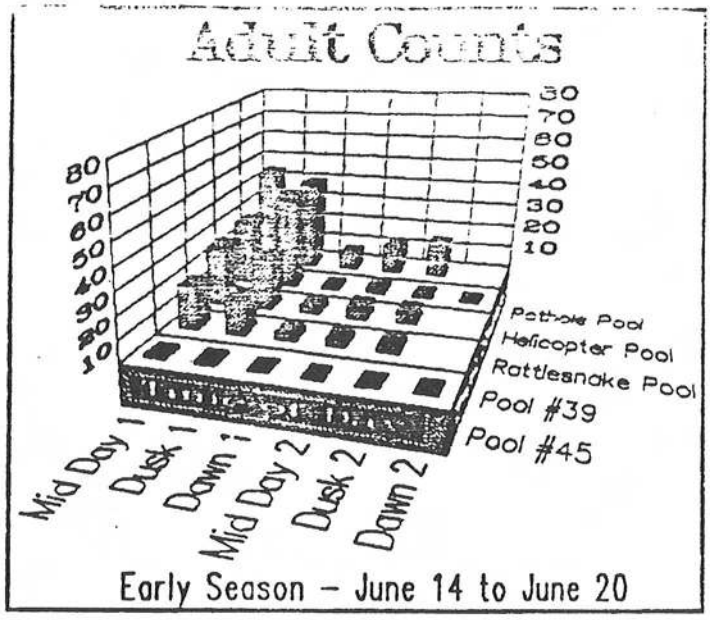
During preparation for a dawn dive at Bear Creek and Kidney Pools, a pair of summer steelhead were seen attempting to ascend riffles between these two pools. About two hours later, one adult was found stranded in a crevice between two rocks. The head, back and one half of its left opercle were out of the water and were dry. This fish was released from the rocks but appeared severly stressed.

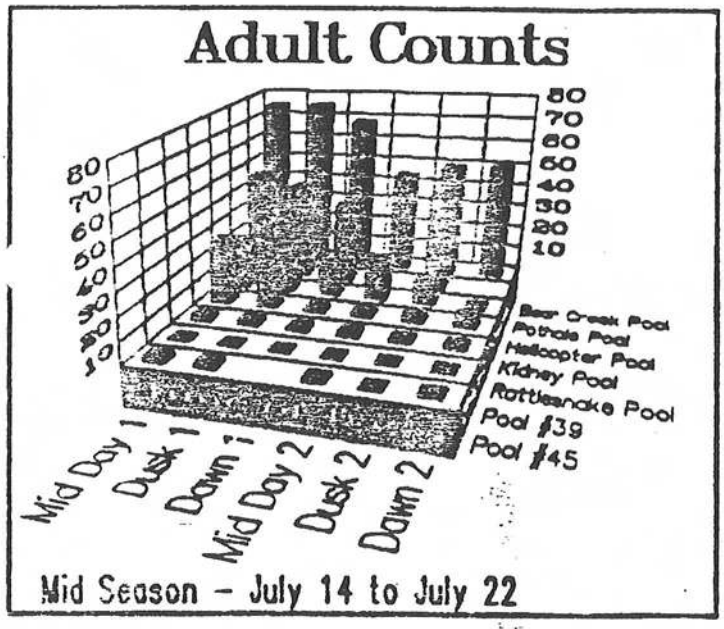
The largest decrease in numbers of adults in study pools generally occurred between the dusk and the dawn dives (Figure 1). In many instances, some summer steelhead would return to the pools by mid day but the numbers never reached the original levels. Migration of adults at night and early morning were confirmed from above surface observation and from dives in river reaches adjacent to study pools. Summer steelhead were found in riffles near Helicopter Pool during two night observations in early June. In both instances, summer steelhead had not been in these riffles during the dusk observation. Upstream migration of summer steelhead from Helicopter Pool to another pool was observed during a dawn observation in July.

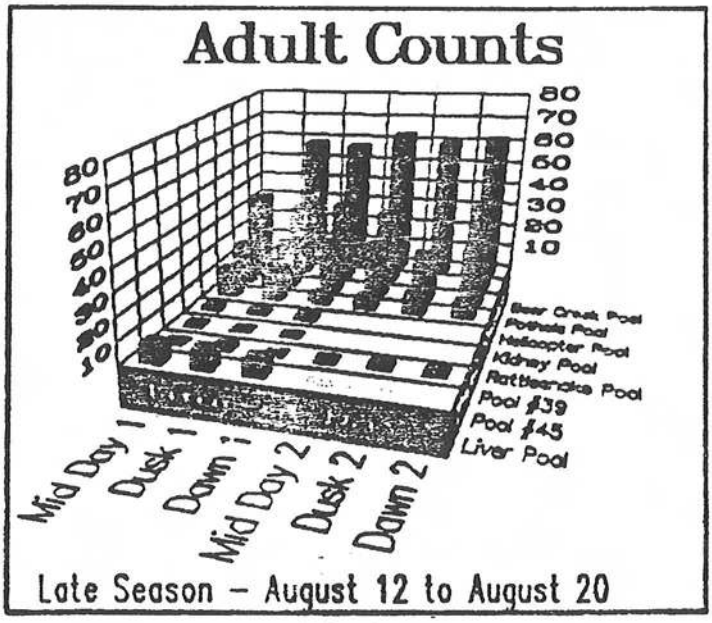
Several observations at Bear Creek and Kidney Pools demonstrated adult movement during the night and early morning. Three summer steelhead were observed entering Bear Creek Pool during a night observation in July. During both night observations in July at Bear Creek Pool, summer steelhead were found at the head of the pool rather than in the deep mid pool. At Kidney Pool during the early June trip, a summer steelhead was found in the riffles immediately below the pool on the second night dive.

Evidence from the California Department of Fish and Game 1987 Summer Steelhead Survey indicated an uncommon distribution of adults in the Middle Fork Eel River. Pools adjacent to the study pools seemed to have more summer steelhead than usual and that the study pools held fewer adults than in past years (W. E. Jones, California Department of Fish and Game, personal communication).









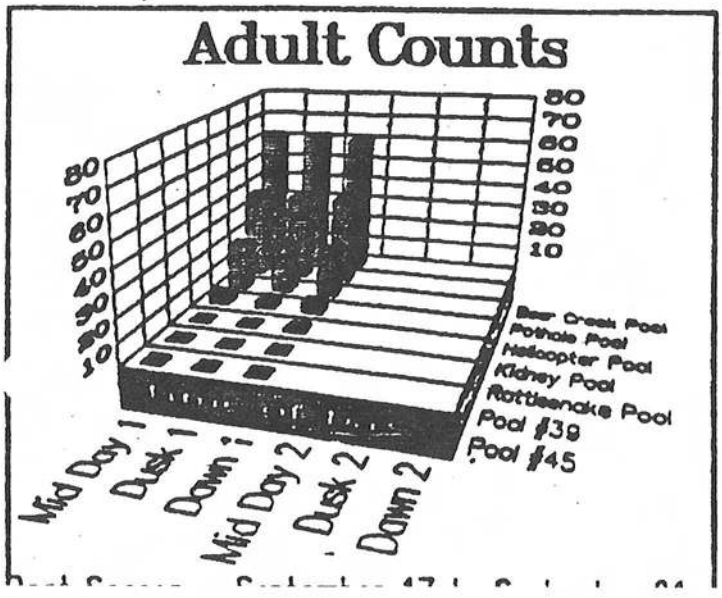


Figure 1. Numbers of adult summer steelhead with respect to time of day for five observation trips from June through September 1987 at selected study pools on the Middle Fork Eel River, California.

Discussion

The method of categorizing adult summer steelhead behavior through above surface observation had mixed results. The vantage points selected for most pools afforded good views of the pools. Wind chop, glare and shade, however, often prevented accurate above surface observations.

The different types of behavior were distinct and easily recognized. The apparent lack of behavioral patterns with respect to pool characteristics, time of day, and season, however, frustrated interpretation.

Similar types of behavior have been observed in other studies. Dunn (1981) described holding behavior similar to what I called hanging parallel and he surmised that this behavior was a positive rheotactic response. Occasionally, summer steelhead that were hanging parallel left the front of the group and returned to the rear of the group (Dunn 1981). This behavior was observed by Dunn in fast water, however, while the summer steelhead observed in this study were in pools with little current. Freese (1982) observed summer steelhead cruising the mid pools but indicated that this behavior was not the predominant type.

The fright responses to divers described in this study have also been reported in other studies (Dunn 1981; Freese 1982; Roelofs 1983). The ease with which one can approach frightened summer steelhead leaves these fish extremely vulnerable to stressful harrassment and illegal harvest. Although the biological significance of illegal harvest to summer steelhead populations is not known, fishery managers of summer steelhead populations are concerned and identify illegal harvest as a primary threat to summer steelhead (Jones 1980; Roelofs 1983).

Distribution of adult summer steelhead within pools during this study was much broader than reported is other studies. Freese (1982) found that summer steelhead were rarely found more than one meter above the substrate of the pool while summer steelhead that I observed were frequently found at all depths. Dunn (1981) found that summer steelhead exhibited a strong positive thigmotactic response to pool bottom and pool structures and were rarely seen in open water.

Evidence from direct observation and repeated adult summer steelhead counts in each pool strongly indicates that diver presence induced summer steelhead migration from study pools in June and July (Figure 1). In many cases, numbers of summer steelhead decreased dramatically within 18 to 24 h after the initial dive. Few or no summer steelhead were present in most study pools 48 h after the initial disturbance. Mass migration from study pools ceased in August and September, presumably due to decreased river flows. Observations of summer steelhead response to diver presence

in the Middle Fork Eel River in 1982 by M. Lorenz, as reported by Roelofs (1983), agree with these findings.

The phenomenon of diver induced migration may have significant implications. Human impact over periods of time as short as 18 to 48 h may force adult summer steelhead to leave preferred pools. Low river flows may force displaced summer steelhead to hold over in pools with less than optimal qualities. Also, additional stress is placed on adults migrating at lower flows.

It is unknown whether the migration of adult summer steelhead at night and early morning is natural or a result of diver disturbance. Mass migration during the first night of observation at a pool may be a delayed response to the initial mid day and dusk dives. Adults located in river areas other than pools during late morning or afternoon, however, were observed only on one instance during the summer. Also, observations of summer steelhead migration on the second night and second dawn observations of any particular observation trip further suggest that these may be the preferred times for adult summer steelhead migration.

Puckett (1975) observed several summer steelhead moving upstream at night in the Middle Fork Eel River. Everest (1973) in the Rogue River and Dunn (1981) in Wooley Creek found that summer steelhead migrate during the day. It has been speculated that cooler temperatures at night may be the reason summer steelhead migrate at night in the Middle Fork Eel River (Roelofs 1983). The Rogue River in southern Oregon and Wooley Creek in northern California are similar to the Middle Fork Eel River in many respects, however, suggesting that the anomolous night migration of summer steelhead in the Middle Fork Eel River may be caused by other factors.

Existing populations of summer steelhead in California occur primarily in wilderness areas suggesting that the remoteness of these native streams may be as responsible for their presence as other stream conditions (Roelofs 1983). This study has demonstrated the vulnerability of summer steelhead to human activity. As human development continues to encroach into wilderness areas and watersheds containing summer steelhead, fishery managers will have to be even more cautious about the conflicts between humans and summer steelhead.

Acknowledgements

This study was part of a study of the formation of cold pools and their utilization by anadromous salmonids in northern California (Project RWU-4351). This was directed by Dr. Tom Lisle and Lynn Decker of the USDA Forest Service, Pacific Southwest Forest and Range Experimental Station. Special recognition is due to Dr. Terry Roelofs, Bob Easton and Wendi Jones for their comments, criticisms and assistance in the field.

of Indians" appendix #4. North Coast Journal, by Gillis, from Nov. 12, 2009 titled " Sport Fishermen accuse tribes of bogarting the fall salmon run" appendix #5. Record Searchlight Oct.23,2010 by John Spencer ,titled "Steelhead :Truly the prize of freshwater" appendix #6. Record Searchlight By D. Darling on Dec 9,2009 titled " Are gill nets decimating Klamath and Trinity salmon runs". appendix #7.

No matter what the user group is, they are all universally repulsed by the cornucopia of multiple nets strung across the trinity and Klamath river confluence. These photos show row upon row upon row of gill nets and no fish can possibly migrate up either river. I do not care who, what, or where you are, NO ONE HAS THE RIGHT TO SLAUGHTER A SPECIES to all our detriment no matter what" rights" insanity they want to throw. Best story of the bunch was how the tribes got caught with thousands of extra fish but because someone "forgot??" to file the harvest plan nothing happened?? Sic sic sic.

To now add insult to injury in all it's benevolence the CDFG has gleefully announced that summer salmon fishing is OK'd for the Feather, Sacramento and American, and the Chinook season is also opened now that we got rid of them insidious dredgers. Now all is bright and let the wholesale slaughter begin anew. Please see example #24 But this failed EIR mandates we do not have the right to dredge which has never produced a ticket for harming a single salmon. This is not application of law it's downright discrimination to serve the massive environmental lobby who think even 1 dredge is too much in THEIR RIVERS as gleefully announced at the SEIR meeting in Redding.

Thankfuly a group of water districts have chosen to sue over this insane opening of the salmon killing season. They too feel the bite as it costs the farming folks hundreds of millions in mitigation and lost crops but YAHOO let the killing begin says the CDFG. Example # 25.

KARUK VS THE 49er Club

This storm of lawsuits has drug on for many years through many courts in many jurisdictions. Finally an Alameda County judge gave them what they wanted. If you shop long enough, with deep enough pockets you eventually win, especially in the SF bay area. This EIR mandated by the court was in relation to the Klamath River basin but lo and behold since they were at it was decided, lets just throw in a whole state ban and do away with them dredgers everywhere no matter that over 90% of the state never even saw a salmon, just a good excuse to serve their lobbyist masters with deep pockets.

Well the ungodly PR from the 49ers has indeed spread it's cancer to the whole state and nation. It may come as a shock to the Karuk, and many others, is that the majority of the miners also oppose such perversion of the mining laws. Gobble up 40-50-60 80 miles of river and people are going to get mad. Add in desecration of Indian burial sights, desecration of holy ceremonies, EPA mandating of a closure of Happy Camp and a hazardous waste site mercury cleanup, to the halls of congress with the headlines" Massive Land Grab on Western Rivers". The mining laws were completely changed to reclassify all claims over 10 to a business status, charge rent for under 10 and increase claim filing fees by 1000 %. And currently the Oregon Governor appeals to the federal government for Relief from massive influx of 49ers as advertised on their website. The Rogue gets invaded by California dredgers and on and on and on. I am adding to the appendix #8, a 16 page article from the North Coast Journal August 30, 2007 that mirrors the Karuk stance, the miners stance and the horrendous troubles brewed up by huge clubs

EXAMPLE #15

THE RECORD SEARCHLIGHT
redding.com

Salmon stranded by low north state river levels

By Dylan Darling

Friday, October 23, 2009

Rivers running through a pair of pastoral valleys in far Northern California became but trickles - if anything at all - this year, raising concerns about salmon runs and fueling debates about agricultural water use.

Stretches of the Scott River went completely dry this year, and parts of the Shasta River came close, said Mark Pisano, senior biologist with the California Department of Fish and Game's Yreka office. Flows along the Shasta dropped to 5 cubic feet per second, the lowest in 72 years' worth of data for the river, he said.

"That's low," he said.

Salmon attempting to swim upstream to spawn were trapped in isolated pools along the shallow rivers. Although recent rains have revived the rivers, concerns about their futures persist.

Like most water use debates in the West, the issue in the Scott and Shasta valleys comes down to balancing agricultural water pulled from rivers and the ground with what is left for fish. Farmers and ranchers say they have taken steps to reduce their water usage for their own and salmon's future, but environmental groups say more needs to be done to ensure regular water flows each year.

Concerned about a DFG plan that would allow incidental harm to salmon and their habitat by agriculture in the two valleys, a group of environmental and fishing groups Thursday filed a lawsuit against the state agency. The groups claim the program would lead to more water going to farms and ranches and less left in the dwindling rivers for fish.

Environmentalists and biologists point to the dry riverbeds this year as a warning bell for the future of the already endangered coho salmon and its unlisted cousin, the chinook salmon.

Tributaries to the Klamath River - once home to the third-largest salmon run on the West Coast - the Scott and Shasta rivers are considered critical spawning habitat in the effort to restore the coho and chinook salmon.

In the 1930s, state scientists counted as many as 80,000 salmon swimming up the Shasta River, Pisano said. So far this year, fewer than 4,000 salmon have made the swim.

Historical data isn't available for the Scott River and a counting station is just now being installed, he said. If conditions were perfect, he said each river could support 80,000 salmon.

This year, conditions were far from perfect.

The low flows and stranded chinook salmon caused concerns about a potential fish kill, or die-off. Pisano said pools filled with stranded salmon could serve as incubators for disease.

The start of the storm season this month likely remedied the situation for now, refilling the rivers and aiding the salmon, said Gareth Plank, 52, a rancher from Etna. The Scott River runs through his 1,000 acres.

He said the up and down flows are the river's natural rhythm, with the rains providing the upbeat.

"That brings the river levels up and the salmon up," he said. "You need those fall rains."

Although the end of growing season in Siskiyou County and recent rains have increased flows down the Scott and Shasta rivers, worries continues about low flows in the future.

"While we are not experiencing fish kills in either of those two watersheds, we are feeling we just squeaked by," said Erica Terence, a spokeswoman for Klamath Riverkeeper, an Orleans-based nonprofit watchdog group aimed at restoring the river and its tributaries.

Diversions the problem?

While there have been three consecutive dry years in the Scott and Shasta valleys, it's agriculture that is putting the rivers in peril, said Scott Harding, executive director of Klamath Riverkeeper.

"The irrigation withdrawals are very clearly what is causing the extremely low flows on both rivers," he said.

Harding said each valley has about 30,000 acres of irrigated farm and ranch land.

Being in high-elevation valleys, with short growing seasons, growers in both valleys focus on alfalfa, pasture and small grains, said Steve Orloff, a farm adviser with the University of California Cooperative Extension in Siskiyou County.

Much of the crops are grown to be eaten by cattle, said Dan Drake, another extension farm adviser. In the two valleys, there are about 40,000 head of cattle combined.

While some agricultural acres were put under conservation agreements in recent years, more agreements and less water use are needed, Terence said.

CG

She said the group was concerned about the possibilities of a fish kill this year and doesn't want to have to wait for such a dramatic event to cause changes to water use in the valleys. The group formed about three years ago and, while focused on the removal of dams on the Klamath River, it is also working to improve conditions on the Scott and Shasta rivers.

That improvement will take a major shift in the resource management philosophies in both valleys.

"I don't think that means the end of farming," Terence said. "I think that means that farming will look different."

A small percentage

Those who use Scott and Shasta river water for their crops and livestock say they use it wisely and that they aren't to blame for the low flows this year.

Jim Morris, 49, president of the Siskiyou County Farm Bureau, said his wife's family has farmed there for about 200 years. During that time, the river has often gone dry during years of light rain and snowfall.

"The river does go dry and it has gone dry," said Morris, who grows on about 400 acres. "It is a natural process and it just happens."

Morris said farmers and ranchers have taken steps to improve the efficiency of their irrigation systems - such as shifting from flooding fields to sprinkler systems - saying it's in their best interest to be conservative with water use.

"We'd like to be around for another 200 years," Morris said.

Plank, 52, the Etna rancher who also farms the Scott Valley, said farmers and ranchers use only 4 percent of the water - 35,000 of 750,000 acre-feet - that flows through the valley each year. An acre-foot is enough water to cover an acre of land a foot deep in water.

And he said that water is used in the summer before the salmon start their fall run up the rivers. Even if the rivers are lowered by agricultural use, he said fall rains usually revive them before the salmon come. That rhythm makes the valleys conducive for growing.

"This is actually an ideal place for agricultural," Plank said.

Farms and fish

The question remains whether dry years will continue.

Terence of the Klamath Riverkeeper argues that less groundwater should be pulled for agriculture and the county should stop issuing any new groundwater permits.

Morris and other farmers and ranchers argue they can make changes to water use at the time when it's most beneficial to salmon.

That includes agreements to forgo late season and stock water use, he said.

Members of the Scott Valley Irrigation District and the Scott River Water Trust signed a deal earlier this month that will keep about 350 acre-feet in the river this fall, said Sari Sommarstrom, a consultant for the trust. In the deal, the trust is paying to keep water out of stock troughs and in the rivers.

A nonprofit group, the Water Trust is paying $21 per acre-foot - or about $7,350 - for the water in the agreements, Sommarstrom said.

"That will change things," she said.

While such agreements keep water in the river, Terence said bigger changes must be done to truly improve conditions for fish. Those could be a shortening of the growing season, changes to which crops are grown and a shift of philosophical focus to the protection of fish.

"We are going to need a lot more of that to be effective," she said.

Reporter Dylan Darling can be reached at 225-8266 or ddarling@redding.com.

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EXAMPLE #16

THE RECORD SEARCHLIGHT
redding.com

Dam removal advocates ignore lethal consequence

Frank Galusha

Tuesday, June 3, 2008

Marcia Armstrong's concerns about sediment dangers behind the Klamath Dams deserve more scientific scrutiny, not ridicule as provided by Craig Tucker's "Speak Your Piece" response last Tuesday, but let's not ignore the other salmon-killing consequences that could follow dam removal.

Removing the lower four dams might harm winter and spring Chinook runs, depending on rainfall and runoff, and could destroy what is left of the Chinook fall run.

Without sufficient water storage and the means of regulating its flow (Iron Gate is the regulator) we can't know there will be enough water, especially during droughts. Shallow Upper Klamath Lake would not suffice. It is much warmer today than it was 100 years ago (pre-Klamath Basin reclamation) when, in some years, the Klamath River actually went dry. The Klamath is and always has been upside-down (warm at the top, cold at the bottom). Today's much warmer Upper Klamath Lake water would be even more lethal to salmon, if they made it that far. No wonder the Klamath Tribe ate suckers.

Tucker knows his "campaign" is based on no science or junk science. On Nov. 16, two members of the National Academy of Sciences committee studying feasibility of Klamath dam removal told the U.S. Fish and Wildlife Service and the California Resources Agency just that. In their two-page, six-point critique, UC Davis Center for Watershed Sciences professors Peter Moyle and Jeffrey Mount summed it up with this italicized sentence: "Most notably, there has not been a systematic, comprehensive assessment of the impact of dam removal on native fish populations of the Klamath, particularly salmonids."

We must also consider the other potential losses. Iron Gate fish hatchery, relatively green hydropower, flood control, farmlands, businesses and communities northeast of Hornbrook and in the upper basin have value, too. And there are other facts: Naturally occurring phosphorous in this volcanic region is responsible for most of the algae buildup, not farmer's fertilizers. Pacifi- Corp is conducting nine separate studies that might lead to improvement in water quality. That is a better use of science and our resources. Less fish netting, improvement of existing habitat and some reduction of predators are also positive steps.

Why does Tucker go negative by maligning legitimate arguments against dam removal? Because it is not about the fish! Dam removal advocates are playing on emotions in order to perpetuate their "full employment act" and the feast of tax dollars, grant money and donations from a gullible public. They should be careful what they wish for. The law of unintended consequences awaits those who promote pipe dreams.

Frank Galusha lives in Shingletown.

EXAMPLE #17

THE RECORD SEARCHLIGHT
redding.com

Algae plagues Siskiyou water

Public warned to avoid lake growth

By Ryan Sabalow

Saturday, July 7, 2007

For the third straight summer, potentially deadly algae is blooming in Iron Gate Reservoir and Copco Lake, prompting health warnings from environmental officials and calls from tribal leaders to demolish the lakes' dams.

Because of the potential health risks, federal, state, local and tribal officials warned swimmers and boaters this week to stay away from the blue-green algae blooms in the Siskiyou County lakes, near the Oregon border between Yreka and Ashland, Ore.

Those who come in contact with the floating scum can suffer such maladies as skin rash, mouth ulcers, vomiting, diarrhea or cold- and flulike symptoms, U.S. Environmental Protection Agency officials warned.

In rare cases, contact with the strain of algae can lead to liver failure or death.

The blooms appear blue, green, white or brown and can be found in foam, scum or mats floating on the water.

Pets and young children who could possibly swallow or inhale the toxic slime in the water are most at risk, EPA officials said.

The warning again brought calls from the Karuk Tribe to demolish the dams on the Klamath River.

Tribal leaders, conservation groups and fishermen in recent years have urged Portland, Ore.-based Pacifi-Corp to remove the dams to improve declining salmon runs.

Reporter Ryan Sabalow can be reached at 225-8344 or at rsabalow@redding.com.

EXAMPLE #18

THE RECORD SEARCHLIGHT
redding.com

Warning issued over toxic algae along Klamath River

By Dylan Darling

Saturday, September 29, 2007

Don't touch that brightly hued Klamath River water.

That's the warning set to be planted next week on posters from Iron Gate Dam down almost 200 river miles to where its water meets the Pacific Ocean. The warning about the dangers of blue-green algae comes from state officials and members of the Yurok tribe.

"The blue-green algae can produce harmful toxins," said Bob Klamt, executive officer for the North Coast Regional Water Quality Control Board. "They can result in damage to livers and internal organs."

While the blue-green algae has bloomed in recent falls in reservoirs along the Klamath -- prompting the state to erect warning signs on their shores -- this is the first time the warnings will be posted on the free-flowing stretch of river, he said.

"We are finding blue-green algae through the entire river system," Klamt said.

High concentrations of the single-celled plant can be dangerous, he said. The regional water board deems

water with more than 40,000 cells per teaspoon of water a health risk.

Samples taken by state and tribal scientists along the river have shown as much as 85,000 per spoonful.

While not all the algae on the river is toxic, it's hard to tell what is and isn't without putting samples under a microscope, said Harriet Hill, an environmental specialist with the Humboldt County health department.

"Therefore, we tell people to avoid all algae-infested areas," she said.

The agencies are warning against wading or swimming in the river, as well as drinking, cooking or washing with river water.

The toxins can be especially dangerous for children and pets, Hill said.

With warning signs set to go up along the river, one of those trying to get its dams removed was in Washington, D.C., on Friday, raising the alarm about the algae.

Regina Chichizola, director of Klamath Riverkeeper, an Orleans-based environmental group, said she met with federal legislators from around Northern California and Oregon.

With her, she said she brought photos showing the bright-green color of the river -- similar to antifreeze.

Chichizola is among those pushing to have dams along the river removed and cites the algae as one good reason to do so.

"You can't have these toxic reservoirs without the river becoming toxic, too," she said.

Reporter Dylan Darling can be reached at 225-8266 or at ddarling@redding.com.

Humboldt County press release

EXAMPLE #19

THE RECORD SEARCHLIGHT
redding.com

Algae toxin added to Klamath River quality standards

By Dylan Darling

Saturday, March 22, 2008

Tiny toxins produced by bright green algae along the Klamath River in Siskiyou County have been added by the U.S. Environmental Protection Agency to a list of factors to be considered while forming new water quality standards for the river.

The Iron Gate Dam is one of a string of four power dams on the river owned by Portland, Ore.-based PacifiCorp. While the company is attempting to win a new 50-year federal license to continue operating the dams, environmentalists, as well as farmers above the dams and fisherman below them, have called for their removal.

And the algae is another reason to remove them, environmentalists say.

"They are the things that create skin rashes," said Peter Kozelka, a scientist in the EPA's San Francisco office.

The toxins also can cause liver problems and tumors.

Already on the list of possible problems are nutrients, dissolved oxygen levels and temperature -- all factors that determine whether the algae will bloom, Kozelka said. The affected area is a stretch of about 20 miles along the river between Iron Gate Dam and the Oregon border.

Klamath Riverkeeper -- the Orleans-based environmental group whose lawsuit against the EPA spurred the addition of the toxins to the list -- said the change could be another reason for PacifiCorp to remove the dams.

"It means that PacifiCorp will need to clean up the toxic algae, and we think the only way to do so is to remove the dams," said Regina Chichizola, director of Klamath Riverkeeper.

But Art Sasse, a Pacifi-Corp spokesman, said the change shouldn't affect PacifiCorp's re-licensing effort.

He said the company has always taken algae in the Klamath River as a serious matter that has been occurring naturally in the river for decades and is fed by nutrients from sources far upstream.

"We don't anticipate that this will affect our clean water certification process in any way," he said.

The EPA expects to set water quality standards for the river in 2009.

Meanwhile, in an agreement released in January, a coalition of 26 stakeholders in the Klamath Basin pegged dam removal as a key component in settling longstanding battles over water in the basin.

But the company isn't among the stakeholders that forged the agreement and is continuing efforts to relicense the dams rather than remove them.

The Upper Sacramento River Exchange held an informational meeting about the agreement, led by Phil Detrich of the U.S. Fish and Wildlife Service, that drew about 25 Dunsmuir area residents Thursday night. Another meeting on the same topic is set for 6 p.m. Tuesday at the Miners Inn Convention Center in Yreka.

Reporter Dylan Darling can be reached at 225-8266 or at ddarling@redding.com.

To read the EPA's report, click here.

EXAMPLE #20

THE RECORD SEARCHLIGHT
redding.com

Judge: Water board must review decision on Klamath River algae

By Dylan Darling

Wednesday, June 18, 2008

A Superior Court judge has told state officials to take another look at the law to determine whether they should regulate the amount of toxic algae growing in the Klamath River.

The North Coast Regional Water Control Board had decided to defer such regulation to the Federal Energy Regulatory Commission earlier this year, said Catherine Kuhlman, executive officer for the board. But Sonoma County Superior Court Judge Elaine Rushing ruled last week that board needs to review that decision.

"She didn't say we were wrong," Kuhlman said. "She just said she wasn't sure we were right."

Portland, Ore.-based PacifiCorp owns a string of four power dams along the river and is attempting to earn a new 50-year federal license to operate them. Citing the bright green, toxin-producing algae that grows in the reservoirs, environmentalists, anglers and tribes have called for the dams' removal.

Rushing's ruling came in response to a petition filed last week by the Karuk Tribe, the Pacific Coast Federation of Fishermen's Associations and Klamath Riverkeeper, an Orleans-based environmental group.

The groups are trying to establish set limits for how much toxic algae will be allowed in the river, said Craig Tucker, spokesman for the Karuk Tribe.

"We won't rest until PacifiCorp is held accountable for poisoning the Klamath River," he said.

The ruling won't lead to any changes in procedure or operation of the dams, said Art Sasse, PacifiCorp spokesman.

"This is just a simple procedural ruling that clarifies a decision-making process — we really won't have any substantive reaction until we get to a final ruling," he said.

Reporter Dylan Darling can be reached at 225-8266 or at ddarling@redding.com.

EXHIBIT #2

Disease greatly reduces chinook salmon s

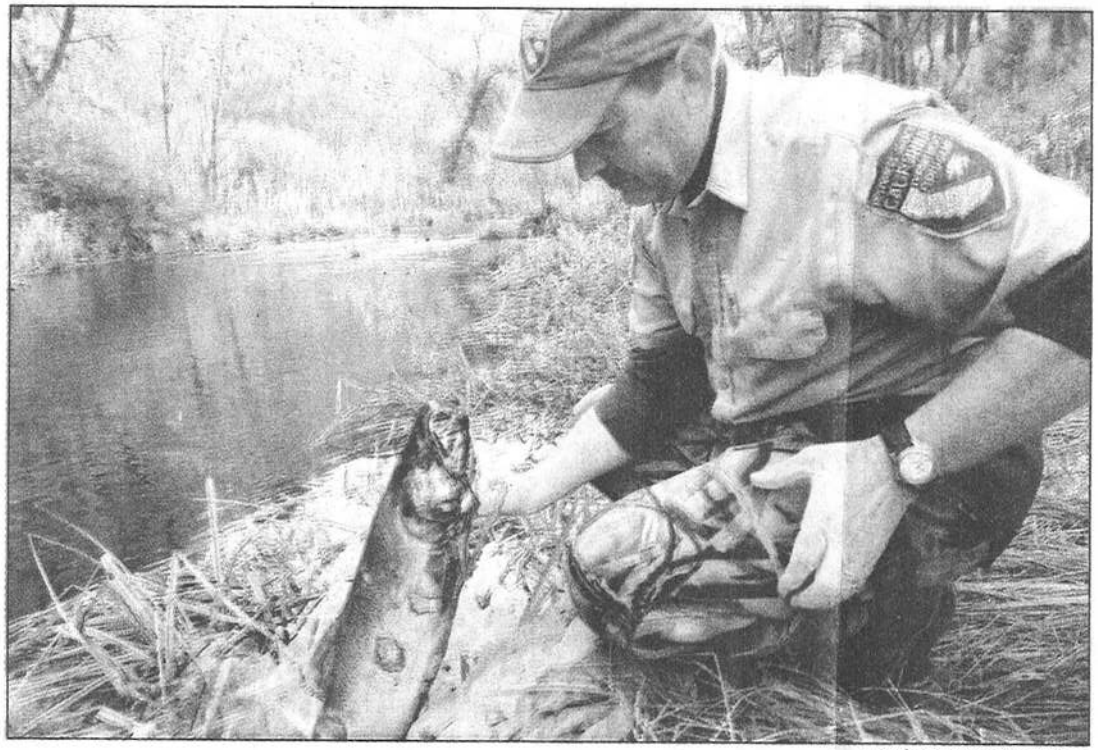
Klamath River tributaries suffer decline this year in returning fish

By Jeff Barnard
Associated Press

HORNBROOK — Walking the banks of Bogus Creek, state fisheries biologist Mark Hampton stopped and pointed to a black and white shape in the shallow water — a battered female chinook salmon lying on its side and thrusting its tail into the gravel to dig a nest for its eggs.

This fall the returns of chinook salmon to Bogus Creek, and the Shasta, Scott and Salmon rivers — tributaries to the Klamath River in Northern California — have been disappointing. Estimates based on fish and carcass counts are showing less than a quarter of last year's returns, and less than 10 percent of the strong returns of 2000.

The reasons are difficult to nail down, but the more researchers look, the more disease they are finding in young chinook migrating down the Klamath River. The fish that survive to reach the ocean are find ess food than they did a few years ago.



Jeff Barnard / *Associated Press*

OVERRIPE: California Department of Fish and Game fisheries biologist Mark Hampton examines a dead chinook salmon earlier this month on Bogus Creek, a tributary of the Klamath River near Hornbrook. Fall chinook salmon returns to tributaries of the Klamath are down sharply this year.

in the ocean off Northern California and Southern Oregon are cut back to allow more to return to the river to spawn.

Infestation common

Declines blamed on habitat loss, poor water quality and overfishing prompted Congress to initiate a rebuilding effort in 1986, which led to in-

with the parasite Parvicapsula minibicornis by the time they reach the ocean. It doesn't appear to be fatal, but it weakens fish by making their kidneys less efficient at filtering their blood, Foott said.

Another parasite, Ceratomyxa shas nfests the intestines. Betw 1 30 percent and 40 percent of young chinook

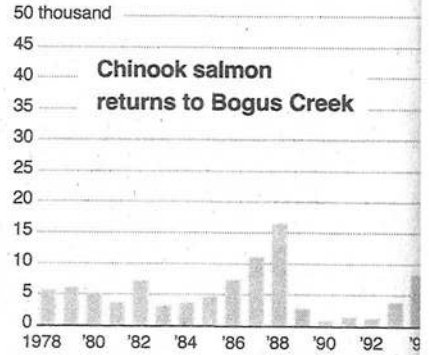
Department of Fish and Game.

"This disease problem hits much harder in some years than other years," he said. "We're just now finding out what it's doing."

The fish do not appear to become infested with C shasta in their home tributaries, said Foot. It all appears to happen after they enter the Klamath.

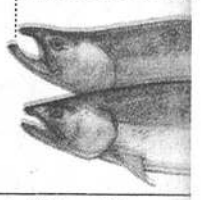
Salmon returns drop in

Returns of chinook salmon to Bogus Cr to the Klamath River decreased this fall last year's numbers.



Chinook salmon
Spawning is the last stage of life for the fish, which turns from its silver ocean color to a dark maroon and olive for migration up the river.

Males have hook



SOURCE: California Department of Fish and Game

into a drainage canal, it doesn't operate like it used to."

Water flows contested

Diseases could become another issue in the debate over water allocations in the basin. Right now, the timing and amount of flows down the Klamath River are dictated by the needs of coho salmon under the Endang Species Act.

That could change if the Yu-

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EXAMPLES #22

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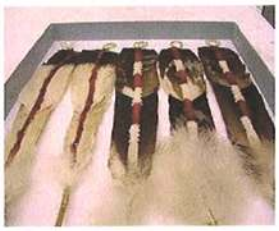

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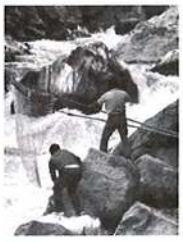



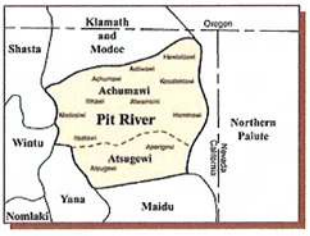

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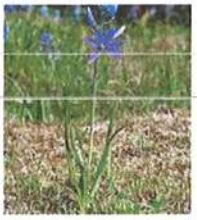

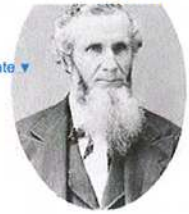




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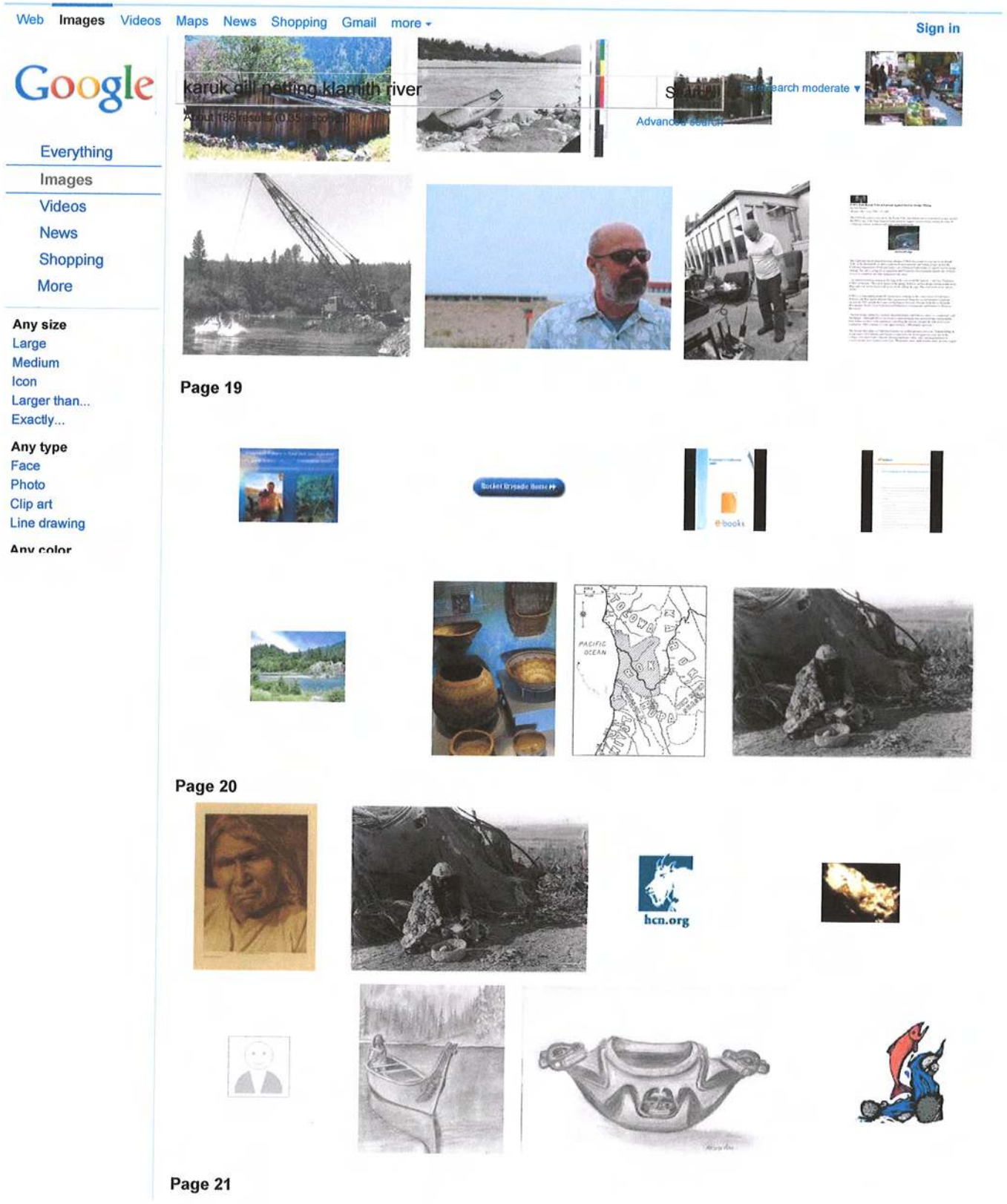
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EXAMPLE #23

Klamath River
Yurok Tribe
Chinook Fishery

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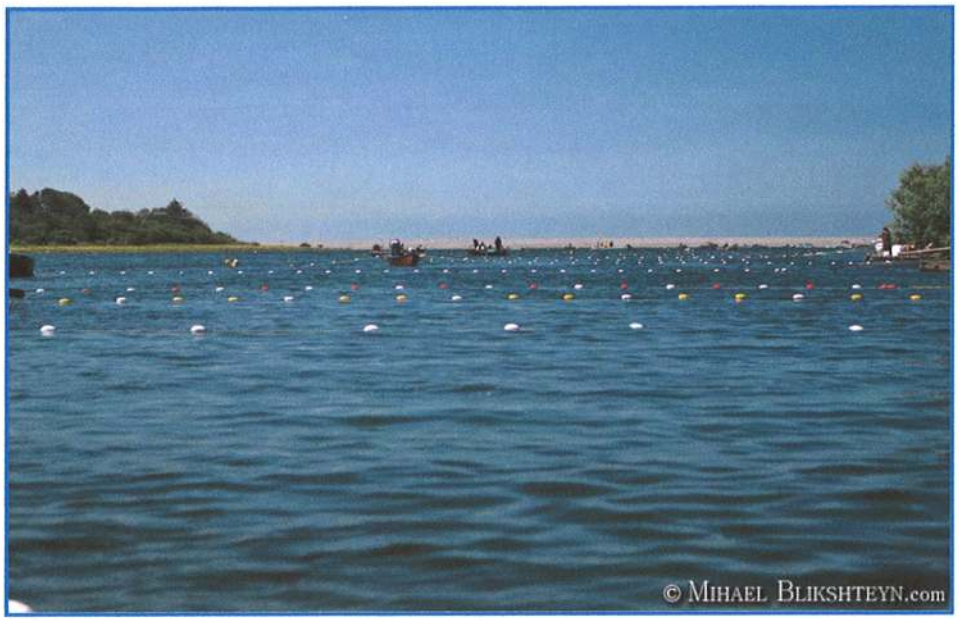
← Eat. Pray. Love. Salt. Garberville, California. Shelter Cove, California →

Klamath River, California Commercial King Salmon Fishery by Yurok Tribe.

September 8th, 2010 · 1 Comment



Towards the end of the king salmon season in northern California, which this year was from June through early September, natives of the Yurok Tribe were allowed to commercially gillnet 13,000 [corrected 16 October] king salmon from the mouth of the Klamath River. With no bag limit and the price of kings over $4 a pound, close to 200 gillnets were set along the last two miles of the river on August 22nd, the season opener for this fishery.

Thanks to Bob and his assistant, who were working for the tribe counting the fishermen and their catch, I was able to spend several hours zipping up and down the river, taking photos. The whole commotion looked like one big party, with many families picnicking on the river bank, or just dropping by to observe.

I was surprised to see how many women, and especially young women and girls fished. Probably quarter of all fishermen (yes, yes) were women. And they didn't just come along for a ride. Some boats were exclusively female-powered, while on others, older men drove the skiffs and drank beer, while young women shook the nets clean of algae and landed the fish.

It took a couple of weeks to land the allocated quota and close the fishery. Observing the fishery on the first day made me ponder. With most Yurok fishing in aluminum boats with modern outboards and monofilament gillnets, how close was this festivity to the original subsistence-based way of harvesting the king salmon. Perhaps, it is a silly comparison.


© MIHAEL BLIKSHTEYN.com

Too see all photos in this series, click here.

Like

Tags: California, Northern · Fisheries

1 response so far ↓

- 1 **YurokFisher** // Sep 29, 2010 at 1:12 pm

  We were allowed 14,000 Salmon this year for commercial. Or about 116,000 less fish than you mentioned. Before you go throwing smartass comments towards gillnetting and the way its done consider this, "How smart would we be if we didn't adapt and use the best resources available to us?" If we would've had them in the old days we would have used them. Should loggers go back to falling trees with an ax because that's the "traditional" way to do it? Give me a break hypocrit.

Leave a Comment

Name (required)

Email (required, will not be visible)

Website

WEEKEND ROUNDUP
Whole Earth Festival, egg hunts among events.
COMMUNITY, 1C

BOY SEEKS BONE MARROW TRANSPLANT
Cottonwood youth needs treatment for leukemia. LOCAL, 1B

Record Searchlight

FRIDAY, APRIL 22, 2011 redding.com REDDING, CALIFORNIA // 46 CENTS

Summer salmon fishing OK'd

First time in four years, on Sacramento

By Dylan Darling
ddarling@redding.com
530-225-8266

For the first time in four years, salmon fishing will be allowed this summer on the Sacramento River between Anderson and Red Bluff.

The California Fish and Game Commission Thursday laid out the guidelines for the season.

"It's a terrific season," said Harry Morse, spokesman for the California Department of Fish and Game.

On the Sacramento salmon season will be:

- From Aug. 1 to Dec. 18 between the Deschutes Road bridge in Anderson and 500 feet upstream of the Red Bluff Diversion Dam.
- From July 16 to Dec. 18 between 150 feet downstream of the Lower Red Bluff Boat Ramp to Knights Landing northwest of Sacramento.

Low salmon returns in 2007, 2008 and 2009 prompted the Fish and Game Commission to cancel salmon season on the Sacramento, said Doug Killam, a DFG biologist. A rebound last year and projected healthy returns this year brought its revival.

"What we are expecting is enough fish back for everyone to fish for them again," Killam said.

Scientists have said poor ocean food conditions caused the crash in salmon returns and predict that more food available in the ocean should [illegible] Sacramento.

The river will remain closed to salmon fishing through Redding throughout the year, he said.

"If you catch a salmon up there you're supposed to cut the line and let it go," Killam said.

For the last 25 years or so that's been standard, said Dave Jacobs, who runs Dave Jacobs Professional

See SALMON, 2A

Calif.'s recreational salmon season opens

By The Associated Press

SAN FRANCISCO – For the first time in four years California's recreational Chinook salmon fishermen are gearing up for what is expected to be a normal-length season.

California Department of Fish and Game officially opens the season on Saturday, after forecasts predicted triple the amount of salmon expected to return to the Sacramento River this fall.

It also was welcome news for the state's bait and tackle shops, boat mechanics and others who have been hard hit economically by the sa[illegible]n declines.

[illegible]glers can fish salmon legally from Cape Mendocino south to the U.S.-Mexico border. Waters north of Cape Mendocino to the Oregon border will be opened at a later, undetermined date.

The fall Sacramento River Chinook salmon run provides 80-to-90 percent of the fish caught off the California coast.

EXAMPLE #24

EXAMPLE #25

nd go

Salmon season spawns lawsuit

■ Water group worried about fish's numbers

By Jason Dearen
Associated Press

SAN FRANCISCO – A group of Central Valley irrigation districts that supply water to farms and cities have filed a lawsuit against federal fisheries managers seeking to stop the first full commercial salmon fishing season off the California coast in years.

The San Joaquin River Group Authority filed the suit Thursday in federal district court in Fresno.

It argues that the National Marine Fisheries Service and its related agencies violated their duty to protect the threatened Sacramento River fall run of Chinook salmon by allowing a full commercial season.

If the fish continue recent population declines and become a federally endangered species, the authority's members would be forced to release more of their water to increase river flows, said Allen Short, the authority's coordinator who also is general manager of the Modesto Irrigation District.

"The potential that additional water would have to be released to address dangers for endangered salmon could have a negative

The authority is comprised of irrigation districts in Modesto, Merced, Turlock, Oakdale and the South San Joaquin Irrigation District, among others. San Francisco also is a member of the authority.

After predictions of a more robust salmon return this year, commercial fishermen on May 1 opened the first full-length season since 2007. Canceled seasons in 2008 and 2009 and a shortened season in 2010 left many fishermen struggling to make a living.

But federal fisheries managers estimated 730,000 Chinook would return to the Sacramento River this fall. This run of salmon provides many of the fish caught off California and southern Oregon, and has been plummeting in numbers in recent years.

The lawsuit filed Thursday is just the latest salvo in the battle between fishing and agriculture interests over the reasons behind the precipitous declines of fall run Chinook salmon in recent years.

The rebound that accounted for this year's commercial season is in part because of improved ocean conditions, each side agrees.

But in 2008, a federal court imposed restrictions on the huge delta pumps that move water to farms and cities while litigation

concentrating usage in a miniscule area, same as CDFG proposes with this failed SEIR seasons and closures.

There was a live broadcast over the radio 4/12/11 with Stopher CDFG, Trucker Karuk tribe and GPAA newbie. The whole gist of the exchange was yet again, as always, the 49ers this and the 49ers that and the worst part is I felt sorry for the Karuk trying to deal with this insanity even as the dredge ban runs me into bankruptcy. Oh yes I forgot there are no socio-economic ramifications—such mindless drivel.

Conclusions from the delusions of a failed EIR,

This SEIR states we do massive damage to the environment. To that I must absolutely say pure unadulterated hogwash. Example #26-I defer to the erosion study conducted by the USDA Forest Service "A comparison of stream materials moved by mining suction dredge operations to the natural sediment yield rates". The Siskiyou natural sedimentation is estimated to be over 331,000 cubic yards of NATURAL EROSION from mass movement and normal erosion. The dredgers survey state the total state yardage dredged was approximately. 3,550 cubic yards. There are over 60 forest areas and 11,100 drainages and our total movement is barely 10% of the natural erosion rate of a SINGLE FOREST and less than 0.0000000000012% of the states natural erosion rate.. Once again the SEIR tries to deceive and fails miserably in the light of day utilizing a comparative analysis.

The national Sportsmen Association polled America to see what percentage of the population utilizes what sports and dredgers are such a miniscule number we didn't even rate as existing. But yet we are shown to be a massive destructive mob. Hogwash. See example #27.

I would like to also introduce a chart utilized in the 1994 dredge committee meetings that shows and tell the whole truth on where we dredge. See example #28- Also the best is at the last #9 as Federal Mining regulations supersede State dredging regulations on Federal claims. Rule of law falls on federal statures and supersedes state authority. We are regulated by the Forest service, Bureau Of Land Management, Bureau of Reclaimation , SMARA, Army Corp of Engineers, State Water Quality Board, The Clean Water Act, The ESA list, EPA, OSHA,MINOSCHA, scenic rivers, wild and scenic rivers, a a dozen forest classifications both federal and state mandating who, what and when we can do anything ever?? And in the soup lets throw in CDFG for good measure. too.

This SEIR also puts forth the delusion that a "SPECIAL PERMIT" can be issued for dredging which is absolutely false. Not for location or length of season . These are the only specials that are important. During the Gray administration the rich lobbyists slipped in a rider to the state budget, of all things, effectively killing CDFG ability to issue any substantial specials. We miners fought long and hard to fight this incredulous violation of departmental abilities. If they don't have the expertise to issue a lousy special—what are they doing regulating dredging in the first place? See example #29 for appeal of the CDFG right to issue specials. Then Mr. Banky Curtis dropped the bomb on Jan. 15,1992 and not only were all of our multiyear specials on the Sacramento killed but all specials within the stae also. See. Example #30.

EXAMPLE #26

United States Department of Agriculture | Forest Service | Siskiyou National Forest | 200 NE Greenfield Road, PO Box 440, Grants Pass, OR 97526-0242

Reply to: 2800

Date: October 16, 1995

Subject: A comparison of stream materials moved by mining suction dredge operations to the natural sediment yield rates

To: The Record

A question that has frequently been asked is how much material is moved by annual mining suction dredge activities on the Siskiyou National Forest and how does this figure compare with the natural movement of such materials by surface erosion and mass movement? At the conclusion of the 1995 summer suction dredge season, the responsible minerals personnel on each Ranger District of the Siskiyou National Forest were asked to make a quantitative estimate of the number of cubic yards of material that was moved over the season by suction dredge operations. The estimates were based on on-the-ground observations carried out over the summer. Quantities of moved material ranged from 23 to 1920 cubic yards per district with a Forest total of 2413 cubic yards for the season.

Three documents were examined to determine a reasonable estimate of natural sediment yield rates. A published 1985 study by Michael P. Amaranthus et al entitled "Logging and Forest Roads Related to Increased Debris Slides in Southwestern Oregon" found that natural erosion rates for debris slides in the Klamath Mountains of southwest Oregon averaged about 0.5 cubic yards per acre per year. This same study found that erosion rates on roads and landings were 100 times those on undisturbed areas, while erosion on harvested areas was seven times that of undisturbed areas. In another study (unpublished) done in 1988 by Jon Vanderheyden et al entitled "Siskiyou National Forest Silver Fire Recovery Process Paper", surface and channel erosion rates were estimated and then an estimate of total natural erosion rates was made by summing a debris slide rate with surface and channel rates. The debris slide rate was developed for the Siskiyou National Forest from an inventory that examined landslide activity between 1956 - 1976 on 137,000 acres of the Forest. This 1985 study estimated that baseline sediment yield (total natural erosion rate) in the Silver Creek basin averaged about 14.2 tons per acre per decade. For the Indigo Creek basin sediment yield averaged 8.0 tons per acre per decade. Putting these figures on an annual basis and using a generally accepted average of 1.5 tons per cubic yard of material would produce sediment yields of 0.95 and 0.53 cubic yards per acre per year for Silver and Indigo Creeks respectively. The Siskiyou National Forest Land and Resource Management Plan of 1989 estimated that the average natural sediment yield rate for the Forest from both mass movement and surface erosion was 0.5 tons per acre per year. This figure equals about 0.33 cubic yards per acre per year and is the most conservative of the natural sediment yield figures found in the literature readily available.

for Siskiyou NF EA

94

There are 1,092,302 acres on the Siskiyou Natural Forest. Using a factor of 0.33 cubic yards per acre per year times 1,092,302 acres will produce a very conservative estimate that 331,000 cubic yards of material move each year from natural causes compared to the 2413 cubic yards that was moved by suction dredge mining operations in 1995 on the Siskiyou. This would be a movement rate by suction dredge mining that equals about 0.7% of natural rates.

/s/ Michael F. Cooley
MICHAEL F. COOLEY
Recreation, Lands and Minerals Staff Officer, Siskiyou National Forest

The latest greatest game now by CDFG is to constantly feed into high and low sierra foothill stream fish that are not indigenous to our state and they are devastating the yellow legged frog but all the better to close these waters too. But of coarse not to fishermen whom they plant the killers for, only them nasty dredgers who create spawning grounds. Dredgers are the only user group that actually benefits the fish, We provide stable aireated spawning gravels presized to their specific genesis requirements. Dredgers created the protected spawning habitat on the New River. When the Clear creek habitat restoration projects took place a dredge was utilized. When the EPA had to remove over a ½ million cubic yards of sludge from Keswick Dam they used a dredge. A dredge is the EPA mandate as the absolute best mode of recovery utilizing currently existing technology. It's called BAT-best available technology and blessed on The Yukon River in Alaska as a great recovery tool with impact minimus. You cannot mandate what technology cannot provide. I personally redesigned dredges to be extremely environmentally friendly and these designs are now the industry standard. But our mere miniscule presence is the offence here also.

What is also extremely disturbing is that the state in 11/11/06 finalized a California Enviromental Analysis of Suction Dredging and explicitly mandated our dredging is MINIMUS IMPACTUS and thus blessed to continue. See example #31- Thence enter the multi million dollar consortium to not only attack dredging in the courts but lobby the legislature with pockets full of cash and goodies to get their own sick mandate fulfilled no matter what the science. The cost of a multi-year multi-pronged attack with AB1032, SB670 and a host of court suits is millions. To have a court in Alameda County and the State Legislature SIMULTANEOUSLY ,same day, almost the same hour , kill dredging was a radical mandate pushed through with much cash, favors and deceptions. The hypothetical Miners movement even made a special pact with Steinburg for the committee meeting limiting the discussion to 15/20 minutes to determine the future of 3,200 dredgers, half a dozen manufactures, dozen stores,12,000 jobs on the line, and the economic viability of the river folks to make a living selling campsites, supplies ,food, gas and materials. 3 hypothetical representatives , back door deal, jumped to the table and pushed all others out of the way. Standing and waiting were at least 30 dredgers , many professional full time dredgers, with at least 600 years of experience, denied their right to even speak out on their livelihood. But Siskiyou supervisor droned on 3500 square miles,2,000 folks, 500 cows blah blah blah. Then the 49er lawyer addresses the committee and essentially wants the committee to prove dredging is wrong. I have cherished the CD from the Senate hearing as Mr. Steinburg stammers something to the effect," Oh my god not another damn lawyer". Followed up by PLP Mr. Elmer Fudge-the 1872 mining laws say I can—Steinburgh interrupts "Are you reading from a prepared statement" No of coarse not stammers Elmer-and continues"The 1872 mining laws. Game over we were murdered as the committee kept hammering away with questions about mercury, impacts, riparian habitats and on and on and none of them could answer. At the last minute when we were required to simply utter-I am for or against SB670 I jumped in the hotseat and pleaded to answer their questions. I further stated that I has personally prepared and mailed to every committee member a comprehensive 20+ page package weeks earlier with documented evidences from the EPA and many other agencies proving our innocence. Well NOT A 1 HAD EVEN READ A SINGLE WORD. I kept pushing and was a few seconds from the Sargent of Arms and his boys bouncing

EXAMPLE #27

2009 Participation - Alphabetically

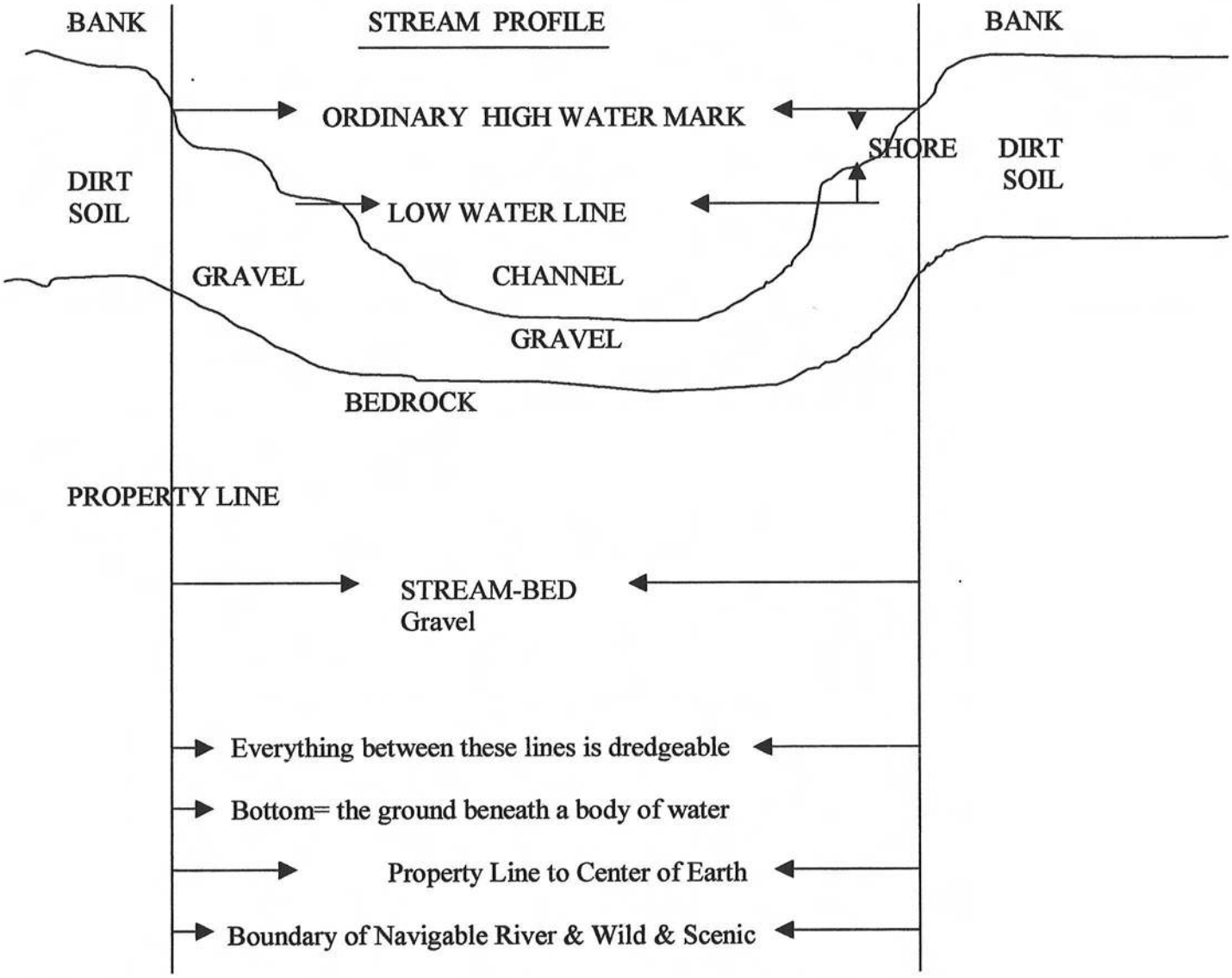
Participated more than once (in millions)
Seven (7) years of age and older

Sport	Total	Percent Change*	Sport	Total	Percent Change*
Aerobic Exercising	33.1	3.0%	Mountain Biking (off road)	8.4	-17.8%
Archery (target)	7.1	na	Muzzleloading	3.8	11.6%
Backpack/Wilderness Camp	12.3	-5.3%	Paintball Games	6.3	-6.5%
Baseball	11.5	-13.5%	Running/Jogging	32.2	1.0%
Basketball	24.4	-5.0%	Scooter Riding	8.1	-19.9%
Bicycle Riding	38.1	-1.5%	Skateboarding	8.4	-13.8%
Billiards/Pool	28.2	-11.1%	Skiing (alpine)	7.0	7.3%
Boating, Motor/Power	24.0	-13.9%	Skiing (cross country)	1.7	7.4%
Bowling	45.0	0.6%	Snowboarding	6.2	5.7%
Camping (vacation/overnite)	50.9	3.0%	Soccer	13.6	0.6%
Dart Throwing	12.2	na	Softball	11.8	-7.9%
Exercise Walking	93.4	-3.4%	Swimming	50.2	-6.1%
Exercising with Equipment	57.2	4.0%	Table Tennis	13.3	na
Fishing	32.9	-22.0%	Target Shooting - Airgun	5.2	4.3%
Football (tackle)	8.9	-6.2%	Target Shooting (net)	19.8	-2.4%
Golf	22.3	-3.9%	Tennis	10.8	-14.5%
Gymnastics	3.9	na	Volleyball	10.7	-11.7%
Hiking	34.0	2.8%	Water Skiing	5.2	-7.2%
Hockey (ice)	3.1	60.0%	Weight Lifting	34.5	1.8%
Hunting w/Bow & Arrow	6.2	0.2%	Workout at Club	38.3	-2.6%
Hunting with Firearms	18.8	0.3%	Wrestling	3.0	na
In-Line Roller Skating	7.9	-15.4%	Yoga	15.7	20.9%
Kayaking	4.9	na			

*Percent Change is from 2008

EXAMPLE #25

INFORMATION PERTAINING to DREDGING REGULATIONS



1. Klamath River is Federal, non-navigble & not Wild & Senic..
   See, Donnelly v United States 228 U S 243 [1913]
2. Bottom of Bank, or Top of Streambed is the Ordinary High Water Mark, identified by driftwood line or tree line, scrub willows are not trees and do not identify the bank. At low water the edge of the water is the shoreline. Between the shoreline and High Water Mark is the shore.
   See, A. Shively v Bowlby 152 US 1. [1894]
   B. Mammoth Gold Dredging v Forbes, 39 Cal.App.2d 739
   C. People v Ward Redwood Co., 225 Cal.App.2d 385
   D. State of Calif. v Superior Court [Lyon] 29 Cal.3d 210
   E. Attorney General Opinions, No. SO 73-15-August 28,1973, No. 63-13-June 12,1964.
3. Notification May be Oral.
   See, Rutherford v State of Calif. 188 Cal.App3d 1267
4. Floodwater is water flowing over or above the bank.
   See, Harbors & Navigation Code 100
5. Fish & Game regulations indicate no dredging permit is needed on the Klamath River.
6. Fish & Game Jurisdiction is very questionable on the Klamath River, I ask, but get no answer.
7. All cases are on www .findlaw.com, its free, use it.
8. Fish & Game doesn't have a definition of "River Bank"
9. Federal Mining Regulations supersede State dredging regulations on Federal mine claims.

EXAMPLE #29

From; John Oates
To;California Dept. of Fish and Game
Attn; Mr J.Steele -Project Coordinator
Re;Special Dredge Permits

Dear Sirs,

This letter is a comment directed to the questionable practices used to delete the miners right of special dredge permits. It is also a plea from an committee member from the 1997 scoping meetings utilized to publish the historical resultant findings agreed upon.

The series of meetings were conducted through the herculean efforts of Mr.B.Maxwell and the mining community. To have gone from the animosities of the past to the joint cooperation attitude of the present has truly been a pleasure-although extremely expensive and frustrating from both sides of the table. The progress and understanding gained from the intellectual discussions between biologists and miners proves that we can indeed gain considerable benefit to the environment through joint cooperative efforts. The clarification of justifiable closures, and unjustifiable also, still has a long way to go by virtue of the many thousands of miles of rivers and streams.

Special permits were to be the avenue to undue the unjustifiable or accidental closures done without verifiable biological reasoning. A avenue to follow before the time and money were obtained to further study creek by creek, river by river, the true bio-diversity required to maintain each and every ecosystem, and not be deleterious to fish. The billions of dollars and the multitude of years to accomplish this task are unobtainable and specials were to be an equitable approach to parity utilization of resources accessible to all user groups. UNFORTUNATELY certain individuals utilizing much less than ethical devices have taken upon themselves to elevate themselves above the CDF & G technical staff, miners, and all concerned parties by virtue of the budget to obtain their illicit private agenda. This is truly a sad state of affairs for all Californians and an affront to the true legislative process. To have taken away the rights of Fish and Game to delegate, in direct accordance of ,the administration of the ecological preservation within California is an extremely dangerous precedence in enviro-terrorism. To have gotten CEQA through the legislative process and implantation was a very long and arduous task. And now the radical element of the environmental movement can not even abide by their own rules to obtain their illicit agenda but must sink to ever new depths of depravation to obtain their ever insistent agenda.

The loss of a miners right to a special has impacted the professional miner to a magnitude that is unacceptable. I have gone through many specials revues, both for myself and in assistance to my many associates in the mining community. We have gone through many repetitive revues on the same exact area ,paid our fees, and proceeded to earn a living. That right is now gone and truly a "takings" has occurred through no fault of the miners or the DFG. It is a dismal event when joint participation, enlightenment, and cooperation has been precluded through "dirty politics."

The monumental conclusions published through DFG in 1997 were and still are, in this poor miners mind, in direct accordance with all applicable laws of the Public Administrations Act, CEQA, and in the true spirit of environmentalism by virtue of existing rights and use in parity. We are still in a quandary as to how this legal agreement was railroaded out of existence. The illegal

manipulations utilized in this open and notorious attack on both miners and the DFG has paralyzed any and all efforts in these matters.

I believe that the preexisting documents, procedures, and process must be thoroughly examined by competent legal counsel for any and all defects that undermined the legality of the original 1997 document. Ms.S.Tom was our legal guidance councilor through these initial first steps. She was, still is, a definite asset in the understanding of where we all went wrong-or if not-is it ever going to be possible to go forward with any agreements to satisfy the unsatisfiable demands of the chosen few who strive to undermine the legal process? We have studied CEQA for years and helped get the initial 1994 regs through the legal loops and can not find the workings utilized to disrupt this endeavor. The mechanics used must be defined and eliminated to progress. Or do we all just give up, go home, retire, and admit defeat to the radicals who want to control this legal process for their own personal gain?? I for one don't think so!!

We, the miners, would like to assist the CDFG in any way we can to amend this situation in an equitable manner. We are well aware of the current political situation, cutbacks, departmental restrictions, and hostile environment perceived in current government and regulatory agencies. But as an engineer my favorite saying was always,
"IF YOU ARE NOT PART OF THE ANSWER, THEN YOU ARE TRULY PART OF THE PROBLEM, AND MUST BE ELIMINATED TO PROCEED PROPERLY."

Until the preexisting defects are identified and eliminated the reconvenience of meetings in relation to openings or closures seems to be a moot point. If an opening cannot be made to comply to CEQA requirements, then closures also cannot comply to CEQA either. The two are utilized in the same exact sense, process, and procedure and as such are equitable legally and any departmental decisions must convey parity in the two processes.

Thank You, as always, for any and all considerations

John Oates
P.O.Box 70498
Shasta Lake, Ca., 96079
e-mail: dragon@shasta.com

EXAMPLE #30

STATE OF CALIFORNIA—THE RESOURCES AGENCY

PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME

401 LOCUST STREET

DING, CA 96001

(916) 225-2300

January 15, 1992

To Whom It May Concern:

Upper Sacramento River Suction Dredging

Because of the Cantara Spill and the subsequent loss of virtually all aquatic life in the Upper Sacramento River, we closed the river and all tributaries between Box Canyon Dam and Shasta Lake to suction dredging.

The purpose of this letter is to clarify and to emphasize that we will not accept any Special Dredge Applications for that portion of the Sacramento River during calendar year 1992. The decision for 1993 will be made at a later date.

Sincerely,

Banky E. Curtis

Banky E. Curtis
Regional Manager

Klamathbasincrisis.org
EXAMPLE #3

California Environmental Analysis of Suction Dredging

11/11/06

The State of California explained in its environmental analysis of suction dredging:

"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 MER40.)

This study corroborated the findings of numerous prior cumulative impact studies. (*See, e.g.*, MER24 ("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"); MER30 (thirty-five years of personal observations); MER32 (six 6" dredges on 2 km stream and 40 dredges on 11 km stretch "had no additive effects"); MER33 (no cumulative effects from twenty-four 3" to 6" dredges along 15 km stretch); MER34-35(California state EIS finds no significant effects); MER36 (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", finds *de minimus* impact on aquatic resources).

me out of there and into jail. I shut up like a fool, should have stayed and gone to jail to raise the roof on this SB670 paid for sham skam flimflam. The gentlemen in his $20,000 doe skin beaded suit was absolutely jubilant as the lobby cash once again ruled the day. The day that dredging died.

The evidence provided within this SEIR comment is proven fact and documentation included, not just a list of authors, BUT the real documents to prove authenticity of facts, figures and ungodly horrors commited by the chosen few to our exclusion.

The real question is not if dredging is deleterious to fish....
The real question is, are fishermen deleterious to fish...
The real question is, are gill nets deleterious to fish..
The real question is, are boaters deleterious to fish

And lastly and most importantly is CDFG policy and this failed SEIR deleterious to fish??

No longer respectfully, John Oates,
Miners Alliance Board and Founding Member

Qualifications. AFL-CIO Certified Analytical Laboratory Technician and Chemical Engineer. American Electroplaters Certified AA in electrochemistry 1970. AFL-CIO shop steward and shop Foremen for all lab and electroforming functions. Waste, haz /mat and water discharge speciality and responsibility.

Litton G&CSD Woodland Hills, Class A chemical Engineer for the printed circuit and A-100 laser gyroscopic laboratories.

Bunker Ramo , Westlake Village. Shop lead and waste management and water discharge specialist.

Arbo Electronics, Van Nuys, Production Manager, waste and water discharge management, Built and helped 2 facilities for Arbco.

Hamilton Corp., Reno, Nevada, Electrical, mechanical and digital assemblies manager. Also included, because of my experience, the engineering of a new manufacturing facility and water treatment facility.

Cirtel Nevada- Hired to run the chemical processing areas and lab for discharge and haz/mat procedures. Ended up as Manufacturing Manager, Personal manager ,purchasing agent. We designed and built a 60,000+ square foot manufacturing facility for military state of the art polyimide, flexible, multilayer circuit boards. I was in total charge of all wastewater and haz/ mat areas of responsibility. I was also a BOARD MEMBER OF THE STATE HAZ MAT APPEALS BOARD AND RESPONSE TEAM IN CARSON CITY NEVADA. Also engineered plasma applications for interlayer plasma interconnects resulting in patents.

Cirtel , Irvine. Rebuilt and re-engineered a 86,000+ square foot hi tech printed circuit facility. And also responsible for all chemical processing, plama etchback, waste and water discharges. Our research and perfection of auto clavical stack lamination process and procedures resulted in numerous patents. Plasma science backscatter shielding experimentation also ended in numerous plasma shielding patents.

Sigma Circuits, Costa Mesa, responsible for 3 shifts of plating and chemical processing in conjunction with resultant haz/ mat process and procedures.

Prospectors Equipment and Services Company-Designed and manufactured a complete line of mining equipment for both wet and dry applications. Project engineering to meet OSHA,EPA,SMARA and waste water requirements. Sold laboratory supplies,assay supplies, .metal detectors and all forms of camping and survival equipment.

Marin Circuit Technology, Redding- Engineered and built a 64,000 square foot manufacturing facility for printed circuit boards. Was responsible for everything door to door. Waste haz/ mat performance and directly responsible for all matters of water discharge, ran the lab analysis for water and effluents. EPA contact , state haz/mat contact, environmental quality for Shasta county. All documentation, performance and functions of the facility were my area of responsibility.

Last but not the least a miner since 1957. And the absolute worst addiction I've ever admired and gleefully participated in, gold dredging since 1972. I have built and engineered over 50 large scale operations nd prepared dozens of special use permits, Army Corps studies and permit applications, numerous NOI and POO (federal vegetable soup for plans and subsequent reclamation Process and procedures). I have mined on BLM, Forest service, Bureau of Reclamation and private properties for over 56 years with ABSOLUTELY NO CITATIONS FROM ANY AGENCY EVER.

Continued my education with many hundreds of lectures, classes, symposiums, and years of experiences.

Served on many committees in conjunction with many federal and state issues. Miners Ad-Hoc committee with BLM, FS, CDFG. Trinity River restoration plan and cleanups. Clear Creek Horsetown preservation committee, Camden House restoration committee, Carter House Museum committee, 1994 CDFG SEIR committee, assisted in the publications" A Dredgers Primer To Survival in a Shrinking world" funded by The Trinity River Restoration committee(which dredgers founded) see A #9, The Forest Service manual" Suction Dredging in the National Forests' see A #10. And numerous other forums, lectures and consortiums help by many governmental agencies.

22+ year member and board member of The Western Mining Council, Palos Verde gem & Mineral member, Orange County 49ers,funded and sponsored, GPAA member, Auburn Gold Hounds member, Shasta Miners & Prospectors, former editor, President, and Vice President numerous times, Co-Founder and current board member of the Miners Alliance.

If your not part of the answer—your part of the problem-volunteer and make a change--.

Hatchery
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Monterey
Moss Landing
Santa Cruz
Rivers
American
Chetco
Eel
Feather
Garcia
Gualala
Klamath
Mad
Mattole
Russian
Sacramento
Smith
Trinity

TRINITY RIVER

November 06, 2009 Headlines Tribal Netting Wiping Out 09 Salmon Run

Steelie counts are holding up and guides are reporting decent action but nowhere near the scores what they should be seeing this time of year. On **Wednesday 11-4** guide Steve Huber reports he has been working the Del Loma section and averaging 3 to 6 fish mostly steelies along with a few, very few, scattered small and dark salmon. The majority of the fish are running 4 to 7 pounds or in current day guide speak "under gillnet mesh size fish". There are still lots of smolts in the river and Steve says he is getting most of his fish on plugs. He advises anglers to be on the river early and try to stay away from the competition. We want to commend Steve for putting in place the last three weeks a no salmon take policy. Steve has been very upfront with all his clients that on his boat all salmon will be released due what has been going on down river. My hat goes off to Steve and his clients for supporting him.

Gillnets Take Most of Trinity Salmon Run

Tribal gillnets are literally wiping out the entire 2009 Trinity salmon run. It's tough enough the salmon have to make it through one gauntlet on the Lower Klamath but it's the second set of nets at the Hoopa reservation on the lower Trinity that are inflicting the biggest toll. The numbers of fish fighting their way to the spawning grounds on this important tributary to the Klamath are at all time lows.

We have been highlighting this travesty for the past month and it finally looks like

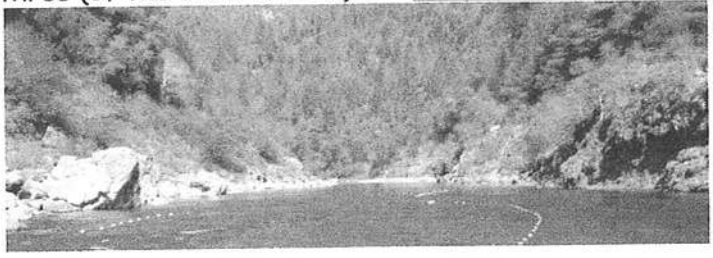
the main steam media is starting to pick up the story and bring it to light to those outside the fishing community. We encourage out readers to help us continue to spread this message (and what to thank those of you who have already done so).

For the week ending today **November 4th** only 16 king salmon made their way through the weir on the main stem Trinity at Willow Creek. That brings the Trinity river / Willow Creek weir count since October 1st to 111 fish. Cal F&G just posted a new message on their weekly Willow Creek weir count announcement to clarify actually escapement which reads **"Attached is the most recent summaries for the weirs and hatcheries. An important reminder- the weir counts are not complete counts of fish passing the site, only a sub sample, usually less than 15% of the total number of fish passing the weir site, please do not cite weir counts as total counts. Also, all data is considered preliminary until final editing has been completed, please cite as such."** (strange... they never reminded of this before but now claim "important reminder)

We respect that and that's good news as it brings the total salmon escapement to roughly 740 fish. This is still far too low of an escapement for a major river system and shows that F&G just has no idea how to manage this fishery. If the best they can come up with is a "clarification of the weir numbers" it only shows that they are more concerned in "covering their ass" than they are in engaging in their real mission which is supposed to be the "managing California fisheries and wildlife", and we wonder why our fisheries continue to collapse.

This over harvest of salmon was avoidable and in terms of the percentage of returning fish the gillnets have wiped out (harvested or whatever term one wishes to use) over 90% this year's entire Trinity fall run of kings. This complete disregard for sustainable runs will be felt for years and could lead to the continued closures of sport and commercial fishing along the California and Oregon coasts and both tribal and sport fishing in the lower Klamath in 2012 and 2013.

On October 22nd over 20,000 pounds of Trinity river salmon netted by Hoopa gillnetters (approximately 2000 fish) was intercepted by NOAA enforcement officers at a fish processor at pier 45 in San Francisco. Unfortunately the bust was unable to be prosecuted because the Hoopa tribe has never submitted a harvest plan. These processors sell to one so called "eco minded" chain (think health food) that profess that they sell only fish from sustainable fisheries". My only question is that if you can't prosecute the netters why can't you go after the state licensed commercial fish buyers for purchasing illegally caught fish? This catch also violates three (of the total of four) the Hoopa tribal fishing codes.



Despite the fact that the Hoopa netters were busted with 20K pounds of "subsistence" fish (being sold commercially) that they broke their own laws to

many fish of that quota they have caught (on top of the 2000 + they tried to illegal sell) because they have no harvest plan and don't report catches to any outside fishery agency.

Gillnetting and sportfishing quotas are all based on wild ass guess (WAGS) theories of ocean abundance and river returns that are made months in advance. More often than not these WAGS are wrong and when they are overly optimistic can result in far too many salmon being harvested. This year again shows how overly optimistic WAGS result in far too many fish being harvested.

It's time for West Coast fishery managers (PFMC, CDFG, NOAA, USFW) to do away with the WAG and practice modern fishery management.

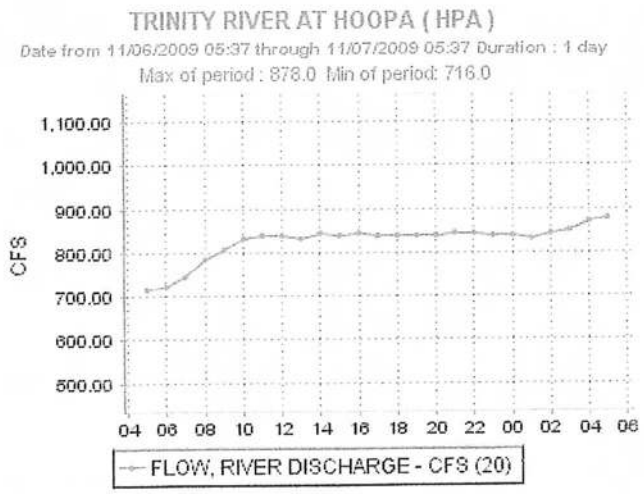
Alaska has had great results in managing both sport and commercial salmon harvest by using sonar counters on many rivers. I feel that sonar (or weirs where they are better suited) would be ideal to manage the Klamath and Trinity river fisheries. It would do away with the WAG and harvest would be controlled by escapement. That is sound management and ensures enough salmon make it back to seed future returns.

(Pictured Left: One can clearly see the gillnet marks on this Trinity steelhead. The fish was just small enough to be able to push through the nets. Today a smaller fish is much more likely to survive as most larger brood stock salmon and steelhead are taken out by the nets)

The 101 bridge on the lower Klamath would be an ideal spot for a primary sonar counter. It's an area where the channel is small and the transponders could be easily mounted onto the bridge pilings to count all returning fish.

For instance if the Yurok tribe is allowed 20% of the in-river return for their commercial fishery they would be allowed to harvest no more (or less) of the escapement that moves past the counter at the 101 bridge. 10,000 fish move past the counter they could harvest 2000 fish, no more or less. 100,000 fish move up they get 20K, no more or less but no fishing until minimum escapement goals have been met **ABOVE THE 101 BRIDGE.**

Currently using the WAG, Yurok tribal netters harvested over 35000 (+ DUE TO



For river status (low flow closure) updates from Fish and Game please call +1.707.442.4502 for the North coast and +1.707.944.5533 for Central coast streams. Be sure to check out the California Fish and Game regulations before you go. Regulations vary on every river and you need to pay attention to bait and hook restrictions. Due to winter closures on HWYs 5, 101 & 299 we recommend you check Caltrans road conditions as well.

Caught Fish? Looking for timely informative updates? Check out a FREE trial to the Northern California Hotsheet, California's fastest growing fishing newsletter. The Hotsheet is emailed three to four evenings per week direct to your desktop. No hunting the web for information or waiting on an outdated magazine to arrive in the mail. These in-depth reports keep you on top of what is happening TODAY so you can catch more fish tomorrow! Just $3.50 per month when you subscribe for one year. You can receive a free week's trial copy by e-mailing a request to fishsite@aol.com

You can play the race card all you want but more often than not that is the first card played by the tribe (s) every time their netting practices are questioned. I only wish that the gillnetters in question were all lily white. Then I could come out with both barrels and Cal Fish and Game would have been parading them in their dog and pony show long ago.

Unfortunately CDFG, NOAA, PFMC and USFW are a big reason this story ever came to be. They have done nothing to enforce harvest. Harvest plans that should have been submitted by the Hoopa's in the 1970s are still not filed. Cal Fish and Game wardens have the audacity to check sport anglers for their license and punch card while (and I have seen this twice the past five years) Yurok netters are shooting sealions right in front of them and they do nothing likely because they are told by management not to. Last and least, why does it take someone like me to state the obvious that sonar counters would be one of the best ways to manage harvest and escapement?

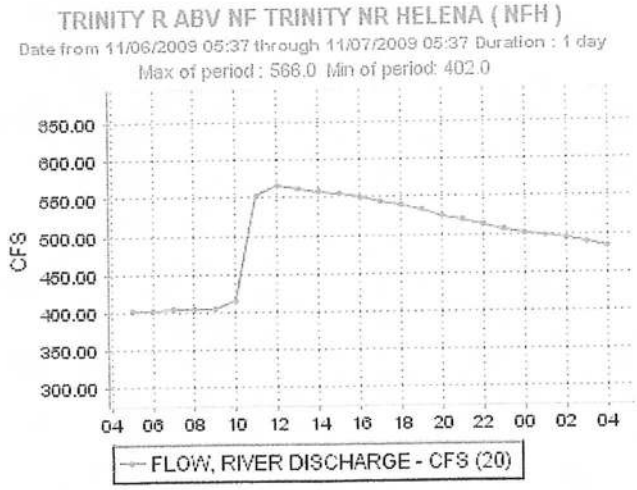
We have lost the Sacramento Valley salmon fisheries and in turn ocean sport and commercial fisheries worth 100s of million $$$$$$$$$ due to water diversion, greed and politics and now the Trinity to gillnetting and greed and for what? $50,000 worth of fish to the Hoopa tribe. This $50K worth of fish to the tribe will cost $10s of millions to the California economy come 2012.

My final question..... is when are Federal and State fishery managers going to start doing their job? If recent history is any inclination they will only step up when the run has completely collapsed.

I encourage sport anglers, especially those who live in the "State of Jefferson" to speak out about this travesty and to contact the media and their state assembly and congress members and ask for answers.

Mike

River Levels:



ALL THE UNCOUNTED FISH AND THOSE NEVER REPORTED) fish in just 17 days early in the season. In the time being sport anglers harvested just 11% of their 32,000 fish quota in 2009. In 2008 sport anglers landed just 10% of their quota 22.5K fish quota but the Yurok tribe took their full allotment of 22,500 fish before 10% of the run even migrated above tide water.

To maintain an accurate count, sonar (or weirs) should also be installed at the mouth of the Trinity and in the main stem Klamath just upriver from the Trinity. Fish that turn into the Trinity could be counted at the mouth and again at the Willow Creek weir. The Hoopa's would be allowed to harvest their allotment of fish that make it past the Willow Creek weir, no more, no less but no fishing until minimum escapement has been met AT THE WILLOW CREEK WEIR.

Over harvest by subsistence Yurok netters on the lower Klamath has been a big problem for years but the actual impact in numbers of fish is unknown. By having sonar counters along the length of the river the true impact of legal and illegal gillnetting would be known and harvests and allotments could be adjusted to make up for these impacts in real time or loss of fishing rights in the following years.

Just a few ideas based on what has worked in Alaska which has tribal and commercial gillnetting, resident dip netting and sport all on the same rivers. They are able to adjust fishery harvest in real time and always error on the side of the fish. It's a proven method of proper fishery management. After all what sense is there is spending 10s of millions to tear down dams if tribal gillnetters continue to over harvest the brood stock.

It's time that for new styles of fishery management but unfortunately it's too late for Trinity river bound kings and coho this year. The over harvest by tribal gillnetters this season will effect future seasons of both California and Oregon sport and commercial salmon anglers for the next several years. There can be a better future for salmon, tribal, commercial and sport anglers if we are bold enough to give up old practices and work together to rebuild the salmon runs.
We owe it to future generations to correct what we ALL have screwed up so badly.
Mike Aughney
fishsite@aol.com

Editor's Feedback:
I want to thank the scores of readers who have written us about this story. This is a "live" story and we will continue to update it as weir counts, pictures and new information comes in. Many letter have been from concerned sport anglers asking what they can do to spread the word and I will address that this weekend.
Many others have been from guides and local business owners (who for years have been muzzled by threats of violence from the tribes when they speak out) saying thanks for what they cannot risk saying. One was from Yurok tribal member who has been ostracized because he had spoken out against nets. In response to letters from some tribal members I will say that this issue has NOTHING to do with race.

catch the netting continues unabated. Dozens of nets are still in the river and likely catching 100s of fish nightly. Yes, the tribes certainly are the stewards of the river, or at least it's demise.

This picture (left) taken the second week of September on the lower end of the Hoopa reservation clearly shows a series of three nets that are set bank to bank that allows little to zero escapement. The nets are set to capture all salmon moving up through a deep hole where the majority of salmon stage and rest. Due to competition, gillnetters always try to set below others making for little chance of escapement. These are just three nets of 44 that were counted. Tribal anglers call this subsistence fishing. With 44 nets stacked in just a small section of river plunder or rape may be a better choice of words. The angler who sent us this picture said every hole had two to three nets and was "impassable, unless the fish grew wings".

Not all tribal members of the many along the Klamath and Trinity agree with what is happening. There are individuals and groups that are totally against gillnetting but have little say on the fishery practices of others through their own counsel. Many agree that gillnetting is not sustainable and is destroying their true native fisheries. You will find only truth in that statement today on the lower Trinity.

Guides and businesses along the river are afraid to speak up for fear of reprisals and threats of violence. Personally I have received (and documented) many threats against me and even my children for exposing what I and many believe to be the over harvest of salmon by tribal gillnetters on the Klamath and Trinity rivers for the past many years.

To be fair it was white cannery operators who first wiped out the Klamath salmon runs in the early 1900s (pictured right) but runs recovered once commercial netting stopped. Then, like now gillnets and greed were the reason for the collapse. The only difference between then and now was that at that time no dams had been built and fishery laws were enforced to allow a come back. Today with tribal nations and no accountability on the tribes to properly manage their harvest the run is being wiped out yet again and maybe for good.

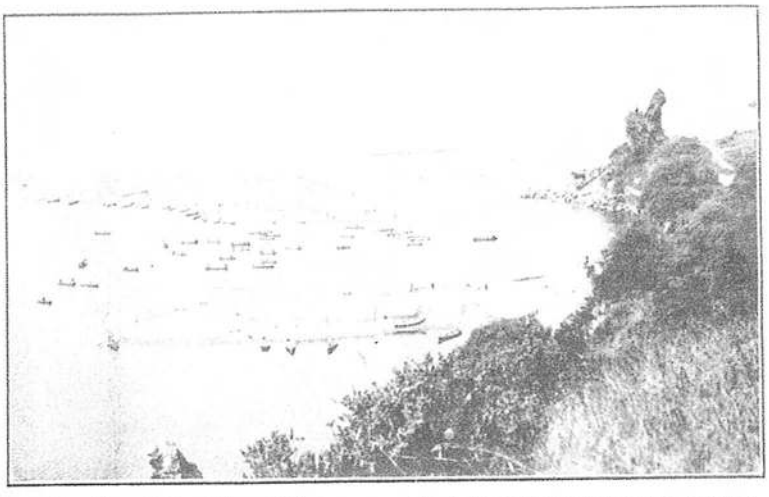


FIG. 10. Line fishing, Klamath Estuary near the Jaws; view from point 31, figure 9.

The Hoopa's are entitled to a 6000 fish quota this year. There is no telling how

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Appendix #2

THE RECORD SEARCHLIGHT
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Are gill nets decimating Klamath and Trinity salmon runs?

By Dylan Darling

Sunday, November 8, 2009

Leonard "Spam" Ferris has stretched a gill net into the waters of the Trinity River near his home on the Hoopa Valley Indian Reservation for about 50 years.

After starting as his grandpa's helper when he was 7 years old, Ferris, now 57, says he catches as many as 700 salmon a year using gill nets. So far this year, he's caught 400 and expects to keep filling his smokehouse.

"It's a late run so they are still coming," he said.

While Ferris, a member of the Hoopa Valley Tribe, said he hasn't seen more gill nets this year along the river through the reservation than in a typical year, upstream salmon guides charge that an increase in tribal gill nets is decimating the fish's fall run.

"We are just not seeing the fish we should be seeing," said Steve Huber, 43, a fishing guide in Weaverville.

While the two tribes on the lower stretches of the rivers - the Yurok and the Hoopa Valley tribes - report that they've hauled in almost 28,000 fish, close to this year's allotment, Huber and other guides said very few salmon are making it past the tribal waters and into areas where they can catch them.

The angry anglers are airing their concerns on the Internet.

Mike Aughney, 48, of Petaluma, who started www.usafishing.com in 1995, has launched an Internet campaign against gill netting on the Trinity, warning that tribal nets, particularly those on the Hoopa Reservation, are wiping out the Trinity River run.

"Because of the gill nets, we are seeing almost no return," said Aughney, who says he's fished in the north state for 40 years.

Allie Hostler, the Hoopa Valley Tribe's spokeswoman, said her tribe aims to protect the fish on the Trinity and American Indian gill netters are unfairly targeted.

"I feel like this is a witch hunt to blame the (Hoopa Valley Tribe) for something," she said.

Tightening tension

To fuel his online argument, Aughney points to low numbers reported by state scientists at a weir - a submerged fence used to collect migrating salmon - near Willow Creek. The data shows nine salmon the week of Oct. 22 and 16 salmon the week of Oct. 29. The guides and anglers say the counts should be in the hundreds.

But Wade Sinnen, the associate fishery biologist with the state Department of Fish and Game in Arcata in charge of the project, said the numbers don't mean that there is a problem with the fish population.

"It is not a crash situation," he said. "... there has been misinterpretation of that data."

While there are weirs that channel fish so they'll pass by video cameras or other tools to create a count, the Willow Creek weir corrals salmon into a trap where they are marked by scientists, Sinnen said. The percentage of marked fish that then show up at the Trinity River Hatchery in Lewiston is part of the formula used to create a population estimate.

Data collected on the runs since 1977 show the numbers can vary widely, he said. The hatchery returns range from a low of 1,551 in 1993 to a high of 30,386 in 2003, Sinnen said. The natural returns range from 5,249 in 1991 to 113,007 in 1986.

He said it is too early to tell what this year's total run will be, but all indications so far are that it won't be a large one.

"The bottom line is the Trinity River is going to have an OK run," Sinnen said, "but not a real robust one."

Aughney said he thinks tribal members are using more gill nets as a result of the ongoing ban of commercial salmon fishing on the California coast. As the commercial salmon supply available drops, prices have shot up.

He said 20,000 pounds of salmon - about 2,000 fish worth $60,000 - from the Trinity caught by members of the Hoopa Valley Tribe ended up for sale at the San Francisco fish market and he questioned whether that was legal.

Dan Torquemada, assistant special agent in charge of the National Oceanic and Atmospheric Administration's Fisheries Office for Law Enforcement in Santa Rosa, said he received an anonymous tip about the salmon, but no laws were broken by tribal members. He said the tribe is allowed to sell some of the fish caught along the Trinity River.

"Currently, we have no evidence that the Hoopa fishermen are using their nets in an illegal manner," he said. "They are operating under the direction of the Hoopa tribal authorities."

The Hoopa and Yurok tribes work with the Pacific Fishery Management Council, a federal entity regulating sport and commercial fishing on the West Coast, to set salmon

catch allotments for the river and the ocean, said Chuck Tracy, salmon staff officer for the council.

This year's allotment is 30,900 fish each for non-American Indian anglers and the American Indian fishery on the Klamath and Trinity rivers.

Huber said sport anglers will be lucky to catch 4,500 on the rivers - about 15 percent of their allotment - because of a diminished Trinity run.

Gill netting has long been controversial in Northern California, especially along the lower Klamath River, said Tracy, salmon staff officer for the Pacific Fishery Management Council.

"It's a pretty consistent fishery," he said. "It's pretty intense."

Tribal tradition

The state outlaws gill nets on rivers, but they are allowed on waters running through the Yurok and Hoopa Valley reservations that are governed by the separate tribes.

Flanking 44 river miles from the mouth of the Klamath at the Pacific Ocean to the river's confluence with the Trinity River, the Yurok Reservation is centered on the river. Just upstream from the Yurok Reservation, the Hoopa Valley Reservation is a 12-mile-by-12-mile square - 144 square miles in all. It is similarly river-driven.

Gill nets allow a salmon to swim partway through their mesh. Cinching around the fish's body, the nets trigger a salmon's instinct to swim backward when they encounter an obstacle. When they do that, they become ensnared in the net by their gills.

The technique is a traditional one, used for centuries by American Indians along the rivers, said Hostler, the spokeswoman for the Hoopa Valley Tribe.

"We used to make them out of iris twine," she said.

Today, the nets are made of thick, braided synthetic fishing line and held afloat by plastic foam. Hostler said the nets in the river on the reservation are usually 50- or 100-feet wide and tribal laws restrict them from covering more than a third of the river.

Tradition dictates placement of the nets, said Hoopa gill netter Ferris - whose uncle jokingly said he felt like a can of Spam when he was a newborn baby, giving him a nickname that stuck.

"Everyone knows your spot and protects your spot," Ferris said.

He said today he takes his grandchildren fishing and the fish they catch go to his large family and elders in the tribe.

Hostler said tribal fishery officials and law enforcement officers also police the river, making sure those using gill nets are following tribal laws.

Leaders from the two tribes meet each year to set a division of the tribal allotment. This split is 80 percent to the Yurok and 20 percent Hoopa, reflecting the larger size of the Yurok tribe, Hostler said. The Yurok have 5,500 members and the Hoopa 2,500 members.

This year, the members of the Hoopa Valley Tribe have caught about 4,000 fish of their 6,128 allotment, said Mike Orcutt, who heads the Hoopa Valley Tribal Fisheries Department.

The Yurok have caught 24,000 salmon, only 720 fish short of this year's allotment, said Troy Fletcher, a policy analyst for the tribe.

"We are pretty close to the end of the season," Fletcher said.

Upriver on the Hoopa Valley Tribe Reservation, the run continues.

Orcutt said on a busy day there are as many as 50 gill nets in the water on the reservation, but he said there hasn't been an increase in the number of nets this year.

He said he has seen reports on angling Web sites questioning whether the tribe is exceeding its allotment this year.

"Our answer is we are in our harvest objectives; we haven't gone over our harvest objectives," Orcutt said.

Racial divide

The issue boils down to a racial divide, said Fletcher, the Yurok official.

"There has always been a tension over the tribal fishery," he said.

Fletcher said the Yurok Tribe has the most monitoring and law enforcement on the river, but nontribal members don't trust the American Indian because there is no state or federal oversight.

However, he insists the tribe is focused on protecting the salmon and improving its stocks on the Klamath, of which the Trinity is a tributary.

"That is our river," Fletcher said. "Those are our fish. And we manage those fish in a responsible way."

Aughney said he plans to continue his online criticism and his concerns are not motivated by race, but by the type of fishing he said he sees crippling the salmon run.

"I am not an Indian hater," he said. "I hate gill nets."

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Appendix #3

June 04, 1979

Clamor Along The Klamath

The beautiful course of the Klamath River in northern California has grown ugly in recent years. It is a setting for war—at times a shooting war—between sports fishermen and Indian gill-netters, with the salmon caught in the middle

Robert F. Jones

Although it's only 200 miles long, the Klamath River of northern California has many faces. Great green combers roll in from the Pacific past the sandbar at its mouth where Yurok Indians jig for eels and sea lions frolic as they wait for a run of salmon. A short distance upstream, fishing resorts and camps flank the straight edge of Highway 101 where logging trucks loaded with the trunks of giant redwoods roar past day and night. This is the town of Klamath (pop. 635), a community predicated on Chinook salmon and steelhead trout.

Above Klamath, the river loops between high bluffs thick with young redwoods and madrones. Vast gravel bars gleam in the green water and herring gulls scream over the shallows. Then the river narrows gradually, its pace quickening.

Beyond road's end, the river grows wilder, the rapids rougher, the banks only infrequently showing signs of human presence: a sprawling ranch at Apah; a vast and ugly clear-cut, courtesy of the Simpson Timber Company, near Blue Creek; a modernistic house of weathered wood and glass, balanced precariously on a rock where Surpur Creek enters from the west. At the Indian town of Johnson's, eight or nine junked cars rusting on the bluff announce the presence of 200 human beings. Still, the overall impression is one of deep natural beauty: a strong, raucous, clear-running river and big white boulders, some of them topped with equally white driftwood.

But there is another face to the Klamath River, one that has grown uglier each year since 1975. It's a face of war, the Great Klamath-Trinity River Salmon War, the Trinity being the Klamath's principal tributary. Real bullets whiz back and forth across the Klamath at times, Indian firing at white man; Indian at Indian; cop at violator. Last summer a white canoeist was shot in the back far upriver. Like many modern wars, this one has no out-and-out bad guys, unless it be "government," that catchall bad guy of our times. On one side are arrayed sportsmen, resort owners, local law-enforcement officers and the majority of the 3,800-member Yurok tribe that occupies the lower 50 miles of the Klamath-Trinity system. On the other side are 18 to 20 commercial gill-netters, themselves mostly Yuroks, and their backer, the U.S. Bureau of Indian Affairs. Caught in the middle, to a greater or lesser extent, are 1,400 Hoopa Indians who occupy a 12-mile-square reservation just upriver of the Yuroks; the 500 or so Karok Indians upstream from them; the Secretary of the Interior, Cecil Andrus; various California state officials; and—most poignantly—the salmon and steelhead of the river.

The issues involved in the conflict are so deep-rooted and complex as to require a latter-day Solomon to resolve them, yet if resolution isn't achieved by the time this summer's Chinook run starts later this month, most experts—Indian and non-Indian alike—agree that the Klamath may be finished as a natural salmon fishery. The reason: since 1975, in an exercise of "traditional Indian fishing rights," a small group of Indians (and some non-Indians) has been gillnetting the river so heavily that the salmon of the Klamath-Trinity drainage may have reached the point of no return. The netters aren't fishing just for "subsistence," an ill-defined term that would seem to mean home consumption, but for money. They have been selling their catches for prices up to $6 a pound—in defiance of a 1933 California state law that forbids commercial salmon fishing in any of the state's once salmon-thick rivers, and with the overt approval of the Bureau of Indian Affairs.

"This is a river that has been devastated," said U.S. Representative Robert L. Leggett during congressional hearings on the matter last fall. "We have virtually lost the salmon in the Sacramento River, and we have lost them in lots of rivers in California. We are in danger of losing them in this river." Leggett, who is chairman of the House Subcommittee on Fisheries and Wildlife, was addressing himself to Forrest Gerard, Assistant Secretary of the Interior in charge of the Bureau of Indian Affairs. "If there are violations that have occurred

out there, those violations ought to be reasonably pursued. There has been the law of the jungle on this river for much too long. It has been utter chaos."

Though the origin of this chaos dates back at least to 1891, when some five northern California Indian tribes were given the Hoopa Reservation on the Klamath, the immediate furor began taking shape in 1969. In that year a downriver Indian named Raymond Mattz was arrested by the California Fish and Game Department agents for gillnetting salmon on the Klamath. In 1972 Mattz took the case—*Arnett vs. Five Gill Nets et al.*—all the way to the U.S. Supreme Court, and although the Court said nothing about Indians fishing in violation of state law, it did rule that the lower Klamath—the 50 miles below the so-called Hoopa Square—was to be considered part of the reservation. In 1975 the U.S. Court of Appeals ruled that the state had no power to interfere with Indian fishing rights on the reservation unless such regulation was needed to conserve the resource.

The famous (or infamous) Judge Boldt decision of 1972 in the state of Washington had clarified the rights of so-called "treaty" Indians living along the Columbia River drainage to fish for salmon without regulation. Early this May, U.S. District Court Judge Noel P. Fox of Grand Rapids ruled similarly in a case involving Chippewa Indian gill-netters, upholding the rights granted by treaties signed in 1836 and 1855. "The mere passage of time," he wrote, "cannot erode the rights guaranteed by solemn treaties. The Indians have a right to fish today wherever fish are to be found.... It is an Indian treaty case."

But the Hoopa Reservation wasn't set up by treaty. It was established by executive order with no mention of fishing rights. Nonetheless, Mattz and the other commercial fishermen on the Klamath argue that—until recently—no one, the BIA included, had interfered with their gillnetting. During the summer run of 1975, Mattz and a few dozen of his fellow Indians began fishing commercially in a big and blatant way. The BIA did nothing to stop them. The rationale offered was based on debatable anthropological evidence that some Yuroks in pre-white days had occasionally traded salmon for deerskins and artifacts.

The bureau's laissez-faire policy frightened and outraged sports fishermen and the resort owners who had been earning more than $1 million a year from the sport fishery. Under the leadership of Ed Henke, a former San Francisco 49er, the sportsmen banded together in a group called the Klamath/Trinity River Coalition, Inc. "I've been fishing that river for 30 years," says Henke, "and I knew right away that most of the Indians were against commercial fishing. The Yuroks, and the other Indians upstream, know damn well that the resource is fragile, that you don't hit it hard year after year with heavy monofilament gill nets in every eddy and expect to have anything left. The Chinook has a three-to five-year life cycle. When it returns to spawn, it dies, as do all the Pacific salmon. If there isn't enough 'escapement' from the nets, that whole year's return can be wiped out. We've had unconscionably heavy gillnetting now for three years. Figure it out."

If it were simply a matter of the Indian majority recognizing a threat to its major resource, one would think the Indians would stop the 18 or 20 "outlaw" gill-netters. There is, however, another legal fly in the proverbial ointment: the Jessie Short case. In the early 1950s the BIA decided that the midriver Hoopa Square was one reservation and that the "Yurok Extension"—the 50 miles of river below the square with a mile of mountainous country on each side—was another, separate reservation. That arbitrary, bureaucratic fiat deprived the 3,800 Yuroks of the wealth of the Hoopa plateau, mainly timber valued at $200 million. Allan Morris, a white man and former Eureka, Calif. police detective married to a Yurok woman named Fawn Williams, took on the role of adviser to the Yuroks and sued the BIA. In 1973 the U.S. Court of Appeals ruled in favor of Morris' advisee, a woman named Jessie Short, and 3,300 other claimants, who aren't necessarily full-blooded Yuroks but are residents of the extension. The court said that the two reservations were one and that the Yuroks had at least $16 million coming to them.

"We still haven't seen the money," says Morris, a burly, intense man who lives in a modest home in Mountain View, near San Francisco. "Look at all these papers"—he gestures to room after room full of legal documents, press releases, newspaper clippings. "Pretty soon Fawn and I will be living in the yard with a house full of documents."

The distribution of Yurok monies has been held up because the Court of Appeals can't decide which of the 3,300 litigants is a true Yurok. Until this question of Yurokness is sorted out, the BIA is holding the money in trust. Morris and his wife, and many other Yuroks as well, refuse to set up any sort of tribal organization until they can do so in tandem with the Hoopa council. At that time, they argue, they will decide what to do or not to do about commercial fishing on the river. Morris particularly fears that the BIA is trying to force the Yuroks into a premature tribal organization so that the agency can then say, "Aha! They always have been a separate tribe, just as we said in 1953, so give us back our $16 million."

To be sure, the Bureau of Indian Affairs has a bad track record, dating to the early Agency days when corruption flourished around the twin allures of booze (for Indians) and furs (for whites)—but in this day and age? "They're two-faced liars!" rages Morris. "They're out to get our money and kill the salmon in the Klamath."

But why?

"In 1980," Morris says, "California loses its lease to water from the Colorado River. Where is the state going to get water for Southern California? If the salmon in the Klamath-Trinity system are wiped out, the non-Indian sportsmen and environmentalists will lose interest. And if the fish are wiped out by Indians, even more so. Then the government can build high dams wherever they want, with only a few Indians—who are all already branded as 'villains' because of the salmon kill—arguing against it. So Southern Californians will still be able to wash their cars, but all of the Indians of the river will find themselves depatriated. They'll have to leave the river. It will have become a chain of sterile lakes."

To be sure, paranoia and sunshine abound in equal measure in California, yet a number of reasonable men agree with Morris' theory. One of them is Bob Bostwick, 42, a lean, bemused steelhead enthusiast who with his wife, Jenny, runs Kamp Klamath, an RV park on the lower river catering to the fishing trade. Bob and Jenny moved up to the Klamath from the freeway freneticism of Southern California six years ago, looking for a life of self-sufficiency and lots of fishing.

"At first glance it would seem pretty unlikely," Bostwick says of Morris' theory. "But the more you think of it, the more sense it makes. The BIA is in business as 'trustee' of the various Indian tribes on reservations. It's up to the agency to keep the reservations economically healthy. Yet it was the BIA that condoned the commercial gill-netting in the first place, and it's the BIA that's been promulgating regulations for commercial fishing the past couple of years. In effect, they've legalized the destruction of this river as a fishing resource—not just for the Indians, but for all of us, Indians, sportsmen and lodge owners alike. There are 19 lodge owners here in Klamath. Two of them have already gone under, and more are likely to fail this summer. Why would any federal agency permit this sort of destruction—of the Indians' livelihood as well as our own—if there weren't something bigger behind it?" And that something, the Bostwicks agree, is the water-hungry burgeoning population and rich agricultural lands of Sacramento and the Sacramento delta 300 miles to the south of the Klamath.

The Bostwicks, other resort owners, sportsmen and some residents have banded together to form yet another organization, the Klamath River Basin Task Force, which is suing Cecil Andrus, the Department of the Interior and the BIA for failing to prepare a proper environmental impact statement before the BIA's authorization of commercial netting in August 1977. In addition, the task force has filed a claim asking $1.25 million in damages.

What hurt the resort owners most was a lukewarm compromise between the BIA and the state of California last summer. In August, with the concurrence of the Fish and Wildlife Service, the agency imposed a moratorium on all fishing—commercial and sports—with the exception of "traditional" Indian subsistence netting. "As if 'subsistence' fishing weren't the same damn thing as commercial!" says Bostwick. "Who's to say if they take those fish home or sell 'em?"

Last Sept. 5, while working on a drug case, Del Norte County Sheriff Tom Hopper and his men stopped a truck on Highway 101 carrying 650 salmon and one steelhead worth some $60,000 to $70,000.

Hopper is a short, dapper, wry-spoken man of 41 who has lived in the Klamath-Crescent City area for about 20 years. "We thought we had a narcotics bust going," he said not long ago in his Crescent City office. "This area has some of the richest marijuana-growing country anywhere. But when we pulled that truck over, I saw it: water running from the back of the truck. Melting ice. We'd caught a load of fish. It was a Hertz Rent A Truck, and the salmon were all belly-packed in ice, a real professional job."

Hopper, who takes enforcement of the salmon situation seriously, says that Klamath River fish are being sold to points as distant as Reno, San Diego, Los Angeles, Denver and "maybe even as far as New York, from what we've heard.

"Black-market prices are so high," he says ruefully, "that they can operate with impunity anywhere they want. It's the same situation as it was in 1933, when the state banned commercial salmon fishing—a small number of greedy individuals wiping out the resource for short-term gain.

"What I'm afraid of is the violence that could well erupt on the river this summer. We came damn close to death last summer, during the moratorium. Last December I learned that there were 60 gill nets in the river on one given day. I called the Fish and Wildlife guys in

Sacramento, and I even called Washington. I screamed bloody murder. The operator or secretary who answered in F&W in our nation's capital said that the responsible people in this matter were on vacation. I guess that's when I said maybe when they come out here, this summer we'll be on vacation."

Across the street from Sheriff Hopper's headquarters is the office of Del Norte County District Attorney Bob Weir, a trim, wiry and eagle-eyed young lawyer who likes to exercise his hands with wire-sprung compressors while he talks. "The first priority in this whole sorry business," he said, "is to settle the Jessie Short case as soon as possible. Why it's taken 20 years for that case to go through, only God and the federal courts know. If they could only have invested that money—some $16 to $20 million—into the river economy, buying resorts or something to help the local economy, Indian and white, then it might have been worth it. If the BIA would but do it.... But they won't. Their prime interest, to my mind, is to keep from getting sued, to keep their tails out of a legal bind.

"The decline in the fishery, in my opinion, is only partly the fault of the Indians who are going at it commercially. It's minor. The biggest cause is bad logging practices, which have made many spawning streams impassable to salmon and have helped to silt up the river. Another factor, certainly, is the removal of water from the upper drainage of the Trinity to the south. But I don't think there's an overall, calculated plan—a conspiracy—to destroy the river in order to divert its water down south."

Weir flexes his wrists and compresses the wooden handles. "To allow commercial fishing, as the BIA and the Interior Department have done, and then to stop it in midseason as they did last summer, is a bit like letting the genie out of the bottle and then trying to stuff him back in."

One of the saving graces of any salmon fishery, of course, is the fact that all salmonids can be readily raised in hatcheries, then restocked in waters where the native population has failed. But Weir, who has done his homework thoroughly, feels otherwise in the Klamath's case. "Hatchery input is bad for the river," he says. "Hatchery fish return only to limited spawning spots—the places they were planted—while wild fish cover the whole spectrum of the river. What's more, hatchery fish are fed on chopped liver and other goodies while they're growing, thus they're bigger and stronger than the natives—they compete in the river for food against the natives, and they win."

Weir sees a historical link with the problems of old English salmon rivers. "In medieval times," he says, "it was a crime punishable by death for a commoner to take the king's salmon. Yet men risked it, and do to this day, though the penalty is less severe. Poaching these fish is so profitable, here as it was there, that men are willing to risk even death for the payoff. You can suppress illegal fishing, but you can't stop it."

Bill Van Pelt, 60, is a short, husky, soft-spoken Yurok with a thick white crew cut and the classic cheekbones and strong chin one sees in photographs of 19th-century war chiefs of the Great Plains.

"I speak for the salmon who have no voice," he likes to say, and he speaks very articulately. "A lot of people these days are saying that the Indian is a 'natural conservationist.' That's a lot of bunk. I'm fed up with a lot of this stuff they teach in the Native American Studies programs that make the Indian out to be some sort of ecological and ethnic saint. Our ancestors were killers, both of men and of other animals, salmon included. When I was a boy growing up on the river, the old people used to talk of how the first Yuroks who came into the Klamath country rubbed out a Stone Age people who were here ahead of us.

"The only reason they didn't kill all the salmon before you white men got here was because they had a crude, weak technology. They had heavy dugout canoes—I'm damned if I know how they cut down the trees to make them, maybe with fire—and they used nets woven from iris grass or else wicker fish traps made of roots and branches. They fished for a week or two as the salmon run passed the family fishing hole, caught maybe eight or 10 salmon a night. Salmon wasn't the only or even the major source of protein. There were shellfish, eels, deer when they could hit them with their weak bows and arrows, elk very rarely. The Indians who are now gillnetting the salmon to death are fishing drift nets in the mouth of the Klamath. They say they're fishing 'traditionally.' That's bunk, too. Nobody ever fished the mouth in the old days. It was too far away, and who could paddle those big, cumbersome canoes back upstream? These gill-netters say that the old Yuroks traded salmon with other tribes, and thus they justify commercial fishing. That's a lie. The old Indians believed it to be a sin to sell or barter fish.

"There used to be a fall run of big salmon in the Klamath—we called them 'kings.' They were big fish, 60 pounds or more. We wiped that run out about 1945. Now it looks like we're going to wipe out the summer and the spring runs as well. Then we can all move away and

lament the good old days." He smiles sadly, shakes his head and sips from his coffee cup. "I guess I don't have to tell you. The other Indians say I'm a white man with a brown skin. I don't care what they say. I speak for the salmon who cannot speak for themselves. This river needs a long rest—a total moratorium on subsistence as well as commercial and sport fishing, while a decent, solid study is done so we know what we have left."

During this spring's run—a small one at best—the only enforcement of BIA regulations on the river was being handled by three Yurok officers of the U.S. Fish and Wildlife Service, including Dale Miller, 32, a supervisor and wildlife inspector, who was in charge. I rode up the river on patrol with Miller and his two assistants, Ron Holzhauser and Blake Proctor, in their 55-mph aluminum-hulled jet boat. It was a bright, cool day after a week of rain and the river was riding high. "Our job is to check the name and registration number on every gill net in the river," said Miller, a portly man with a cop's hard eyes. "We check to see if there are fish in the nets—so far this run hasn't been very productive—and that the nets aren't more than 100 feet in length overall. Each family can fish two nets of 50 feet each. The moratorium of last fall was lifted for this spring run, but even if it hadn't been, I don't know what I'd do if I caught a violator. Give him a warning, I guess. I'm under orders from the BIA not to make any unnecessary arrests. We're trying to keep a low profile so as to avoid the SWAT team approach we used last summer."

The run up the river was uneventful. We found 33 nets, all of them properly marked and registered. Only one contained a fish—a 40-pound sturgeon, an incidental but valuable victim in the salmon game. A scattering of salmon was taken, but it was by all accounts a mediocre run at best. Halfway up to Coon Creek Falls, Miller pulled the patrol boat over to a gravel bar where a johnboat with an outboard was beached. In it, awakening from a peaceful siesta, was Jerry Patterson, 48, one of the leaders of the gill-netting, commercial-fishing contingent, which calls itself the Klamath River Wildlife Conservation Association. Patterson is blond, blue-eyed and one-eighth Hoopa on his mother's side.

"Look at all this country around here," he said, gesturing across the rolling river. "My great-grandmother had lots of land, but she gave it all away—lots of land over in Redwood Valley. She kept only this little bit of the river for her descendants to use and to live on, and now they want to take the commercial-fishing rights away from us." He cocked his camouflage hat back on his freckled forehead. "I used to be in the lumber business, but now all the good timber has been turned into houses. All that's left is leaners and widow-makers on the steep slopes. I'm not going back in the woods. I got out with my whole skin, and now I'm going to use the river the way my great-grandmother intended for me to use it. I don't know how anyone can seriously say that we're destroying the resource. Heck, there was a study that showed the trawlers on the deep water—Russians and Japanese as well as Americans—take 88% of the salmon that are headed for this river. The sports fishermen take another 8% and the Indians take only 4%. Whatever they decide, I'm going to keep right on fishing."

What Patterson failed to mention was that the study he referred to was done in 1967. There is no up-to-date study on the salmon's return to the river, and thus no means of determining how many fish—if any—can safely be taken before they spawn. As for Patterson's mention of his dear old great-grandmother, Dale Miller had to laugh. "If you'd called Jerry an Indian five years ago," he said, "he'd have punched you out. Some folks say he took $200,000 out of the river last year. He's driving a new truck and his house has been all fixed up. I don't know, you figure it out."

Perhaps the Solomonic decision that could save the salmon and steelhead of the Klamath is just as simple as old Bill Van Pelt's advice: stop all fishing on the river right now, use some of that Jessie Short money to pay the fishing families what they would have realized had they kept fishing and send in a team of well-funded, impartial marine biologists to assess the entire situation. Donations from concerned conservation groups might help keep resort owners like the Bostwicks afloat during the study period. Surely even the Jerry Pattersons and Raymond Mattzes couldn't object to that. After all, if it was their great-grandmothers' desire that the young have a renewable resource, they would only be acceding to the ancestral wish.

Appendix #4

Trinity & Klamath Salmon doomed bc of indians

10-29-2009 11:15 PM #1

sidewazzz

You dirty monkey

Location: Gilroy

Motorcycle: 150cc Tank Scooter

Name: Jesus

http://www.usafishing.com/trinity.html

I know there are a few here that love to fish, just thought I'd share.

So sad. I actually saw a gill net pull about 80 salmon outa one hole. Size ranged from 15-50 LBS

Tribal gillnets are literally wiping out the entire 2009 Trinity salmon run. It's tough enough the salmon have to make it through one gauntlet on the Lower Klamath but it's the second set of nets at the Hoopa reservation on the lower Trinity that are inflicting the biggest toll. The numbers of fish fighting their way to the spawning grounds on this important tributary to the Klamath are at all time lows.

We have been highlighting this travesty for the past three weeks and it finally looks like the main steam media is starting to pick up the story and bring it to light to those outside the fishing community.

For the week ending today October 28th only 9 (nine) king salmon and four coho made their way through the weir on the main stem Trinity at Willow Creek. That brings the entire Trinity river escapement of adult king salmon since October

1st to 95 fish. That's an average of just over 3 fish per day at a time when 100s of fish should be pushing through daily.

This was avoidable and in terms of the percentage of returning fish the gillnets have wiped out (harvested or whatever term one wishes to use) over 90% this year's entire Trinity fall run of kings. This complete disregard for sustainable runs will be felt for years and could lead to the continued closures of sport and commercial fishing along the California and Oregon coasts in 2012 and 2013.

Last week over 20,000 pounds of Trinity river salmon netted by Hoopa gillnetters (approximately 2000 fish) was intercepted by NOAA enforcement officers. Unfortunately the bust was unable to be prosecuted because the Hoopa tribe has never submitted a harvest plan. The shipment of what literally was the entire fall escapement for the upper Trinity was bound for two San Francisco based fish processors. These processors sell to one so called "eco minded" chain (think health food) that profess that they sell only fish from sustainable fisheries". My only question is that if you can't prosecute the netters why can't you go after the state licensed commercial fish buyers for purchasing illegally caught fish?

FYI. Hoppa are entitled to 6,000 fish this year. In one week they pulled 2,000 but they have been doing this since early Sept

http://jgiphotography.blogspot.com/

Reply With Quote

10-29-2009 11:53 PM

BillST4s #2

Registered User

Location: Edmonds (near Seattle) Washington

Motorcycle: Darkwing Duc: 2006 Ducati ST3s (black)

That is pretty sad. Our tribes up here run their own hatcheries and employ wild life management professionals to insure that salmon and other fish are not wiped out.

and keeps 2. That would come out to... 20 fish total.

Now 5 nets...Well I'll use the number from the Hoppa Indian I spoke with. So one net usually gets 80-100 fish but since I saw a total of 43 lets say 40 for kicks. 40 fish X's 5 nets= 200 fish

20 vs 200 You be the judge on who needs quotas. But really it's not about that, it's about the fact that the Indians are over fishing their YEARLY quota. I mean shit with 30 nets in the water in one day catching a 1,000 fish isn't hard to do. When we were there last year we counted something like 10 nets within a few miles.

While the Hoppa may have a quota of 6,000 fish. There is nobody there to enforce it!!! And the only reason there was a bust resently was bc the Trinty Salmon count was WAY, WAY, WAY down.

http://jgiphotography.blogspot.com/

Reply With Quote

10-30-2009 10:58 PM #12

sidewazzz

You dirty monkey

Location: Gilroy

Motorcycle: 150cc Tank Scooter

Name: Jesus

At shot from 2008. Mouth of Trinity meeting up with Klamath

http://jgiphotography.blogspot.com/

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Appendix #5

news story / By Ryan Burns

By the Gills

Sport fishermen accuse tribes of bogarting the fall salmon run

(Nov. 12, 2009) As the fall salmon run on the Klamath and Trinity rivers draws to a close, a small group of sport fishermen and guides has been casting allegations into the teeming waters of the Internet, claiming that gill nets employed by the Yurok and Hoopa Valley tribes are systematically decimating the fragile fish population by ensnaring all but a measly, undersized few. They say the nets, which snag fish by the gills as they attempt to escape, are jeopardizing not only their livelihoods but the health of fisheries up and down the coast for years to come.

Tribe members, meanwhile, dismiss the charges as baseless, saying these commercial fishermen are ill-informed at best, and, at worst, dishonest and racially motivated.

Gill net buoys on the Lower Trinity River in a photo posted on www.usafishing.com. Photo courtesy of Mike Aughney

GALLERY >

Commercial fishing guide Mike Aughney has been leading the anti-gill net campaign from his own Web site, www.usafishing.com. For more than a month, Aughney has been lamenting the dearth of salmon on the lower Trinity, citing as evidence the experiences of commercial fishermen and guides like himself as well as low fish counts at the Willow Creek weir, a collection site monitored by state scientists.

"It's tough enough the salmon have to make it through one gauntlet on the Lower Klamath," Aughney wrote in reference to the Yurok gill nets, "but it's the second set of nets at the Hoopa reservation that are inflicting the biggest toll."

On Oct. 22, investigative agents with the National Oceanic and Atmospheric Association's Fisheries Service responded to an anonymous tip that a Bay Area grocery store chain was selling Klamath River salmon with telltale gill net markings. NOAA Fisheries Supervisor Tan Torquemada said via e-mail last week that this was suspicious.

"We were aware that the Yurok tribal commercial season had been closed for over a week, and became concerned that the fish had been unlawfully harvested under current Yurok fishing regulations," he said. Investigators learned that a total of 20,000 pounds of salmon had been sold and distributed among the chain's 20 Bay Area locations. Aughney believed this was the smoking gun. However, the salmon turned out to be from the Hoopa Valley Tribe, which, unlike the Yurok, does not prohibit its members from the commercial sale of their state-sanctioned allotment of subsistence fish. (Such a ban used to exist, but the tribe repealed it in 1989.)

"That's the rub, the Catch-22," said NOAA Fisheries Special Agent Tim Broadman. "You have to have a regulation that's being violated." NOAA Fisheries has authority to prosecute tribes under the federal Lacey Act, which prohibits the sale of illegally acquired fish, but since the Hoopa Valley Tribe has no law against selling subsistence fish, the agency has no jurisdiction in this case. In fact, the transaction was not illegal.

Nevertheless, Aughney believes the current system, in which tribes regulate their own fisheries, allows for corruption and dishonesty. He claims tribes have been stringing gill nets across the

entire width of the river, a violation of regulations in both tribes. "When [tribal police] have NOAA observers on board, all the illegal activity stops for a couple hours while the principal walks down the hall, so to speak," Aughney said by phone last week. "And as soon as he goes back in his office, it's wide-open recess again." He suggested switching to the type of sonar counting system used in numerous Alaska fisheries.

1 2 NEXT PAGE >SHARE

TWO Comments

Comment / By Outsider Looking In / Nov. 12, 2009, 11:41 a.m.

It is important to note that despite multiple dams, massive water diversion, temperatures up to 76 degrees, no fish ladders, a fish kill of more than 60,000 and hazardous chemicals running into the water, the Klamath and Trinity rivers continually support healthy salmon runs. Ironically, the Klamath and Trinity rivers are located on multiple Indian reservations. Further, the healthiest salmon runs in the State of California are within the Klamath and Smith river basins. Both are taken care of by Native people. Sadly, the Sacramento River's salmon runs have been killed off due to farming and high water temperatures. The Sacramento River is solely controlled by Non-Indian people and its destruction happened in less than 150 years. This terrible story can be told over and over again about rivers within the State of California. The Tribes have been here, caring for the rivers for thousands of years and continue to do so despite all the surrounding environmental challenges bestowed upon them. If one wants to continue to challenge the Tribes on their right to fish, it would be best to look at the history and facts first rather than a few for-profit guider's clouded opinions.

Comment / By Salmon Lover / Nov. 12, 2009, 1:51 p.m.

Thank you Outsider. Your comments are the most sound I've read on the topic thus far. Indians have managed the fishery successfully for thousands of years. It wasn't until dams and irresponsible mining came along that the fishery was devasted. In fact, in the ten years after the dams were built on the Trinity River, the fishery declined by 80-percent. I've lived in Hoopa my whole life and fished these rivers just as long. Sure, some salmon are sold from time to time. But that really is a rarity. The only reason they were sold this year, is because the ocean fishery is shut down and there is quite a demand for salmon in the Bay Area. The total take of salmon has reduced dramatically since ocean fisherman aren't taking the usual 100,000 to 200,000 fish. Our hearts go out to those folks too. It used to be there were plenty of salmon for all, if managed wisely. Today, the state and federal governments water priorities are screwed up leaving river

Appendix #6

THE RECORD SEARCHLIGHT
redding.com

Steelhead: Truly the prize of the freshwater fish

John Spencer, Special to the Record Searchlight

Saturday, October 23, 2010

I thought it was about time to perhaps start writing about steelhead.

Along with salmon, they are also in the forefront of the fishing season going on now. It is my belief that steelhead are truly the prize of all the freshwater species to catch in both beauty, and for those unfamiliar, steelhead are defined as a silvery rainbow trout that migrates to the sea before returning to freshwater to spawn.

They are anadromous. That is, they have the ability to physically adjust to fresh and salt water the same as salmon at the time to spawn. On another note, unlike salmon, when they spawn, they do not die but return to the sea to spawn again. Sometimes more than five times. Again, unlike salmon, they feed along the way and back to and from the sea.

In as much as they are actually rainbow trout, their coloration might look the same as some resident rainbows after being in the freshwater for a period. Fresh steelhead out of the salt water display a more silvery color with very little pink showing on the lateral line. The back or top portion of the fish is a distinct olive-grey steel color where it gets its name identity. The name “steelhead” origin is unknown. I would assume it might have come from early American Indians. I doubt if anyone will contest the name given them. They are Mother Nature’s gift to us every fall and winter. In addition, in some places, the spring and summer, too.

Steelhead range in sizes from about 2 pounds up to as much as 25 pounds depending upon their location and stream environments. In the Sacramento River for instance, most steelhead run from about 2 pounds up to 8 pounds. I remember the late John Pelnar, the notorious manager of the Coleman National Fish Hatchery, and an avid steelhead angler, caught a 12-pound steelhead on Todd riffle below Red Bluff. That was the largest fish I have seen caught on the Sacramento River. Most steelhead in this river however average from about 3 pounds to 5 pounds on the top end.

On Klamath River, the fish run about the same as the Sacramento River steelhead these days. The day before this writing, while fishing the Klamath, I landed and released very powerful 6-pound fresh female. The fight and powerful runs of that fish were incredible. Female steelhead without a doubt, are the strongest and hardest

fighters. Years ago steelhead up to 18 pounds were reported caught below Happy Camp.

Studies showed that larger strain was somehow flooded out from their spawning area on Clear Creek and the big fish eventually disappeared. Therefore, as a rule, the bigger rivers like the Rogue, Klamath, And Sacramento, have good runs of rather smaller steelhead. The coastal shorter rivers seem to have larger steelhead including the Smith River. There 8- to 15-pound fish are not uncommon. The coastal steelhead streams yield fish that have the bright silvery coloration. Up here on the Klamath, they take on gorgeous rainbow coloration. The differences are quite remarkable. Klamath and Sacramento steelhead are rather stocky with wide girth. Coastal steelhead seem to be sleeker and absent of heavy or wide girth.

I have learned that most of the real large steelhead range in the extreme Northwest United States and up into British Columbia. Washington has many good steelhead rivers as does Oregon many to numerous to list. British Columbia boasts of many rivers with the 20-pound plus steelhead. In Alaska, they mostly just call them big rainbows. On some of the California coastal streams some large steelhead have been caught. For example, the Smith River, Eel River, Mattole, Redwood Creek, And Trinity River have all yielded some quite large steelhead. The neighboring Oregon Chetco River is an excellent river for large steelhead.

Of special note the longest distance perhaps recorded that steelhead have traveled inland to spawn is up the Columbia, to the Snake River, then up the salmon river all the way to Salmon, Idaho, — a distance of over 700 miles. The Columbia River itself is a host highway to many steelhead rivers. Now even steelhead from the West have been introduced to the East, especially the Great Lakes and tributaries where they have been being well established.

Here in the north state there are many wild steelhead that spawn naturally in streams. Both Iron Gate and Trinity River hatcheries release steelhead that return in the fall and winter. Trinity River Hatchery steelhead bloodstocks includes stock imported from the Eel River, three Oregon hatcheries, and Washington hatchery Skamania steelhead according to the CH2MHill report in 1985. Iron Gate hatchery steelhead stocks were founded from native fish but some steelhead eggs came from the Trinity River Hatchery and the Cowlitz River Hatchery in Washington. Recently, large numbers of Iron Gate Hatchery steelhead have been transferred to the Trinity River Hatchery. Studies indicated that half-pounders from both hatcheries were present in the Rogue River. This was reported to indicate that native components remains in both the hatchery broodstocks.

There are also summer runs of steelhead in the north state but any statistics were not available at this time. However, it is reported that the following north state tributaries have returns of summer steelhead: the Salmon River, Wooly Creek, Redcap Creek, Elk Creek, Bluff Creek, Dillon Creek, Indian Creek, Clear Creek, and South Fork of the Trinity, New River, and Canyon Creek. At this writing no steelhead releases were

available from Coleman National Hatchery on the Sacramento and I would expect to report this at another time as information becomes available.

There are plenty of waters to fish for steelhead. The fall run is on right now and will lead to the winter runs mostly on the coastal waters after the rains come. The rivers on the coast are quite dependent upon the high rainwaters to bring the fish in. That season usually runs from late November to Mid March. Rainy weather is kin to coastal steelhead fishing.

Some steelhead anglers all winter travel up and down the coast searching for the rivers with the right water conditions, wet or dry. The Sacramento, Klamath, and Trinity do not normally dish out such harsh weather conditions as does those coastal rivers.

Steelhead anglers have special rituals for their sport, involving curing bait, special flies, choice of tackle, proper clothing, foul weather gear, waders, boats, careful planning, licenses, regulations, gas money, and of course, time off to chase steelhead. One 6-pound steelhead hooked, taking out line off the drag could very well become the great reward.

Tight lines.

John Spencer is a longtime angler and north state resident.

Appendix #7

THE RECORD SEARCHLIGHT
redding.com

Are gill nets decimating Klamath and Trinity salmon runs?

By Dylan Darling

Sunday, November 8, 2009

Leonard "Spam" Ferris has stretched a gill net into the waters of the Trinity River near his home on the Hoopa Valley Indian Reservation for about 50 years.

After starting as his grandpa's helper when he was 7 years old, Ferris, now 57, says he catches as many as 700 salmon a year using gill nets. So far this year, he's caught 400 and expects to keep filling his smokehouse.

"It's a late run so they are still coming," he said.

While Ferris, a member of the Hoopa Valley Tribe, said he hasn't seen more gill nets this year along the river through the reservation than in a typical year, upstream salmon guides charge that an increase in tribal gill nets is decimating the fish's fall run.

"We are just not seeing the fish we should be seeing," said Steve Huber, 43, a fishing guide in Weaverville.

While the two tribes on the lower stretches of the rivers - the Yurok and the Hoopa Valley tribes - report that they've hauled in almost 28,000 fish, close to this year's allotment, Huber and other guides said very few salmon are making it past the tribal waters and into areas where they can catch them.

The angry anglers are airing their concerns on the Internet.

Mike Aughney, 48, of Petaluma, who started www.usafishing.com in 1995, has launched an Internet campaign against gill netting on the Trinity, warning that tribal nets, particularly those on the Hoopa Reservation, are wiping out the Trinity River run.

"Because of the gill nets, we are seeing almost no return," said Aughney, who says he's fished in the north state for 40 years.

Allie Hostler, the Hoopa Valley Tribe's spokeswoman, said her tribe aims to protect the fish on the Trinity and American Indian gill netters are unfairly targeted.

"I feel like this is a witch hunt to blame the (Hoopa Valley Tribe) for something," she said.

Tightening tension

To fuel his online argument, Aughney points to low numbers reported by state scientists at a weir - a submerged fence used to collect migrating salmon - near Willow Creek. The data shows nine salmon the week of Oct. 22 and 16 salmon the week of Oct. 29. The guides and anglers say the counts should be in the hundreds.

But Wade Sinnen, the associate fishery biologist with the state Department of Fish and Game in Arcata in charge of the project, said the numbers don't mean that there is a problem with the fish population.

"It is not a crash situation," he said. "... there has been misinterpretation of that data."

While there are weirs that channel fish so they'll pass by video cameras or other tools to create a count, the Willow Creek weir corrals salmon into a trap where they are marked by scientists, Sinnen said. The percentage of marked fish that then show up at the Trinity River Hatchery in Lewiston is part of the formula used to create a population estimate.

Data collected on the runs since 1977 show the numbers can vary widely, he said. The hatchery returns range from a low of 1,551 in 1993 to a high of 30,386 in 2003, Sinnen said. The natural returns range from 5,249 in 1991 to 113,007 in 1986.

He said it is too early to tell what this year's total run will be, but all indications so far are that it won't be a large one.

"The bottom line is the Trinity River is going to have an OK run," Sinnen said, "but not a real robust one."

Aughney said he thinks tribal members are using more gill nets as a result of the ongoing ban of commercial salmon fishing on the California coast. As the commercial salmon supply available drops, prices have shot up.

He said 20,000 pounds of salmon - about 2,000 fish worth $60,000 - from the Trinity caught by members of the Hoopa Valley Tribe ended up for sale at the San Francisco fish market and he questioned whether that was legal.

Dan Torquemada, assistant special agent in charge of the National Oceanic and Atmospheric Administration's Fisheries Office for Law Enforcement in Santa Rosa, said he received an anonymous tip about the salmon, but no laws were broken by tribal members. He said the tribe is allowed to sell some of the fish caught along the Trinity River.

"Currently, we have no evidence that the Hoopa fishermen are using their nets in an illegal manner," he said. "They are operating under the direction of the Hoopa tribal authorities."

The Hoopa and Yurok tribes work with the Pacific Fishery Management Council, a federal entity regulating sport and commercial fishing on the West Coast, to set salmon

catch allotments for the river and the ocean, said Chuck Tracy, salmon staff officer for the council.

This year's allotment is 30,900 fish each for non-American Indian anglers and the American Indian fishery on the Klamath and Trinity rivers.

Huber said sport anglers will be lucky to catch 4,500 on the rivers - about 15 percent of their allotment - because of a diminished Trinity run.

Gill netting has long been controversial in Northern California, especially along the lower Klamath River, said Tracy, salmon staff officer for the Pacific Fishery Management Council.

"It's a pretty consistent fishery," he said. "It's pretty intense."

Tribal tradition

The state outlaws gill nets on rivers, but they are allowed on waters running through the Yurok and Hoopa Valley reservations that are governed by the separate tribes.

Flanking 44 river miles from the mouth of the Klamath at the Pacific Ocean to the river's confluence with the Trinity River, the Yurok Reservation is centered on the river. Just upstream from the Yurok Reservation, the Hoopa Valley Reservation is a 12-mile-by-12-mile square - 144 square miles in all. It is similarly river-driven.

Gill nets allow a salmon to swim partway through their mesh. Cinching around the fish's body, the nets trigger a salmon's instinct to swim backward when they encounter an obstacle. When they do that, they become ensnared in the net by their gills.

The technique is a traditional one, used for centuries by American Indians along the rivers, said Hostler, the spokeswoman for the Hoopa Valley Tribe.

"We used to make them out of iris twine," she said.

Today, the nets are made of thick, braided synthetic fishing line and held afloat by plastic foam. Hostler said the nets in the river on the reservation are usually 50- or 100-feet wide and tribal laws restrict them from covering more than a third of the river.

Tradition dictates placement of the nets, said Hoopa gill netter Ferris - whose uncle jokingly said he felt like a can of Spam when he was a newborn baby, giving him a nickname that stuck.

"Everyone knows your spot and protects your spot," Ferris said.

He said today he takes his grandchildren fishing and the fish they catch go to his large family and elders in the tribe.

Hostler said tribal fishery officials and law enforcement officers also police the river, making sure those using gill nets are following tribal laws.

Leaders from the two tribes meet each year to set a division of the tribal allotment. This split is 80 percent to the Yurok and 20 percent Hoopa, reflecting the larger size of the Yurok tribe, Hostler said. The Yurok have 5,500 members and the Hoopa 2,500 members.

This year, the members of the Hoopa Valley Tribe have caught about 4,000 fish of their 6,128 allotment, said Mike Orcutt, who heads the Hoopa Valley Tribal Fisheries Department.

The Yurok have caught 24,000 salmon, only 720 fish short of this year's allotment, said Troy Fletcher, a policy analyst for the tribe.

"We are pretty close to the end of the season," Fletcher said.

Upriver on the Hoopa Valley Tribe Reservation, the run continues.

Orcutt said on a busy day there are as many as 50 gill nets in the water on the reservation, but he said there hasn't been an increase in the number of nets this year.

He said he has seen reports on angling Web sites questioning whether the tribe is exceeding its allotment this year.

"Our answer is we are in our harvest objectives; we haven't gone over our harvest objectives," Orcutt said.

Racial divide

The issue boils down to a racial divide, said Fletcher, the Yurok official.

"There has always been a tension over the tribal fishery," he said.

Fletcher said the Yurok Tribe has the most monitoring and law enforcement on the river, but nontribal members don't trust the American Indian because there is no state or federal oversight.

However, he insists the tribe is focused on protecting the salmon and improving its stocks on the Klamath, of which the Trinity is a tributary.

"That is our river," Fletcher said. "Those are our fish. And we manage those fish in a responsible way."

Aughney said he plans to continue his online criticism and his concerns are not motivated by race, but by the type of fishing he said he sees crippling the salmon run.

"I am not an Indian hater," he said. "I hate gill nets."

Reporter Dylan Darling can be reached at 225-8266 or ddarling@redding.com.

Appendix #8

ON THE COVER

the journal
OF POLITICS, PEOPLE AND ART

COVER STORY | IN THE NEWS | OFF THE PAVEMENT
TALK OF THE TABLE | THE HUM | CALENDAR

August 30, 2007

Rock and a Hard Place

Independent gold miners fear extinction as a new wave hits the hills

Story and photos by Heidi Walters

Salmon River (Mining) District. This district, the largest in Siskiyou County, comprises its entire southwestern corner, and includes the drainage area of the Salmon River and its tributaries. Topographically, it is a tangle of mountain ridges separated by precipitous canyons and river gorges. ... The main gold-bearing rock belt of the county crosses through the middle of this section.

-- from a 1916 report by Fletcher Hamilton, State Mineralogist, on the Mines and Mineral Resources of Siskiyou County.

THE BEER TREE

FORKS OF SALMON, Calif.-- Someone plunks a couple packs of Keystone Ice and some Coronas on the picnic table under the huge English walnut tree that anchors this rare flat spot in the canyon, and lays a bag of ice on top. It's a sleepy, hot Friday noon in mid-August. Drivers on the skinny road that hugs the crumbling canyon walls through this remote region near the Humboldt County border holler greetings as they slow to make the sharp curve past the half-dozen miners hunkered at the table and in stray chairs. In an expanse next to the walnut tree, several kids and a mom race around laughing, chased by an overgrown puppy. Across the road a tiny makeshift store gets steady business from the "beer tree" crowd and the passing cars. Nearby is the Forks of Salmon School and a post office.

Noon wanes into afternoon; hands reach for fresh beer, others snap open soda pops. Someone lights a joint and the gab intensifies. Old mining. New mining. The rollicking past. The uncertain future.

Bill Stanford (left) and his son Chad show off their suction dredge.

"They want to clear out all the small-scale miners," says Chad Stanford, halfway down the afternoon's conversation.

"And they won't come at you face on," says his dad, Bill. The two have claims a few miles from here. "They'll use law, paperwork, rules, regulations and police to run people outta here."

It seems to be a preoccupying fear in this crowd -- eviction.

And now they're decrying the notion that dams on the Klamath and suction gold mining dredges there and here on the Salmon are mucking the water and hurting fish populations. Rex Russell gets excited and reaches into a pocket, pulls out a small bottle and passes it around. No, not a glass vial of sunshiny gold flakes. Each miner examines the bottle then swigs a sample of the green liquid: algae from Klamath Lake that a "lady friend" of Russell's is marketing as a health tonic. It's called "Resistance."

Well, the name sure is *fitting*: To listen to these miners talk, there is much to resist. Nothing but grief from all directions: the feds, the state, the Karuk Tribe, the environmentalists and even, though they hate to admit it, certain other miners -- like those New 49'ers who came in a few years ago *en masse*, laying claim to everything in sight, crowding into the river with their dredges and drawing an unwelcome spotlight onto all dredge mining in the Salmon River. Why, the last of the small-time miners here -- the suction dredge miners, specifically, the ones who scour the streambeds for loose specks of gold -- might soon have to flee for other hills. Or other lives.

GOLD

The main gold-bearing belt of Siskiyou County consists of metamorphic slates, granites, diorites, and limestones, with occasionally intrusive masses of porphyry, trap and syenite. This belt is from 5 to 12 miles in width and about 60 miles long, widening and narrowing at places on its line of strike, which varies from N. 20' to 30' E. In some places it is veined and seamed with stringers of quartz; in others it is soft, carrying talc in excess, with irregular bunches of quartz, rich in gold... .

-- Hamilton, *Mines and Mineral Resources of Siskiyou County*, 1916.

The Salmon River begins as snowmelt that seeps, trickles, then gushes through a steep accordion of ridges and wooded canyons: From the Marble Mountains and Russian Wilderness come the waters of the North Fork of the Salmon, and from the Trinity Alps and Salmon Mountain Wilderness come the waters of the South Fork. They merge into one long, winding, deep-pooling, see-through emerald-and-jade current that slips -- undammed -- between stands of fragrant pines, oaks, firs and peeling red-barked madrones, wraps around jumbled bright granite boulders and nibbles away at gravel-packed ledges, quartz-veined cliffs and slaty bedrock. Along the way, more cold creeks flow in: Crapo, Nordheimer, Morehouse, Portuguese, Butler, Wooley. Seventeen miles downstream from where the forks merge, the Salmon River joins the Klamath and continues the plunge toward the sea.

But our story begins back at the Forks of Salmon. It was around about here, on a June day in 1850, that the river-tumbled cobbles and sands finally yielded

what prospectors had been searching for: flakes and nuggets of gold. The ensuing spree lasted for more than a hundred years, with the Liberty Mining District -- just upstream on the North Fork -- at one point yielding so much gold, mostly pried from hard rock, that the region was the second largest gold producer in California, next to the Mother Lode in the Sierras.

THE BEER TREE

"Turn of the [20th] century, there were probably 5,000 miners living in here," says Chad Stanford, sitting in a chair next to the picnic table under the English walnut tree. He and his dad, Bill -- beside him in another chair -- have worked two claims up the North Fork, the Bear Hide 3 and 3Bs, since 1990. They've umpteen problems with the Forest Service, they complain. Not least, the Service's decades-long plan to evict people living on their claims.

"Now there's about 20 who live here!" says Bill, 62, a retired logger and pizza chain owner who lives near Modesto when he isn't up here mining. Like a few of the other older miners sitting around the table, Bill Stanford is a Vietnam veteran. He's got a direct, personal way of looking at someone, with a mix of vulnerability and hardness in his eyes. You like him. You don't want to defy him.

"They finally got Lloyd off," says Chad. "And we're on our claim till September." They don't know what will happen then. "There used to be beautiful homes on the claims here."

"There was probably a house every half mile up the river, till the big push to get 'em off," says Richard Cormier, a resident miner.

Richard Cormier stands in the remains of his outdoor "miner's bed" at his former claim on the salmon river.

THE FOREST SERVICE

It was raining on the day, in 1999, that Richard Cormier and his wife, Mayanna, set fire to their house and said

goodbye to their wild perch between the narrow, landslide-prone canyon road and one of the best swimming holes on the main stem of the Salmon River. They'd courted down there, years before, where the green water pools deep against the white granite: him, a handsome long-haired miner in Speedos living on the beach; her, a pretty Danish woman come out to these woods to visit her sister. She had stopped by to have him fix her motorcycle and the rest is history. They made a home in the vertical-log house that was already there amid the lichen-covered live oaks, brought water down a pipe from Duncan Creek for power, built an outdoor bedframe on the edge of the cliff, planted a garden and made friends with just about everyone who drove up and down the highway.

"It was like the Road House," recalls Cormier. "People were constantly stopping by."

But the claim and house were on public land. Most of the land surrounding the Salmon River is in the Klamath National Forest, although the next-door Six Rivers National Forest manages the lower 13 miles of the river's main stem out of logistical practicality. More than 98 percent of the mining claims here are on national forest land.

Cormier and his wife, like others, lived on their claim by the grace of the 1872 Mining Act, which allows people to prospect and take minerals from public land and, at least in the old days, live on that land as well. But when Cormier bought the place in 1987, he knew the tide was changing against residential occupation of national forest mining claims.

"I was told by the Forest Service, 'Don't buy this place, because we'll have you out in six months,'" he says. "But I bought the claim, and the house -- paid $20,000 for it. And I made a living here for 12 years, dredging. [The Forest Service] harassed me the whole time."

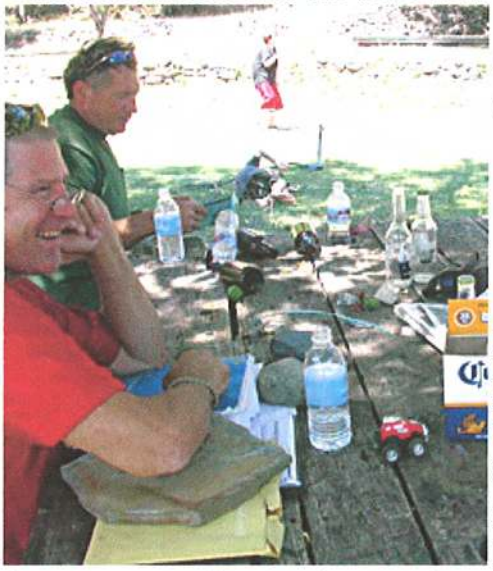
Finally, the Cormiers forfeited their claim to the Forest Service and left. And since they were required to remove all structures and equipment when they left, they did the easiest thing: burned the house down. "It's what the Forest Service does," says Cormier.

They weren't the only ones evicted. In the 1960s, the Forest Service had begun scrutinizing mining claims and discovered many were occupied by residents who no longer were seriously mining -- maybe their paystreaks had run out, or they'd grown old, or they were doing other things.

Hundreds of such residents got the boot, and their houses were burned down, with the greatest "purge" on the Salmon River occurring in the 1980s and 1990s. The region emptied. Hilton Cass, the Forest Service's minerals administrator for Region 5, which includes the Salmon River, says a few elderly claim dwellers were granted a life-tenure permit to stay in their homes; when they moved or died, their claims could not be transfered to someone else and their structures would become Forest Service property.

These days Cormier mines outside of Forest Service territory on the South Fork, where he and his wife built a new house, working eight acres of dredged tailings at a private gold mine patented in the 1890s. But he's still bitter about what happened to his old claim site after he left it.

"The Forest Service let the New 49'ers move in," he says.



Rex Russell (foreground) and Richard Cormier at the Beer Tree.

THE BEER TREE

Jessie Allen, the Forks of Salmon postmistress, has just got off work and wandered across the road to join the conversation at the beer tree. A youthful middle-aged woman, one-quarter Karuk Indian with dark curly hair, Allen was born in the Hoopa Valley and moved to the Forks of Salmon in 1967, when she was 13. She's mined all her life, first on the Starveout claim passed down through her family since 1913. "My ex and I did $6 an hour in the '80s," she says. "We lived off it, the four of us." Now she dredge mines on the Eel Rock claim on the South Fork.

It was there that she -- along with much of the rest of the indie mining folks -- first encountered a new threat to their way of life: a club for amateur gold-seekers from the city called the New 49'ers Club, which was vastly expanding its operations a few years ago. In 2003, the New 49'ers Club's founder, Dave McCracken, came into the Salmon River mining district and started staking claims. Many of the spots he claimed in that year were ones abandoned by miners during the Forest Service "purges." But according to Allen, in some cases McCracken didn't even bother to check if people were still mining on

some of the territory he was claiming as his.

"They came in and blanket-claimed over everybody," Allen says. "McCracken, he posted right on top of my sign. I jumped his face -- he was putting a sign on a neighbor's place. And he said, 'I'll see you in court.' But he took his signs down. They got a lot of flack from people."

"With the New 49ers, you get an influx of people who haven't been taught good woods etiquette," says Bill Stanford, grabbing another Keystone Ice. "They come up here, they're used to the city type of life, they leave a lot of garbage and they don't keep their gas away from the river -- a bear can come by and slop that into the water."

"The problem was," adds Richard Cormier, "they came in and put 15 dredges in a half-mile stretch of river."

THE NEW 49'ERS

Dave McCracken is a master promoter.

"60 miles of mining property," shouts the top of his website.

"Hey," it continues, "did you know there is still a lot of gold to be found today? It's true; experts say that only 5% of all gold has been found. I'm Dave McCracken and I founded The New 49'ers Prospecting Association 20 years ago for the purpose of providing the best, and the most, small-scale gold mining opportunities available to you anywhere in America. And I have done it!"

His isn't the only mining club in these parts; the Lost Dutchman's Mining Association has some claims, too. But McCracken's outfit seems more, well, as he'd put it, friendly and family-oriented. It's boisterous. And he is even more convincing in person, or in the case of an interview last August, by telephone: "When you're down there on the bottom of the river," he said, "and you're in a crack, and you dis°cover gold nuggets that no one's ever seen before -- it gets you where you *live*, girl. It's the feeling of winning the lottery, though better than that. It's exhilaration!"

It costs $3,500 for a full membership, which allows you to set up a dredge on claims owned by the club. McCracken holds field training sessions on mining

techniques, and week-long group mining outings. More than a thousand people have joined the New 49'ers, and a lot of them started showing up on the Salmon River starting in 2003, after they read about the 12 miles of new claims McCracken had staked there on the main stem.

Their sudden descent raised the hackles of just about everyone in the community. There was a meeting at which, reported Salm Stroich later in *The River Voice*, a newsletter for the Salmon and mid-Klamath region, people complained about one club campsite with "two dozen people crowded into it ... washing their clothes and bathing, using detergents and soap, directly in the river in the area just up river from Duncan Creek." Boaters said they'd been deafened by multiple dredges operating at once in the canyon, Stroich reported. And everybody knew about the dredge that had flipped, spilled fuel in the water, and run into a "screw trap" the Karuk Tribe's fishery department uses to monitor juvenile fish.

New 49'ers members, meanwhile, complained in their club's website forum of their dredges being cut loose, vandalized or stolen. And of more serious harassment.

"People were driving by and shooting at dredges, or honking their horns and screaming," recalls Richard Cormier. "Tires were flattened." Cormier has some history with McCracken -- he took a dredging class on the Trinity River from him and they even ran a dredge together until they had a falling out.

Cormier decided one day to go warn a recently arrived elderly couple in the club, now enjoying his old homesite, about how rowdy things had gotten. "I think I told them, things were going to get worse before they got better," he says. "And that I was harassed, too, when I first moved there, but then people accepted me."

He also mentioned that he thought that McCracken was taking them for a ride about how much gold was left on that claim. He thought they left on good terms. Apparently not.

"Next thing I know, at 11 o'clock at night here comes the Sheriff to my house," Cormier says. The jumpy clubbers had taken his cautions as a threat.

In the phone interview last year, McCracken said he had sensed the displaced old-time miners' unhappiness. "They watched us move in, saw our porta-potties go up, and they were like, 'What

happened?'" He said the district ranger at the time allowed the club to set up campgrounds on a couple of vacated spots. "So it looked like we invaded," McCracked admitted. "And there we were, in their face. Well, so what I did was, I just redirected away from the Salmon River." In 2005, he started to concentrate his operations on the Klamath instead.

Bill Stanford at his claim.

Well, actually, the Orleans District, under new district rangers, started asking McCracken's club to file detailed plans of operation for its claims. And that, said Bill Rice, who that year became the district ranger of the Orleans District, which manages the lower 13 miles of the main stem Salmon, caused McCracken's retreat.

"They could never tell me how many miners could descend on any particular claim at any one time," said Rice. "And McCracken, he was doing these classes, and he might have two to five dredges at one spot. I found I could only accept two dredges per mile." Rice also told miners they could only camp in established campgrounds, they had to keep their dredges out of swimming holes and away from where cold streams came into the river, and they had to replace the cobbles in the holes they dug while dredging.

"I didn't say they couldn't mine," Rice said. "I don't think I'm the big, bad ogre with the miners."

By 2007, McCracken's retreat from Rice's domain was complete. Early this year, the club auctioned off its main stem Salmon claims. Cormier says his old claim went for more than $50,000.

THE KARUK TRIBE

The New 49'ers had been dredging on the main stem of the Klamath River above Happy Camp for 20 years, said Karuk Tribe Vice Chairman Leaf Hillman in an interview in February 2006 at his Orleans office. "And while we certainly weren't happy about it, it was on the main stem," Hillman said. "Then they got quiet."

But in 2003, Hillman said, Dave McCracken "looked down the river, down this way, and he saw there were a lot of mining claims down here. ... Once he

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secured all the claims, then he went on his big advertising and promotion campaign: 'Hey, the new gold strike! Hey, come be part of this action! The biggest gold strike since 1850!' And it worked really well."

Miners rushed to the Salmon River -- and onto sacred places such as Katimin, the Center of the Karuk World and the place where the Salmon joins the Klamath. "Any place you could get off the road was occupied by New 49'ers' trailers and campers," Hillman recalled. "And everywhere you looked on the river was a dredge."

Hillman said he hadn't minded the miners who'd lived on the claims before.

"All those years, those old miners, I never felt a bias toward them," he said. "They were just hippies and okies. They didn't tear things up. They were conscientious of how they did things. They were hardworking and they were part of this community.

"But the 'New 49'ers' -- as Karuk people, this strikes a chord very deep. The old 49ers, the ones from 1850 -- we were one of the last places where contact occurred between Europeans and native people. Between 1850 and 1870, 60 percent of our indigenous population was wiped out by disease and hunger. An additional 20 percent were murdered, killed, rubbed out by miners and settlers. It's not ancient history -- it's a mere smidgen over 150 years ago. ... Empires throughout the world have been founded on gold, and it continues to be the root cause of genocide. ... And the jury's still out whether or not we'll 'survive' contact. 'New 49'ers': The name inspires rage in me."

McCracken, the Forest Service and the Karuks met several times to try to work things out. But still the Karuk Tribe sued the Forest Service, accusing it of being too lax when it came to sanctioning and monitoring suction dredge operations. The tribe lost the suit, appealed, and it's now in the 9th Circuit Court. Then the Karuk sued the California Department of Fish and Game, saying it had failed to update its regulations prohibiting suction dredge mining in rivers occupied by species listed as threatened, endangered or of concern. The regulations were based on a 1994 environmental impact report. Since then, the Coho salmon, green sturgeon and Klamath River lamprey, among others, had been listed, but DFG regulations hadn't reflected the change. In late 2005, the two parties reached a settlement that banned suction dredge mining on the main stem of the Salmon River and on dozens of tributaries to the Klamath and Salmon, and placed greater restrictions on when dredgers could operate elsewhere.

Outraged and surprised, the New 49'ers sued to intervene, saying they'd been denied the opportunity to partake in the settlement. Miners' website forums crackled with indignation, and sometimes something worse. In a December 2005 posting to a forum on the website "49er Mike's Prospectors Cache," a "Reed Lukens" responded to 49er Mike's alert about the Karuk-DFG deal: "And it happened behind our backs ... 150 years ago the miners would just have killed them all for this."

In December 2006, the court ruled in the miners' favor, saying the Karuk and DFG had wrongly left the miners out of the process. The court ordered the DFG to prepare an updated environmental document on suction dredging by mid-2008. Both sides -- the miners and the Karuk -- are hoping that the document will fall in their favor. But funding problems at DFG have stalled the review, and now no one is sure when it will get done.

THE BEER TREE

"The old miners left a mess," says Rex Russell. "The old miners hydraulicked everything down the hills [with giant water canons] and left a mess."

"The rivers would almost run red from all that hydraulic mining," says Bill Stanford. "But that algae, and micronutrients, would settle in the estuaries and become food for shellfish and small fish."

Sure, the miners agree, the salmon in the basin have declined. But was it because of modern *dredge* mining? Or even the dams on the Klamath? Some shake their heads, declining to handle the hot potato topic of Klamath dams.

"The off-shore fishermen, they're taking tons and tons of salmon," says Bill. "And you never see 'em."

"It's the foreign fisheries," agrees Richard Cormier. And what about recreation? "You'll get 20 people in a swimming hole -- how much shit does that stir up? And nobody ever says anything about that."

On the Salmon River, rising water temperatures also hurt, says Jessie Allen. "The holes used to be black with the backs of fish," she says. "They started decreasing in the 1970s, and they really dropped in the 1980s. The water temperature rose. There wasn't enough snowmelt to keep it cold."

THE FISH

"We have lethal water temperatures on the Salmon River," said Will Harling, speaking by phone in early August from his office in Orleans. He's the program coordinator for the Mid Klamath Watershed Council, which does restoration projects in the mid-basin to protect anadromous fisheries. "The water is 78 degrees." Seventy-two or 73 degrees would be tolerable, he said. "But you have this warm water already, and the fish are dying of gill rot disease."

The reason this scares people is the Salmon River harbors the last continuous population of spring-run Chinook salmon in the Klamath watershed. Likely, this is because the river is undammed, less impacted than other rivers and has a number of clean cold-water creeks rushing in that create refugia for salmon during the hot summer.

Spring run Chinook salmon. Photo courtesy U.S. Fish and Wildlife Service.

Rebecca Quiñones, a biologist with the Klamath National Forest and graduate student at U.C. Davis, said there used to be spring-run Chinook throughout the Klamath River Basin. They'd come in from the ocean in May and June and hang out in the rivers and tributaries until they spawned in the fall. Dams, hydraulic mining, agriculture, logging and canneries devastated spring-run Chinook populations. Now, mostly what is left in the region are fall-run Chinook, who come into the rivers July to September. And two years ago, the spring-run Chinook population in the Salmon River took a nose dive to just less than 90 individuals. This summer, however, biologists counted about 840 individuals.

"That's still way below a healthy number for that population," said Quiñones. "In the whole Klamath watershed, there should be 100,000 spring Chinook. When you have a species with much diversity, you have more of a buffer from a variety of impacts. Without diversity, you get genetic deterioration, so you're less adaptable to future change."

Steelhead in the Salmon River have also declined -- just 30 adults were counted in the river this summer.

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Curiously, the Salmon River wasn't historically the best salmon and trout producer. "It doesn't have as many nutrients," Quiñones said. And the east-west orientation of the river naturally lets in more sunshine, so water temperatures have always risen a bit high in the summer. "And also, with climate change, we are seeing less snowmelt, and so even warmer temperatures."

And so adding one more potential impact to the river -- say, suction dredge mining -- can't be a good thing, say the biologists.

Prove it, say the dredgers. Miners -- club and independent ones -- say they actually see fish hanging out by their dredges, eating all the good stuff stirred up by the suction hose. According to attorney James Buchal, who represents the new 49'ers, one biologist found that "the only place fish can survive is in cold water holes left behind by dredges." The dredges remove silt, said Buchal, that otherwise would clog up the salmons' spawning gravels. Sure, fish eggs could get sucked into the suction hoses. "That's why you can't dredge when the eggs are in the gravel."

But biologist Peter Moyle of U.C. Davis, who has done extensive research on the Salmon River fisheries, said there are many potential impacts. Gravels displaced by dredging become unstable for spawning redds. Other sensitive fish species' eggs could be getting eaten by the salmon hanging around the dredges. And so on. Even the miners agreed to stop dredging for a day this July while the annual "fish count" took place on the Salmon River, Moyle said. "When large sections of a normally clear river are cloudy with silt for much of the summer, how can that be good for fish, especially endangered salmon?" asked Moyle.

It's a question being entertained in a much broader arena, these days, as a bill that would allow the DFG greater authority to restrict or ban dredging on certain rivers works its way through the state legislature. Under AB 1032 -- "Native Trout, Aquatic & Amphibian Species Protection" -- the DFG would be able to close a stream, either altogether or seasonally, to motorized suction gold dredging to protect wild trout and aquatic species listed as threatened, endangered or of special concern. It would affect at least 5 percent of the 20,000 miles of streams in California, according to the bill's author Assemblywoman Lois Wolk.

Jeff Shellito of CalTrout, a nonprofit fish conservation group that is pushing for AB 1032, said that the bill would force the DFG to carry out obligations that would have been met had its settlement with the Karuk not landed in limbo.

And that might make it difficult, if not impossible, for some independent miners to continue dredge mining in places like the Salmon River. If the bill does pass, it might be the final straw for that long-suffering group of people gathered underneath the beer tree, who find in this place and this occupation a way to escape from civilization and live wild for a few months. Or a lifetime.

If it doesn't -- why, they'll still have plenty to complain about.

THE BEER TREE

"I was on a claim," says Rex Russell, a harried, gentle-seeming man with a gold-nugget earring. He's sitting at the table with a stack of legal papers in front of him that keeps getting scattered by a capricious breeze.

The 58-year-old Russell -- also a Vet, and somewhat ravaged by injuries from a car wreck -- had a gold claim (hard rock, not placer) and, more profitably, a slate operation down near Slate Creek, by the Klamath River. For 15 years he excavated slate and sold it to landscapers and masons at $500 a ton. Alas, he's been booted off, for not filing an adequate plan of operations, among other things. The Forest Service says he even once started a fire they had to put out. He is forbidden to return to national forest lands without permission from the district ranger; and now, Russell says, he must report to a halfway house in Oakland to do six months time for his run-ins with law enforcement. It's a long story, involving a probation violation, trespassing, a pot charge and the not very small matter of his kicking one of the officers when they came to his cabin.

"You shouldn't have kicked him," says Chad.

"I hope you got a good kick in," says Bill. Then he says, "They were threatening me with jail, too. For 'trespassing on Forest Service land.' And my waterline, they complained about that, said I had to remove it." The agency didn't like the sprinklers the father and son had put in. And it said they could no longer use the old, unsafe bridge that crosses their camp between their two claims. So now, says Chad, it's harder to get their dredge equipment to that part of the river.

Three years ago, says Bill, he was sick and wanted to be able to hook his heart monitor to a phone out at the mining claim so a doctor could check it. But the Forest Service said no to a phone line, so he went home to Modesto early that

summer.

Meanwhile, his son Chad got in trouble for staying at their camp longer than the Forest Service said he was allowed to. But the agency's occupancy regulations aren't clear, says Chad. The Forest Service is aware of that. It's lost two cases already against miners who sued it for kicking them off their claims, and is in the process of updating the regulations right now.

Bill and Chad Stanford relaxing in camp at their North Fork Salmon River claim.

"You don't know, one year to the next, what they're gonna do or what they're gonna say," says Bill. "So how can you plan a thoughtful operation?"

"They came up in the morning," recalls Rex Russell, returning to his tale, "I'm in my bunk, and they said, 'You're going to have to move.' Then they said I pointed a weapon at them. I had a crossbow. But I didn't point it at 'em. That'd be stupid -- they'd shoot me. I have the crossbow because the civet cats come in the house -- oh, they eat *everything*."

"They tried to supercede the law," says Chad. "The 1872 Mining Law says we have a 'right of possession and enjoyment' of mining claims."

"And this is one of the last of our American rights," says Bill. "People can go and get their worth from the earth."

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