

MEMORANDUM

PLACER COUNTY AGRICULTURE DEPARTMENT

TO: Honorable Board of Supervisors
FROM: Joshua P. Huntsinger, Agricultural Commissioner/Sealer
DATE: May 3, 2011

SUBJECT: COMMENTS TO PROPOSED CHANGES TO CALIFORNIA CODE OF REGULATIONS REGARDING SUCTION DREDGE MINING

ACTION REQUESTED: Adopt a resolution authorizing the Chairman of the Board of Supervisors to sign a letter to the California Department of Fish and Game recommending that proposed changes to California Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 8, Section 228, include a general prohibition of suction dredge mining on rivers designated by the state and/or federal government as Wild and Scenic, such as the North Fork of the American River in Placer County.

BACKGROUND: Placer County is located in the heart of California's "Gold Country", and gold mining has been a part of Placer County for over 160 years. Gold mining will continue to be an important part of Placer County into the foreseeable future. California Code of Regulations Title 14, Division 1, Subdivision 1, Chapter 8, Section 228, as proposed, would allow suction dredge mining to once again occur in Placer County with certain restrictions.

Suction dredge mining involves the use of a motorized suction system to vacuum material from the bottom of a river, stream, or lake and to return all or some portion of that material to the same body of water for the extraction of minerals, such as gold. This activity is regulated by the California Department of Fish and Game (DFG). However, all suction dredge mining activity is currently suspended due to a series of court orders, as well as state legislation placing a moratorium until an Environmental Impact Report process and revision of regulations by DFG is completed.

A Draft Environmental Impact Report and Proposed Regulations were published by DFG on February 28, 2011. This item is being considered by the Board today as Public Comment to the draft EIR is to close on May 10, 2011.

Under current regulations, suction dredge mining is prohibited at all times on the North Fork of the American River between the Colfax/Iowa Hill Bridge and Heath Springs [CCR 228.5(d)(3)]. All other waterways in Placer County east of Hwy. 49 are currently open to suction dredge mining between the 4th Saturday in May, and October 15th.

The Proposed Regulations would allow for suction dredge mining in all rivers and streams in the County, with limitations, as summarized in the following table

Proposed Regulations on Suction Dredge Mining in Placer County

Waters	Description	Class – Open to Dredging
Multiple Waters	All rivers and streams unless otherwise noted below.	Class H - Throughout the year.
Multiple Waters	All streams further west than intersection of I-80 and Placer Hills Road unless noted below.	Class C - June 1 to September 30.
American River, Middle Fork (Mainstem)	Mainstem upstream of Oxbow Dam	Class D –July 1 through January 31.
American River, Middle Fork (Tributaries)	All tributaries upstream of Oxbow Dam	Class E – September 1 through January 31.
American River, North Fork	Mainstem and all tributaries from Lake Clementine to Big Valley Canyon	Class G – September 1 through September 30
Lake Tahoe (Tributaries)	All waters draining to Lake Tahoe	Class G - September 1 through September 30.
Pole Creek	Mainstem and all tributaries	Class A – No dredging permitted at anytime.
Rubicon River	Mainstem and all tributaries upstream of Oxbow Dam to Placer – El Dorado County line	Class E - September 1 through January 31.
Truckee River	Mainstem and all tributaries	Class G - September 1 through September 30.

On April 27, 2011, the Placer County Fish and Game Commission discussed this item during its scheduled meeting and recommended to change to the Proposed Regulations to include prohibition of suction dredge mining on all rivers that are part of the National and State Wild and Scenic Rivers System which includes the North Fork of the American River. The Wild and Scenic Rivers System, as defined by the California Public Resources Code, is defined as river to have “extraordinary scenic, recreation, fishery, or wildlife values” and “shall be preserved in their free-flowing state, together with their immediate environments...” The Wild and Scenic portion of the North Fork of the American River is defined as that portion of the North Fork of the American River from its source to the Iowa Hill Bridge. As shown in the above table, this stretch of river would be open to suction dredge mining for approximately one (1) month for the period of September 1 to September 30 of each year. Suction dredge mining is considered by the Placer County Fish and Game Commission as incompatible with the Wild and Scenic Rivers System program and therefore should not be allowed in rivers designated as Wild and Scenic.

The letter to DFG requests to reclassify the section of the North Fork of the American River designated as Wild And Scenic as “Class A” under the suction dredge mining

classification to prohibit dredging anytime. No other changes are recommended and suction dredge mining would still be allowed in other Placer County waters as defined in the regulations.

ENVIRONMENTAL: This activity does not qualify as a project under the California Environmental Quality Act (CEQA).

FISCAL IMPACT: This activity will result in no fiscal impact to the General Fund.

RECOMMENDATION: Adopt a resolution authorizing the Chairman of the Board of Supervisors to sign a letter to the California Department of Fish and Game recommending that proposed changes to California Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 8, Section 228, include a general prohibition of all suction dredge mining on all rivers designated by the state and/or federal government as Wild and Scenic.

Attachments:

1. Resolution
2. Map of Area of Interest Along the North Fork American Wild and Scenic River
3. Letter for Chairman
4. Request letter from Placer County Fish and Game Commission dated April 27, 2011
5. Request letter from Bill Carnazzo dated April 27, 2011.

Before the Board of Supervisors County of Placer, State of California

In the matter of:
A RESOLUTION AUTHORIZING THE
CHAIRMAN OF THE BOARD OF SUPERVISORS
TO SIGN A LETTER TO THE CALIFORNIA
DEPARTMENT OF FISH AND GAME
RECOMMENDING THAT PROPOSED CHANGES TO
CALIFORNIA CODE OF REGULATIONS, TITLE 14,
DIVISION 1, SUBDIVISION 1, CHAPTER 8, SECTION 228,
BE AMENDED TO INCLUDE A GENERAL PROHIBITION
OF ALL SUCTION DREDGE MINING ON ALL RIVERS
DESIGNATED BY THE STATE AND/OR FEDERAL
GOVERNMENTS AS WILD AND SCENIC, SUCH AS
THE NORTH FORK OF THE AMERICAN RIVER IN
PLACER COUNTY

Resol. No.: _____

Ord. No.: _____

First Reading: _____

The following RESOLUTION was duly passed by the Board of Supervisors
of the County of Placer at a regular meeting held May 3, 2011,
by the following vote on roll call:

Ayes:

Noes:

Absent:

Signed and approved by me after its passage.

Chair, Board of Supervisors

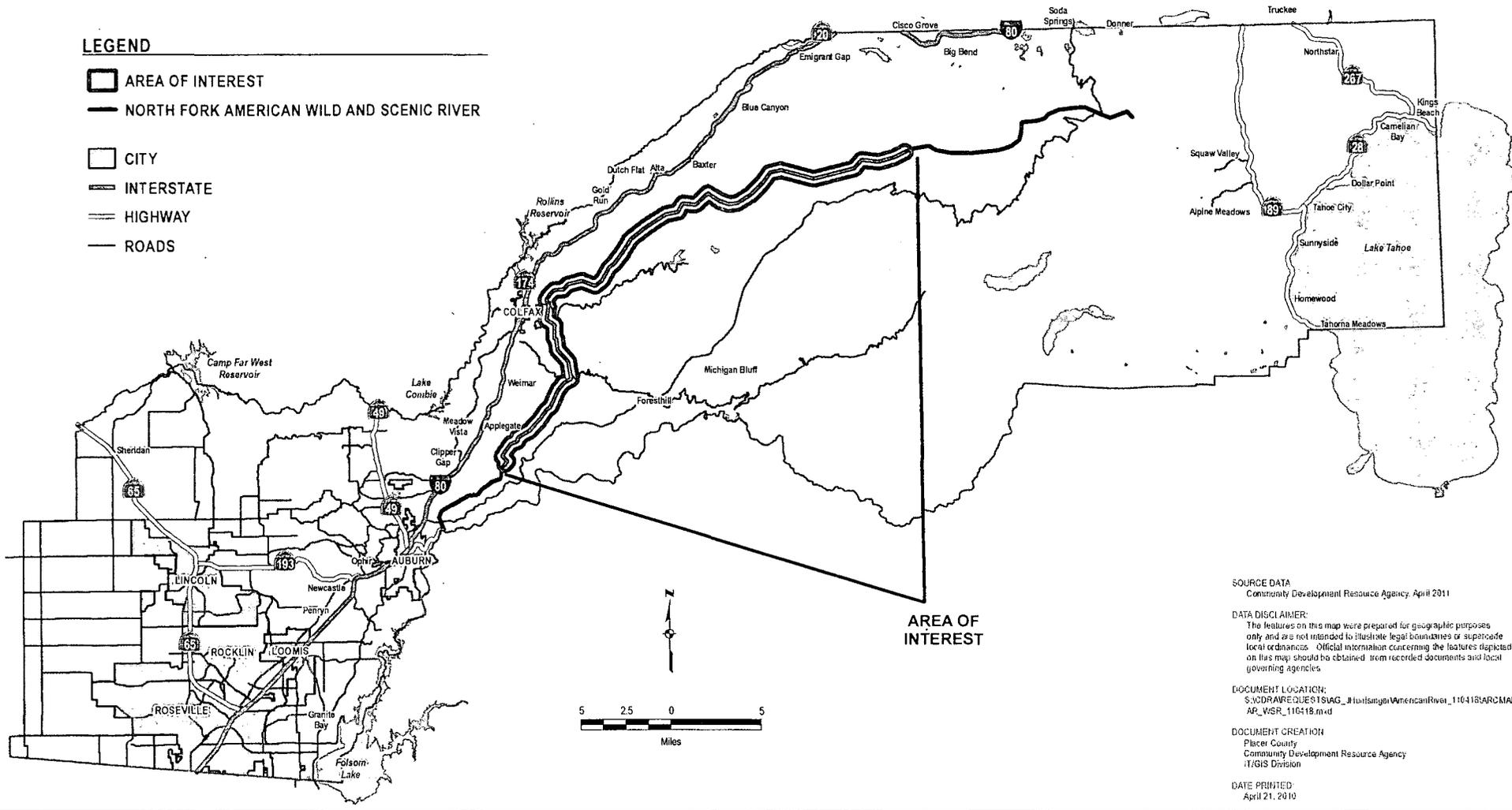
Attest:
Clerk of said Board

BE IT HEREBY RESOLVED BY THE BOARD OF SUPERVISORS OF THE COUNTY OF PLACER,
STATE OF CALIFORNIA, that this Board authorizes and directs the Chairman of the Board of Supervisors to
sign a letter to the California Department of Fish and Game recommending that proposed changes to California
Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 8, Section 228, be amended to include a general
prohibition of all suction dredge mining on all rivers designated by the sate and/or federal government as wild and
scenic, such as the North Fork of the American River in Placer County.

AREA OF INTEREST ALONG THE NORTH FORK AMERICAN WILD AND SCENIC RIVER

LEGEND

- AREA OF INTEREST
- NORTH FORK AMERICAN WILD AND SCENIC RIVER
- CITY
- INTERSTATE
- HIGHWAY
- ROADS



67

County of Placer Board of Supervisors

175 FULWEILER AVENUE
AUBURN, CALIFORNIA 95603
530/889-4010 • FAX: 530/889-4009
PLACER CO. TOLL FREE # 800-488-4308

JACK DURAN
District 1

ROBERT M. WEYGANDT
District 2

JIM HOLMES
District 3

KIRK UHLER
District 4

JENNIFER MONTGOMERY
District 5



May 3, 2011

Mark Stopher
California Department of Fish and Game
601 Locust St.
Redding, CA 96001

RE: Placer County Concerns: California Code of Regulations, Section 228
Suction Dredge Mining

Dear Mr. Stopher,

The Placer County Board of Supervisors values the abundant natural resources that Placer County is home to, and desires to encourage their continued use. Placer County is located in the heart of California's "Gold Country", and gold mining has been a part of Placer County for over 160 years. The Placer County Board of Supervisors believes that gold mining will continue to be an important part of Placer County into the foreseeable future. California Code of Regulations Title 14, Division 1, Subdivision 1, Chapter 8, Section 228, as proposed, would allow suction dredge mining to once again occur in Placer County with certain restrictions.

The proposed regulations do not specify any restrictions or requirements regarding suction dredge mining on rivers designated by the federal or state governments as "Wild and Scenic." Suction dredge mining, including the process of removing stream-bed material down to bedrock, is not compatible with the stated purpose of the California Wild and Scenic Rivers Act, which states that Wild and Scenic rivers are, "certain rivers which possess extraordinary scenic, recreational, fishery, or wildlife values shall be preserved in their free-flowing state, together with their immediate environments, for the benefit and enjoyment of the people of the state."

The North Fork of the American River from its source to the Iowa Hill Bridge, which is located entirely within Placer County, is designated to be "Wild and Scenic" by the California Wild and Scenic Rivers Act. This portion of the North Fork of the American River is an excellent example of the type of pristine waterway that is recognized as worthy of conservation by both the federal and state statutes.

Mark Stopher
Placer County Concerns: California Code of Regulations,
Section 228 Suction Dredge Mining
May 3, 2011
Page 2

The Placer County Board of Supervisors would like to reiterate our support of continued opportunities for mineral resource utilization within Placer County, but respectfully request that you consider our comments respective to the specific provisions contained in proposed regulations as they related to California's wild and scenic rivers.

Sincerely,

COUNTY OF PLACER

Robert M. Weygandt, Chairman
Placer County Board of Supervisors

cc: Placer County Board of Supervisors
Tom Miller, County Executive Officer
Josh Huntsinger, Ag Commissioner



**COUNTY OF PLACER
FISH AND GAME COMMISSION**

JOSHUA P. HUNTSINGER
Agricultural Commissioner
Sealer of Weights & Measures

COMMISSION MEMBERS
DON GOULD District 1
MARK FOWLER District 2
ROBERT HASWELL District 3
GARY FLANAGAN District 4
KARI FREIDIG District 5
RON SALTER District 5
MICKEY DANIELS District 5

11477 E AVENUE, AUBURN, CALIFORNIA 95603
TELEPHONE: (530) 889-7372
FAX: (530) 823-1698
www.placer.ca.gov

Robert Weygandt, Chairperson
Placer County Board of Supervisors
175 Fulweiler Avenue
Auburn, CA 95603

April 28, 2011

Dear Chairperson Weygandt:

At the direction of the Placer County Fish and Game Commission, this letter is being respectfully submitted to the Placer County Board of Supervisors for consideration of the following recommendations regarding the California Department of Fish Game's proposed Suction Dredge Regulations. The public comment period to DFG closes on May 10, 2011.

At our April 28, 2011 meeting, the Commission heard from several Placer County Citizens regarding the proposed regulations. After much discussion, Commission Member Mark Fowler made the following motion, which was unanimously approved by the Commission. The Fish and Game Commission requests that Placer County BOS provide a comment letter to DFG that will:

- Oppose the new DFG regulations on dredging
- Ban the use of dredges on "Wild and Scenic" waters, such as the North Fork of American River Watershed, and also on "Wild Trout" status rivers, under the State Heritage Trout Program
- Ban the use of 8 inch suction nozzles
- Ask the Board of Supervisors to consider the impact dredgers would have on the methylation of mercury in the American River watershed

The reason for the Commission's position is as follows:

1. These proposed regulations are poorly written, are vague, and contradicting. They do not adequately protect Placer Counties Natural Resources, and water quality would be degraded. The Department used a "Statewide" analysis instead of a stream by stream evaluation, meaning that if the regulation is non-deleterious in the majority of the State's Waters, then even though it is not appropriate in a specific watershed, it would still be allowed.

2. Wild and Scenic and Heritage Trout waters are special places that have been set aside for their natural beauty to protect wild fisheries and other wildlife. Many species living in these waters are "Threatened", "Endangered" and are designated by DFG as "Species of Concern." Stream alterations, caused by dredging are inappropriate in these waters. Prior DFG regulations have always prohibited suction dredging in "Wild and Scenic Waters."
3. Eight inch suction nozzles are much more damaging to the stream bed and the Commission believes that the large capacity enters into the commercial realm of gold mining and away from recreational use.
4. According to DFG the California Environmental Quality Act Document, (CEQA), that the Department based the proposed regulations on, did not require DFG to address water quality issues, so water quality was not considered according to Mark Stopher, Environmental Program Manager with DFG.

The Federal Government has directed the State Water Board to conduct a TMDL Mercury study on the Upper American River Drainage within Placer County because of high concentration of mercury in the American River drainage. Two Placer County F&G Commission Members are stakeholders and have been attending these TMDL meetings. It is well known that "Gold Rush Era" mercury poses a significant environmental danger both to wildlife and humans. A recent study by the U.S. Geological Survey shows that suction dredging unlocks mercury from its anaerobic state in the bedrock of rivers and allows it to change to methyl mercury and subsequently it is absorbed by macro invertebrates thus concentrating as it moves up the food chain. This mercury also finds its way into public water which is ultimately consumed by humans.

Everyone on the Commission believes that suction dredging has a place as a reasonable recreational use of California's Natural Resources; however, for the above stated reasons the Commission has concerns with DFG's proposed suction dredge regulations.

Respectfully submitted,



Gary W. Flanagan, Chairman
Placer County Fish & Game Commission

Bill Carnazzo
Spring Creek Flycraft and Guide Service
5209 Crestline Drive, Foresthill CA 95631
(530) 367-5209
California Guide License No. 2917
Website <http://billcarnazzo.com>
Email bcarnazzo@ftcnet.net

April 27, 2011

Placer County Fish & Game Commission
11477 "E" Avenue
Auburn CA 95603

Re: Suction Dredge Mining—North Fork of the Middle Fork, American River, and North Fork American River

Honorable Commission Members:

This letter addresses the issues that will be raised regarding the agenda item relating to suction dredge mining on the two captioned streams, for your April 27, 2011 Commission meeting. In filing this letter, and in my presentation to the Commission, I am representing myself and the Foothills Angler Coalition, a California Non-profit Corporation, which represents a broad coalition of angling and environmental organizations, commercial entities, and individuals.

1. North Fork of the American River. The North Fork of the American is a State and National Wild and Scenic River, principally because of its pristine character and its recreation values. Typical recreation uses include hiking, fishing, boating (kayaks, mostly), and related water sports. The river flows from Mountain Meadow Lake at 7,900 ft. and joins the Middle Fork American River near Auburn. Within the headwaters, three small streams join near The Cedars to form a significant flow. The river drops about 1500 feet as it enters Royal Gorge. Below the gorge is the best opportunity for access and fishing. There are four trails providing river access: Italian Bar, Sailor's Flat, Beacroft, and Mumford Bar. The 8 miles long American River Trail links certain of these trails along the river. The 37 miles stretch above the bridge at Iowa Hill Road near Colfax is in the California Wild Trout program, so that no fish are

planted in this section. The Wild Trout section ends at the confluence of Palisade Creek. Below Iowa Hill Bridge, the river tends to get too warm for trout and becomes a smallmouth bass fishery.

The river consists of deep pools, as well as cascading waterfalls, with riffles, runs, and pocket water. Steep canyon slopes frame a narrow bottom. Most of the fish are Rainbows in the 8-15 inch size. Occasionally, there will be some larger Browns. Flows drop substantially by August and September. Fishing is open year-round with the general fishing season ending Nov 15th. From Nov 16th to the last Saturday of April, it is catch and release only with single barbless hooks.

The river has never been open to suction dredge mining because of its status as a Wild and Scenic River under both state and federal law. It is also designated as a Wild Trout Stream under California law. The draft SEIR contains no explanation or articulated rationale as to why DFG determined that this protected river should now be open to degradation by suction dredge mining, and there is no river-specific analysis for the North Fork of the adverse impacts that would occur once dredging is allowed. Several sections of the proposed regulations compound the problem:

- (i) The “normal” suction dredge intake nozzle size is 4”; on page 2-18 of the draft SEIR, the regulations would allow a nozzle on the North Fork of 8” in size, to be permitted “at the Department’s discretion.” There is no public input process for this exception, and there are no stated standards that would govern DFG’s discretion. I have witnessed the devastation that is caused by 8” nozzles—the impact is severe on the stream’s values, including benthic macroinvertebrates, fish, vegetation, and geomorphology.
- (ii) With the exception of the section of the river from Clementine Dam to Big Valley Canyon, the river falls into category “H,” which means it is open to dredging all year long; the section from Clementine to Big Valley Canyon is designated category “G,” which means it is open from September 1 through September 30. There is no explanation or articulated rationale for this differential treatment.

As mentioned above, the draft SEIR does not assess impacts to individual rivers; rather, it adopts a “statewide” approach on the stated basis that the proposed regulations are a “statewide” program. This approach is clearly flawed from a CEQA standpoint, and lacks any coherent logic. Additionally, it is inconsistent with DFG’s approach in other statewide programs such as the issuance of “streambed alteration permits” under Fish & Game Code Section 1602. For example, logging companies must apply for a streambed alteration permit if their logging operations would impact a

creek, stream, or river. The potential adverse impacts to the affected water body must be individually studied and a determination as to the severity of those impacts must be made. Mitigation measures must be incorporated into the logging plan to address the adverse impacts. The point is that there is no rational basis for not making adverse impact determinations on a stream-by-stream basis. Failing to do so amounts to allowing a specific river to be trashed by suction dredges, as long as the overall statewide impact is less than significant. Such reasoning is baffling.

Furthermore, it is widely believed, based on scientific studies that have been published, that certain of the rainbow trout populations in the North Fork of the American River are remnant Central Valley steelhead from the period before Folsom Dam was constructed. That species is an endangered species that (along with Chinook Salmon) is the subject of a Biological Opinion and Recovery Plan issued by the National Marine Fisheries Service. The Opinion and Plan specify that Central Valley Steelhead are to be reintroduced to the North Fork of the American River in early 2012. Allowing suction dredging in a stream that will be host to reintroduced anadromous fish makes no sense whatsoever. Excerpts from the Biological Opinion and Recovery Plan are attached as **Exhibit "A."**

Finally, there is ample evidence that there are significant deposits of mercury in the rubble and sediment of the river, resulting from heavy mining activity on the river during and following the Gold Rush time. Suction dredges stir up the mercury and reintroduce it to the water column, where some of it becomes "methylated," or transformed into a form that will readily combine with other water constituents to form toxic substances. This, in turn, adversely affects downstream beneficial uses of the North Fork and its water. These effects are, in a general way, discussed in detail in the draft SEIR in Chapter 4.2, "Water Quality and Toxicology." For this independent reason, the river should be entirely closed to dredging above Iowa Hill Bridge.

Request: It is respectfully requested that the Commission: (i) direct a comment letter on the draft SEIR to the Department of Fish & Game, asking that the Department delete the entire Wild and Scenic portion of the North Fork of the American River from the list of streams where suction dredging is allowed; and (ii) recommend to the Placer County Board of Supervisors that the Board direct a similar comment letter to the Department of Fish & Game.

2. North Fork of the Middle Fork, American River. The North Fork of the Middle Fork of the American River ("NFMF") originates high up on the Forest Hill Divide in the Deadwood Ridge area. Winding for many miles through a scenic, steep canyon, it terminates at its confluence with the Middle Fork American River a short distance below Oxbow Dam.

I have been fishing this stream for more than 30 years, and am familiar with nearly every foot of it (there are a few areas that are quite inaccessible). Set forth below is a partial, brief list of some of the values that characterize this stream:

a. The NFMF is unobstructed--i.e., it is free flowing from its headwaters to its confluence with the Middle Fork below Ralston Afterbay (Oxbow Lake).

b. The NFMF is characterized by a continuous series of waterfalls, pools, riffles, and runs that hold wild rainbows, and a smaller population of browns. These pristine conditions would be decimated by dredging where all fines and rubble is removed, and the entire stream ecology is altered.

c. To my knowledge, there has not been any fish planted in this stream. All of the fish are wild, healthy, and brightly colored and spotted. I have a lot of pictures of fish caught and released over the years.

d. The NFMF flows through a remote, forested canyon, with a canopy that provides summer shade and good trout refuge during periods of high water temperatures. This canopy would be decimated in areas where dredging would occur.

e. The stream serves as a nursery for fish production for the main Middle Fork; MF fish migrate up this stream to spawn. I have seen this in the spring (rainbows), and to a lesser extent in the fall when the browns move up. There is virtually no spawning activity in the Middle Fork itself. This has been clearly established in the PCWA hydropower facilities relicensing process, where I have for years been a participant and stakeholder for myself and for a broad coalition of conservation and related organizations. Virtually all MF spawning takes place in its tributaries, and the NFMF is (aside from the Rubicon) the largest of those tributaries. Suction dredging would clearly cause siltation, substrate depletion, and other adverse conditions that would have a bad effect on spawning and rearing of rainbow and brown trout populations.

f. The fish population varies depending on location. Certain areas of the stream are remote and/or unknown to the general public. I am one of the few people who know where all of the trails are, and where to access the river for the best fishing. These areas tend to hold the healthiest and largest fish specimens, and dredging would have an enormous impact on the fishery and the food supply in these areas.

g. The BMI population is probably average for an "infertile" stream, which category covers virtually all of the Middle Fork streams. Still, there are good populations of Pteronarcys and Golden Stoneflies, as well as mayflies and caddis. The adverse effects of dredging on benthic macroinvertebrates are well documented. Infertile streams suffer greatly because their BMI populations are limited by the stream's

geomorphology.

h. Streamside vegetation is, in most places, entirely intact and, because the stream is uncontrolled, the spring hydrograph normally includes periodic high flows that both clean the streambed and control streamside vegetation reproduction. This situation would be impacted adversely by dredging, which rearranges the natural flow patterns in affected stretches.

Similar to the North Fork of the American River, the NFMF is subjected to further risk by the proposed regulations in several ways:

- (i) The “normal” suction dredge intake nozzle size is 4”; on page 2-18 of the draft SEIR, the regulations would allow a nozzle on the NFMF of 8” in size, to be permitted “at the Department’s discretion.” There is no public input process for this exception, and there are no stated standards that would govern DFG’s discretion. I have witnessed the devastation that is caused by 8” nozzles—the impact is severe on the stream’s values, including benthic macroinvertebrates, fish, vegetation, and geomorphology. The NFMF is a tiny stream compared to others in the area, thus magnifying the adverse effects of dredging.
- (ii) The NFMF is placed into category “E” by the proposed regulations, which means that it would be open to dredging from September 1 through January 31. The spawning period for brown trout falls squarely within this period, and no dredging should be allowed during that period.

In addition to those issues, all of the comments above regarding the draft SEIR’s “statewide” approach to impact analysis (instead of a stream-by-stream analysis); the current presence of remnant Central Valley Steelhead populations; the mandated reintroduction of Central Valley Steelhead above Folsom Lake; and the presence of mercury, all apply with equal force to the NFMF.

Request: It is respectfully requested that the Commission: (i) direct a comment letter on the draft SEIR to the Department of Fish & Game, asking that the Department delete the NFMF from the list of streams where suction dredging is allowed; and (ii) recommend to the Placer County Board of Supervisors that the Board direct a similar comment letter to the Department of Fish & Game.

Sincerely,

Bill Carnazzo

EXHIBIT A
NMFS BIOLOGICAL OPINION EXCERPTS

[The full *NMFS Biological and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project* is available at the following URL: <http://swr.nmfs.noaa.gov/ocap.htm>.] In the NMFS Biological Opinion's "Section V. Fish Passage Program," the following language is used to specifically describe the NMFS mandated fish passage program:

"Therefore, NMFS believes it is necessary for Reclamation, in cooperation with NMFS, other fisheries agencies, and DWR, to undertake a program to provide fish passage above currently impassable artificial barriers for Sacramento River winter-run, spring-run, and CV steelhead, and to reintroduce these fish to historical habitats above Shasta and Folsom Dams. Substantial areas of high quality habitat exist above these dams: there are approximately 60 main stem miles above Lake Shasta and **50 main stem miles above Lake Folsom**. These high-elevation areas of suitable habitat will provide a refuge for cold water fish in the face of climate change. [Emphasis added]. The NMFS Biological Opinion states in part: "From January 2012 through 2015, Reclamation shall begin to implement the Pilot Reintroduction Program (see specific actions below). The Pilot Program will, in a phased approach, provide for pilot reintroduction of winter-run and spring-run to habitat above Shasta Dam in the Sacramento River, and CV steelhead above Folsom Dam in the American River. By March 2012, Reclamation shall implement upstream fish passage for adults via "trap and transport" facilities while it conducts studies to develop and assess long-term upstream and downstream volitional fish passage alternatives.²⁸ Under Fish Passage Actions, the NMFS Biological Opinion states that NMFS plans to build an American River Fish Collection Facility, due to become operational no later than March 2012. The following is a brief excerpt from the Biological Opinion, at pages 663-664 of the latest Operations, Criteria and Plan document for the Central Valley Project and the State Water Project:

NF 3. Development of Fish Passage Pilot Plan

Action: From January 2010 through January, 2011, Reclamation, with assistance from the Steering Committee, shall complete a 3-year plan for the Fish Passage Pilot program. The plan shall include: **(1) a schedule for implementing a 3-year Pilot Passage program on the American River above Nimbus and Folsom dams, and on the Sacramento River above Keswick and Shasta dams** [Emphasis added]; and (2) a plan for funding the passage program. ²⁸ NMFS Biological and Conference Opinion on the Long-Term Operations of the CVP and SWP, June 4, 2009; Section 11.2.2 V. "Fish Passage Program", p. 659. NMFS Biological and Conference Opinion on the Long-Term Operations of the CVP and SWP, June 4, 2009; Section 11.2.2 V. "Fish Passage Program", p. 665. This plan and its annual revisions shall be implemented upon concurrence by NMFS that it is in compliance with ESA requirements.

Rationale: The Fish Passage Pilot Plan is a critical link between measures in the Proposed Action and this RPA and the long-term fish passage program. The plan will provide a blueprint for obtaining critical information about the chances of successful reintroduction of fish to historical habitats and increasing the spatial distribution of the affected populations.

NF 4. Implementation of Pilot Reintroduction Program

Objective: To implement short-term fish passage actions that will inform the planning for long-term passage actions.

Actions: *From January 2012 through 2015*, Reclamation shall begin to implement the Pilot Reintroduction Program (see specific actions below).

The Pilot Program will, in a phased approach, *provide for pilot reintroduction of* winter-run and spring-run to habitat above Shasta Dam in the Sacramento River, and *CV steelhead above Folsom Dam in the American River*. [Emphasis added]. This interim program will be scalable depending on source population abundance, and will not impede the future installation of permanent facilities, which require less oversight and could be more beneficial to fish. This program is not intended to achieve passage of all anadromous fish that arrive at collection points, but rather to phase in passage as experience with the passage facilities and their benefits is gained.

Rationale: The extent to which habitats above Central Valley dams can be successfully utilized for the survival and production of anadromous fish is currently unknown. A pilot reintroduction program will allow fishery managers to incrementally evaluate adult reintroduction locations, techniques, survival, distribution, spawning, and production, and juvenile rearing, migration. The pilot program also will test juvenile collection facilities. This action requires facility improvements or replacements, as needed, and establishes dates to complete work and begin operation. In some cases, work could be initiated sooner than listed above, and NMFS expects Reclamation and partner agencies to make these improvements as soon as possible. Because these facilities will be used in lieu of volitional fish passage to provide access to historical habitat above the dams, this measure is an essential first step toward addressing low population numbers caused by decreased spatial distribution, which is a key limiting factor for Chinook salmon and CV steelhead. Upstream fish passage is the initial step toward restoring productivity of listed fish by using large reaches of good quality habitat above project dams. Restriction to degraded habitat below the dams has significantly impaired reproductive success and caused steep declines in abundance.”