APPENDIX K: Agency Comments (F - Z)

From: Chandra Lewis <chandralewis@fs.fed.us>
To: <MStopher@dfg.ca.gov>
CC: Christine Nota <cnota@fs.fed.us>, Debra Whitman <dwhitman@fs.fed.us>, Ba...
Date: 12/4/2009 3:25 PM
Subject: 2600/2800; Califonial Department of Fish and Game Initial Study, SuctionDredge Permitting and SEIR - Forest Service Response
Attachments: Attachment 5 - SBNF Riparian BA Tables 1 and 2.docx; Attachment 1 - R5 Draft EIR Response-Forest Issues.docx; Attachment 2 - R5 FS letter to CDFG-12-27-2007.pdf; Attachment 3-2006 PNF letter.docx; Attachment 4 - Plumas NF photos.docx; FS_correspondence.doc

Hard copy of this letter and it's attachments were sent via FedEx to Mark Stopher.

The following Correspondence is archived in the Records database. Any enclosures will follow the letter in this message.

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Attachment 1

The following is a list of suction dredging issues that each National Forest in the Pacific Southwest Region discussed. I have summarized each of the Forests response in an attachment.

Angeles National Forest

The Angeles National Forest comments and recommendations contained in the December 27, 2007 letter are still accurate though we have new information to include in our comments.

Potential post-fire hydrologic and geomorphic impacts associated with the Station fire (and to a lesser extent the Morris fire) will most likely materialize over the next couple of years within the four watersheds of the Forest. These potential mud flows and debris flows are expected to result in significant impacts to stream courses and the biota dependent upon them. In cooperation with California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), and the U.S. Geological Survey, the Forest is engaged in species salvage operations where listed species are being brought into captivity at local zoos until such a time as the watersheds recover. We are hoping that this drastic action will assist in promoting the long-term survival of these species. Additionally invasive species detection surveys are being conducted and the Forest plans to act aggressively to keep these invaders in check. Lastly, the Forest has issued a Closure Order for approximately one quarter of the Forest to safeguard human life and also minimize soil disturbance within the watershed to promote watershed recovery.

The topography of the Angeles National Forest causes human activities to be concentrated in the river bottoms. The canyons are steep-sided and narrow from a human use perspective which causes a higher probability of user group conflict and increases potential for resource damage. Every recreational use imaginable was represented in the East Fork of the San Gabriel River prior to the enactment of the State law prohibiting the issuance of suction dredging permits and suspending the operation of suction dredges permitted for use under the program. This concentrated use results in extreme pressure on the natural resources of the area and on public service providers. High numbers of Forest users involved in suction dredge mining, prolonged unauthorized occupancy, and other dispersed recreational opportunities along the East Fork caused parking issues, dumping and trash issues, health and safety issues, overuse of a picnic area located adjacent to the River, and resource damage. With this as background, the Forest suggests that the State has underestimated the incremental demand associated with suction dredge mining on public services and transportation/traffic. Please pass along our recommendation that each stream reach identified in the regulations be evaluated based on local characteristics and projected use.

Lastly, we would like to suggest that the State consider realigning their regulations that pertain to the Angeles National Forest to recognize the inherent conflict with federal law, namely the Watershed Withdrawal Act of 1928. Although the State asserts that nothing in the regulations authorize activities that are otherwise prohibited, we have witnessed the confusion of the public

when they figure out that large portions of the Angeles National Forest have been withdrawn from mineral entry and are not open to suction dredge mining. We are further put at a disadvantage to enforce federal law owing to lack of enforcement authority. The easiest solution to avoid public confusion and anger would be for the State to incorporate the restrictions of the Federal law within the State regulations.

Eldorado National Forest

We reviewed the 2007 Regional Office comments to the State for accuracy and to determine if there are any new issues that should be discussed in the upcoming study and SEIR. We would like to add the following discussion of known effects to aquatic species on the Eldorado National Forest.

On the Rubicon River, aquatic surveys of the past few years for the relicensing of the Middle Fork American Project have concluded that the best population of foothill yellow-legged frogs (*Rana boylii*) in the project lies near a site where suction dredge mining occurs. The population is already reduced due to the effects of irregular stream flows from the hydropower project on the Middle Fork American River. The Rubicon River tends to have ideal flows for foothill yellow-legged frogs but suction dredging may be affecting populations where it is occurring during critical periods. Gravel and rocks can be moved many feet during suction dredging, and this is the same substrate where egg masses are attached or where tadpoles reside. Survival of eggs or tadpoles where disrupted at their habitat site is unlikely. In dry years, most egg masses hatch by the beginning of June, although in wetter years, this time period could be much later, even into July.

We have observed effects of suction dredging upon foothill yellow-legged frogs at Camp Creek where foothill yellow-legged frog egg masses have been observed. Egg masses occurred in the same pool where suction dredging was later observed. It is possible that egg masses were destroyed or tadpoles were buried by this activity. The early summer appears to be the critical time period since later in the summer the older tadpoles may be able to move out of the way from a localized disturbance from suction dredging.

Both the Rubicon River and Camp Creek also support western pond turtles (*Clemmys marmorata*). The juvenile and adult life stages could be disturbed by suction dredging, although it is most likely that western pond turtles would move out of the way from such disturbance. Downstream water turbidity reduces high water quality.

The Eldorado NF Fisheries Biologist also suggested that CDFG use a start date on streams with Foothill Yellow-Legged Frogs based on the water year since the amount of water flow (water year) is a determining factor on when the eggs hatch and the tadpoles are mature enough to get out of the way of suction dredge intake hoses.

Inyo National Forest

The Inyo NF felt the issues are adequately discussed in the subject documents.

Lassen National Forest

The Lassen National Forest streams provide habitat to State and federally listed anadromous fish (steelhead and Spring-Run Chinook salmon and other aquatic life). We are concerned about any potential negative impacts resulting from suction dredge activities on the Forest.

Plumas National Forest

The Plumas National Forest would like to reiterate that most common issues related to suction dredging are camping and residential occupancy, which requires significant commitments of time from the Forest Service mineral administrators. The Forest would also like to see a requirement that large rocks or boulders (e.g. larger than three feet in diameter) that are moved by mechanized equipment during suction dredging be replaced in their original position to minimize impacts to stream stability and aesthetics.

In response to the Region's request for comment on the Initial Study Suction Dredge Permitting Program Subsequent Environmental Impact Report, the Plumas National Forest included two documents that are included in this letter: 1) Plumas National Forest letter dated December 6th, 2006 (Attachment 3) comments to the California Department of Fish and Game (CDFG) Suction Dredging Regulations and impacts from resulting mining activities on the Plumas National Forest; and 2) photographs of effects to habitat by dredging activities, Plumas National Forest memo dated July 17th, 1997 with (Attachment 4). The Plumas NF also include a paper of "Effects of Suction Dredging on Streams: A review and Evaluation Strategy" dated, July 14, 1995 in hardcopy that is available upon request.

In 1997 the Forest responded to a Regional request on Suction Dredging Activities, the following is a summary of these comments, and includes some additional new information. Those comments are in the hard copy addressed to Hilton Cass, Regional Mining Geologist, dated July 17, 1997.

In addition, the Plumas National Forest proposes the following wild trout streams should be closed to suction dredge mining or at a minimum implement a season of use (to protect fish spawning habitat and young of the year within spawning gravels) in the following drainages: Yellow Creek (Plumas Co.), Nelson Creek (Plumas Co.), and Middle Fork of the Feather River (Plumas and Butte Co.): Class B (Open dredging from July1 through August 31) or Class C (open dredging from July 1 through Sept. 15th).

Section 5.5.9 (pg. 19), Timing: The Forest recommends a season of use to protect the California red-legged frog (USFWS Federally listed as Threatened), mountain yellow- legged frog (USFWS Candidate Species) and the foothill yellow-legged frog (USFS Sensitive Species).

The Plumas National Forest recommends the following streams be closed to suction dredge mining. No dredging should be permitted at any time (Class A) within the following drainages because of known populations of the California red-legged frogs; French Creek, Jack's Creek, Pinkard, (Butte County) and Little Oregon Creek (Yuba County), and within the following drainages because of known populations of the mountain yellow-legged frogs; Boulder, Lone Rock, Pierce, West Branch Lights Creek, Rowland, Clark's, Grizzly Creek, Cat, Dark Ravine, Big Ravine, South Fork Rock Creek, Willow Creek, Sulfur, Sawmill Tom, Cooks, Wolf Creek , (Plumas Co.), Pine Grove Creek, Rabbit, Potosi, Slate and tributaries (Plumas/Sierra Counties), Lower Mill Creek, Fall River (Butte Co.) ,Upper Middle Fork Feather River, Gold Run, (Sierra/Plumas Co.).

The Plumas National Forest recommends that at a minimum a season of use as described below be implemented to reduce effects to these TES amphibian species. The Plumas National Forest has a few streams with mountain yellow-legged frogs (USFWS candidate species), as described above; and numerous streams with known populations of foothill yellow-legged frogs (Forest Service sensitive species), as identified below. Suction dredging has the potential to impact these populations. In previous comments submitted by Plumas NF for suction dredging, a limited operating period was suggested to help protect the frogs. Information we have obtained since those comments were submitted indicates the limited operating period suggested may be insufficient to protect vulnerable life stages of frogs. In streams occupied by foothill yellow-legged frogs, we recommend that season of use for suction dredging begin after September 1st and extends no longer than March 31st, unless surveys show there are no foothill-yellow legged frogs in that section of stream. Foothill yellow-legged frogs metamorphose from tadpoles to frog metamorphs in one season. Beginning the season of use late in the summer will ensure that most tadpoles have reached a life stage less vulnerable to suction dredging. In streams occupied by mountain yellow-legged frogs, we recommend that suction dredging not be allowed. Unlike foothill yellow-legged frogs, mountain yellow-legged frogs usually take two seasons to mature, so there are tadpoles present in streams year-round. Because mountain yellow-legged frogs are a candidate species for listing under the Endangered Species Act, caution is warranted. A season of use starting after September 1st and extending no longer than April 30th, would better protect mountain yellow-legged frog tadpoles from impacts from suction dredging than current regulations, but a limited season of use would not fully protect frogs.

At a minimum; the Plumas National Forest recommends that a season of use (September 1st – March 31st) be implemented for streams with known populations of foothill yellow-legged frogs: Butte County - Concow, Dogwood, Magalia, Pine Cluster, Pulga, American House Ravine, Barnards Diggings, Bean, Bear Ranch, Carpenter, Flea Valley, Frazier Cabin, Grizzly, Hunters Ravine, Kanaka Creek, Little North Fork Feather River; Plumas County/Butte County - Indian Creek, Meadow Valley Creek, Spanish Creek, McNair Meadow, Middle Fork of the Feather River, North Fork of the Feather River, Little North Fork of the Feather River, South

Fork Feather River, South Fork Rock Creek; Plumas/Sierra Co's - Slate Creek and tributaries, Rock Creek, Onion Creek, Oroleve Creek, Valley Creek, Woodleaf Creek; Yuba County - Yuba River.

In addition, there is one Congressionally-designated Wilderness within the Plumas National Forest that is withdrawn from mineral. The Buck's Lake Wilderness also is within the Buck's Critical Aquatic Refuge and the mountain yellow-legged frog (*Rana muscosa*) and foothill yellow-legged (*Rana boylii*) frogs are found within these areas. In addition; the Lake's Basin Recreation Area (which is on both the Plumas NF and the Tahoe NF) is within the Lakes Basin Critical Aquatic Refuge and the Mountain yellow-legged frog (*Rana muscosa*) is found within this area. All streams within the Buck's Lake Wilderness and the Lakes Basin Recreation Area should be classified as closed to dredging at all times.

Other general comments:

Please clarify that the definition of fish includes all biological management indicators (BMI) such as benthic macroinvertebrates and amphibians (all life stages).

Section 5.5.10 – Encampments (pg. 20): Sanitation and lack of restroom facilities, and potential for disposal of human waste adjacent to stream, and contamination of streams.

Page 50, discussion of impacts to wildlife, include a discussion on effects to amphibians by removal of LWD through dredging practices.

Safety issues for anglers and other recreational users are not addressed. There are large deep holes caused by dredging (example Chip's Creek on the NFFR – a hole that is approximately 4 feet in diameter and over 5 feet deep), also cables and other equipment in the rivers that can be hazardous to anglers and recreationists.

<u>San Bernardino National Forest</u>

The following recommendations are clarifications to that letter to protect threatened, endangered, and sensitive species on the San Bernardino National Forest in regard to suction dredging activities:

<u>Forest-wide:</u>

1. Recognize that the San Bernardino National Forest has newly designated wilderness on the San Jacinto Ranger District in addition to areas that were recommended to be wilderness as identified in the 2005 Land Management Plan. Suction dredging should not be allowed in these special designation areas; such as research natural areas, wilderness areas, etc.

2. In order to provide protection to known federally-endangered riparian bird breeding activities, please identify the need for miners to contact the Forest Service prior to any

suction dredging activities proposed on the San Bernardino National Forest. This will allow communications with the miners to coordinate performance of dredging operations outside of the breeding season for these species. If possible, please accomplish this through the CEQA process and subsequent implementation of the proposed action.

Mountaintop Ranger District:

1. Please exclude suction dredging from any perennial or intermittent water source that occurs on the Mountaintop Ranger District, to minimize impacts to know occurrences, critical habitat, and suitable habitat for federally threatened, endangered, and sensitive species.

San Jacinto Ranger District:

1. Please exclude suction dredging from streams that were designated as Critical Biological Zones in the 2005 Land Management Plan. This includes Bautista Creek, Fuller Mill Creek, and North Fork San Jacinto River.

2. The 2008 Riparian Biological Assessment (Attachment 4) for ongoing effects to seven listed riparian/aquatic species contains all known occurrences and critical habitat of threatened and endangered species on the Forest by Ranger District (see Attachment 4 - Table 2). In order to protect these species, we recommend that streams that are identified on this list as occupied or critical habitat for mountain yellow-legged frog, arroyo toad, San Bernardino kangaroo rat, and slender-horned spineflower be excluded from suction dredging.

3. The Forest requests that suction dredging be excluded from any perennial or intermittent water sources that are identified in the above bullet statement.

Front Country Ranger District:

1. Please include the requests made in a letter addressed to the California Department of Fish and Game dated December 27, 2007.

2. To protect Forest Service Sensitive listed fish species, Santa Ana speckled dace, please exclude suction dredging from Plunge Creek.

3. The 2008 Riparian Biological Assessment for ongoing effects to seven listed riparian/aquatic species contains all known occurrences and critical habitat of threatened and endangered species on the Forest by Ranger District (see Attachment 4 - Table 2). In order to protect these species, we recommend that streams that are identified on this list as occupied or critical habitat for mountain yellow-legged frog, arroyo toad, San Bernardino kangaroo rat, and slender-horned spineflower be excluded from suction dredging.

4. To protect the habitat in the Santa Ana River, please consider excluding it from suction dredging. The Santa Ana River has been identified as a suitable location to re-establish populations of native fish including the endangered Santa Ana Sucker.

Shasta-Trinity National Forest

The last couple years has seen a drastic increase in the number of suction dredges in operation in Trinity County. One small creek in particular, Dutch Creek has a claim that is owned by an operator that leases rights out to dredgers. This creates a situation where multiple dredging operations can effectively take place on one claim. Dutch Creek is small (2 cubic feet per second (CFS) summer base flow and average wetted channel width of 8 feet) and having multiple mining operations on one claim has really altered the particle size distribution. Gravels are becoming scarce as mining has created geomorphic instability and allowed the gravels to be transported downstream to the mainstem Trinity River. This has resulted in an abundance of boulders and a lack of gravels. The creek has also become entrenched within and below the mining activity. With the creek effectively disconnected from its floodplain the channel acts mainly as a transport pathway for bedload and depositional (spawning) areas are hard to come by. This creek serves as spawning and rearing areas for winter steelhead, coho, and fall-run chinook. Canyon Creek has also been heavily impacted by suction dredge mining. This creek is listed as a Tier 1 watershed and is also listed as a key watershed and supports winter and summer steelhead, coho, and spring and fall chinook. The North Fork Trinity River and its largest tributary the East Fork North Fork Trinity River are also listed as a key watershed. Suction dredge mining operations here are adversely impacting anadromous fish. The North Fork Trinity River is one of the top summer-run steelhead streams in California and measures should be taken to insure that they are protected. In addition, this stream supports spring and fall chinook, winter steelhead, and coho. The New River is the single largest producer of summer run steelhead in California and is also listed as a key watershed. Suction dredge mining has occurred extensively here and is impacting summer and winter steelhead and spring and fall chinook. There are countless other creeks that are impacted from suction dredge mining in Trinity County as well. The Trinity River watershed is an incredible fisheries resource and suction dredge mining appears to be hampering efforts to recover SONCC Coho. Suction dredge mining in any waters that have anadromous fish within the Trinity River watershed should be evaluated for impacts on those fisheries. Currently, our fisheries program is in the planning phases for gravel injection and large woody debris placement for several creeks to mitigate for lack of suitable size spawning gravels.

In addition to the previously listed Trinity River tributaries, Soldier Creek, Hayfork Creek, Deadwood Creek, Rush Creek, Brown's Creek, Reading's Creek, Big French Creek, and Manzanita Creek also host significant anadromous fisheries represent the bulk of our creeks that support anadromous fish and have had recent suction dredge operations.

Other impacts that have not been mentioned are that suspended sediment: (1) increases daytime water temperatures, this is important to note as most of our creeks temperatures during midsummer approach the threshold of concern (TOC) value of 67 F for salmon; (2) Suspended sediment increases the mobility of waterborne pathogens; (3) Turbidity decreases light levels reaching the stream bottom thereby inhibiting primary productivity of the aquatic system. Many types of aquatic macroinvertebrates utilize aquatic vegetation as a primary food source and in turn many anadromous juveniles utilize these bugs as food.

Stanislaus National Forest

We would like to commend the agency for its thorough consideration of the resources potentially affected by suction dredging and the extensive use of literature to support the rationale for establishing significance.

We would like the SEIR to additionally consider the impact of suction dredging on reproductive success of the foothill yellow-legged frog, particularly as pertains to early season breeding activity. In late spring, male foothill yellow-legged frogs congregate near suitable breeding habitats where individuals establish and defend territories (Wheeler and Welsh 2008) and employ calling to entice a mate. MacTague and Northern (1993) reported a majority of calling for mates involved underwater vocalizations; however, Davidson (199) reported calling also occurred above water. We believe the early season operation of dredges has the potential to disrupt breeding activities in two primary ways. The presence of dredgers in or near suitable breeding habitat during the breeding season may result in regular disturbance of males which may cause them to abandon preferred calling locations which may have social implications in frog mating and may result in impaired reproductive success as described in Wheeler and Welsh (2008). The operation of dredges may interfere with the vocalizations of males and impact breeding success since the vocalizations are used to attract suitable mates. On the Stanislaus National Forest, dredging occurs in several locations where the population size is believed to be small and the dredging impacts that may be affecting these occurrences may have broader implications relative to long term viability of the populations. We recommend that the season of operation for streams with known populations of the frog start on or later than June 15 to mitigate these potentially significant impacts. Since surveys have not covered all streams potentially affected by suction dredging, we also recommend that the season of use be adjusted accordingly should additional populations of the frog be discovered in the future.

The Stanislaus NF would like CDFG to provide a process for the Forest Service to provide feedback to CDFG regarding start and end dates or closures for stream reaches. Monitoring of sensitive species may indicate trends in populations and adjustments in the suction dredging season may be warranted.

Tahoe National Forest

The issues described in DFG's SEIR and the Initial Study adequately addresses the issues surrounding the controversy of suction dredging, except for the following items:

1. Suction dredging utilizes mechanized equipment; so an approved Plan of Operations is necessary for suction dredging activity on Forest Service lands. Many adverse impacts of suction dredging can be mitigated by compliance with Conditions of Approval.

2. Vehicles, trailers and suction dredges can introduce and spread noxious weeds, including aquatic weeds, to the riparian ecosystem.

3. Encampment, which is the act of setting up a physical living area, involves activities that can be deleterious to riparian habitat, aquatic resources, and water quality. The adverse impacts of encampment include:
    a. Unauthorized roads and/or trails to the camping area;
    b. Compaction of the soil on the road, camp and stream bank;
    c. Introduction and spread of noxious weeds;
    d. Removal of riparian vegetation;
    e. Lack of adequate sanitation;
    f. Disposal of human waste and garbage on land and into water;
    g. Contamination of domestic water supplies;
    h. Inadequate fuel storage;
    i. Soil erosion;
    j. Noise from dredges could adversely affect forest sensitive wildlife species;
    k. Abandoned equipment and vehicles;
    l. Unauthorized permanent structures; and
    m. Unauthorized occupancy.

The potential impacts of suction dredging are *more* than was described in the CDFG Initial Study. For example, Section XIII, of the Initial Study, Public Services, does not adequately represent the adverse impact of dredging on the Forest Service Law Enforcement work force and the Department of Fish and Game Wardens.

Section XIV. Recreation states that there is a Less-than-Significant Impact to recreational facilities. Suction dredgers on the Tahoe NF do contribute to an increase in campsites being utilized, often for the entire summer.

Section XV. Transportation/Traffic states that there is a Less-than-Significant Impact to inadequate parking capacity. The Tahoe NF has reached full parking capacity on the Highway 49 Scenic Corridor due to suction dredgers requesting to camp near their claim.

The Tahoe NF does not believe that the current CDFG suction dredging regulations are adequate. The Tahoe NF does not have time during this initial comment period to adequately describe

which suction dredge regulations are inadequate; however, Tahoe NF Fisheries Biologist prepared the following comment:

Suction dredging overlaps the habitats of both foothill yellow-legged frog (*Rana boylii*) and rainbow trout (*Oncorhynchus mykiss*) in the following streams, Duncan Creek, North Yuba, Downie River, North Fork of the Middle Fork and Eldorado Canyon Creek. The timing of spawning for rainbow trout in the above watersheds occurs from February through May. For foothill yellow-legged frogs on the Tahoe National Forest, breeding and egg laying usually await the end of spring flooding and may commence any time from mid-March to May, depending on local water conditions. The breeding season at any locality is usually about two weeks for most populations. Based on known occupancy and habitat, the Tahoe National Forest is in agreement with the Plumas National Forest, which states in the Forest Service December 17, 2007 letter that "Due to the deleterious effects seen to fish and amphibian, specifically in the form of inhibiting the hatching of eggs, development of fry, fingerlings and tadpoles, and the survival of adults, as well as the sediments levels also adversely affect the food source (benthic invertebrates) of trout in our fish bearing streams, we request that consideration be granted for moving the beginning of dredging season on perennial fish bearing waters from the 4th Saturday in May to the 4th Saturday in June.

USDA United States Department of Agriculture | Forest Service | Pacific Southwest Region

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File Code: 2600/2810
Date: DEC 27 2007

California Department of Fish and Game
Attn: Suction Dredge Mining
1416 Ninth Street
12th Floor
Sacramento, CA 95814

Dear Sirs:

This letter is in response to your public notice of October 19, 2007, seeking information on suction dredge mining in California. The National Forests of the Pacific Southwest Region have collected much information on suction dredging operations over the past several years. Attached for your convenience and consideration is a compact disc that contains maps, photographs, memo's and monitoring reports prepared by Forest Service personnel that document their observations on suction dredging within the National Forests. I am also attaching a table of contents for the compact disc.

Environmental Impacts of Suction Dredging

The adverse impacts of suction dredging generally fall under the following descriptions:

- Suction dredging can leave piles of loose gravels which attract spawning fish but are inherently unstable resulting in loss of eggs and redds when these loose gravels are displaced in higher stream flows.
- Every effort should be made to ensure suction dredge mining activities do not jeopardize the continued existence of listed species or adversely modify critical habitat.
- Suction dredging can raise the turbidity and increase suspended sediment, particularly when more than one suction dredging operation is occurring in a short length of spawning habitat.
- Chronic disturbance of fishes creates a significant impact by moving organisms to less favorable habitats. This is especially critical in summer when temperatures reach 65 – 70° F. Even minor disturbances form dredging reduces the carrying capacity of aquatic organisms during times of increased natural stress, e.g. water temperature.
- Anadromous lamprey (Pacific and river) are particularly susceptible to dredging since ammocoetes spend up to five years in streams before emigration. The ammocoetes preferred habitat is fines and detritus, making them extremely vulnerable to dredging.

- Freshwater mussels are extremely susceptible to dredging and are imperiled species in California.
- Studies have determined that dredging causes the remobilization of mercury causing mercury to be released to the environment.
- Suction dredging can cause changes in stream channel geomorphology leading to stream channel instability.
- Disturbance to riparian vegetation, downed woody debris and large rock/boulders outside the wetted stream surface is created by high-banking, camping, trail and access route creation.

Suction Dredging Under Current California Department of Fish and Game Regulations

Most National Forests have reported adverse environmental impacts to fish, amphibians, and invertebrates from suction dredging on rivers and streams that are currently open to suction dredging under a California Department of Fish and Game (DFG) permit. Many of these impacts can be addressed by modifying the DFG's classification of the stream and adding language to the regulations to provide better surface resources protection. Please consider the following general recommendations:

- The number of dredges (and sizes) within various reaches (concentration) of waterways have potential to adversely effect through cumulative effects.
- The number of hours each dredge is allowed to operate effects how much material (cu.yds.) potentially is moved. Perhaps limited hours of operation would help in reduction of volume moved as well as with other user conflicts (for example, fisherman, swimmers etc).
- Regulation should define how much of the stream bed can be impacted by dredge holes or piles to help alleviate impacts (for example, dredge piles should not extend more than 1/4 of the wetted channel width).
- Permit limitations on high-banking and trail and access-building in riparian areas outside the wetted stream perimeter would greatly improve water quality/aquatic habitat.
- The use of winches is common and stream alteration permits are rarely applied for or enforced. Most dredgers think that if boulders are not *removed* from the wetted stream surface, a permit is not required. Strong language in the dredge permit that defines when an alteration permit is required may help.
- Human sanitation issues are not addressed in current regulations.
- Fuel storage language as well as fueling requirements can help prevent accidental spills.

Suction Dredging in Water Quality Limited Segments, Clean Water Act Section 303(d) listed waters:

On NFS lands in California many streams are currently listed as impaired waters under Section 303(d) of the Clean Water Act. In those cases where the source of the impairment is sediment, or habitat degradation, the Forest Service is required to improve those waters to meet State water quality standards. In almost all cases, suction dredging is unlikely to be compatible with our Clean Water Act responsibilities. However, individual operators may still obtain approval for their operations, but only when their plan of operations includes steps to result in a net improvement to instream or riparian resources. The local Regional Water Quality Control Board performs the evaluation of the plan of operations and indicates whether it meets State water quality objectives. The Forest Service can not approve a plan of operations without a 401 certification from the State.

In addition, please consider the following specific comments from the National Forests:

Klamath National Forest and Six Rivers National Forest

In November, 2004, the Forest Supervisors for the Klamath National Forest and the Six Rivers National Forest shared with your office via letter their concerns with DFG's classification of the streams of the Klamath River system. Specifically, the Forest Supervisors pointed to overlaps between the periods allowed for suction dredging and the spawning periods and egg-alevin developmental phases for coho, Chinook salmon, steelhead, green sturgeon, and lamprey. The letter makes recommendations on modifying the stream classifications to reduce the potential for adverse impacts. Those concerns and recommendations are still valid. A copy of that letter and supplemental information is included on the attached compact disc.

Plumas National Forest

On the Mt. Hough and Feather River Ranger Districts, the Forest has documented adverse impacts to the environment that include, but are not limited to: high banking, excessive sediment, modification of large in-stream habitat structures (boulders). The cumulative effects are estimated to be at significant levels and causing adverse impacts to water quality, in-stream fish habitat, streambank stability, and aquatic species survival. Please see the attached photos within the enclosed compact disc of suction dredging sites on **Hopkins Creek** and the **Little North Fork Middle Fork Feather River** for illustration.

Due to the deleterious effects seen to fish and amphibian, specifically in the form of inhibiting the hatching of eggs, development of fry, fingerlings and tadpoles, and the survival of adults, as well as the sediment levels also adversely affect the food source (benthic invertebrates) of trout in our fish bearing streams, we request that consideration be granted for moving the beginning of dredging season on perennial fish bearing waters from the 4th Saturday in May to the 4th Saturday in June.

Mountain Yellow-legged frogs (*Rana muscosa*) occur within many of the streams and rivers within the Plumas National Forest. Due to the same concerns as stated above, for suction dredging operations within occupied mountain yellow-legged frog streams or within designated critical aquatic refuges, we recommend that the DFG's suction dredging regulations require a limited operating period (LOP) from May 1st (or beginning of the suction dredging season) to August 30th. This LOP would significantly reduce adverse impacts to mountain yellow-legged frog while still allowing suction dredging operations to continue during part of the year.

The Plumas National Forest is updating their GIS layer for mountain yellow-legged frog and will be available for your use by February, 2008.

Stanislaus National Forest

The Stanislaus National Forest has one of the largest known remaining populations of foothill yellow-legged frog (*Rana boylii*) within national forest lands. Suction dredging overlaps the habitats of both foothill yellow-legged frog and western pond turtle (*Clemmys marmorata pallida*), in the following streams: **Hells Hollow Creek, Big Creek, Bean Creek, Bull Creek, Rose Creek, South Fork Stanislaus River, and the North Fork Tuolumne River**. Local observations on **Rose Creek** confirm that habitat impacts are occurring which includes changes in water flow regimes and sediment regimes. Dewatering has been noted as the streamflow is directed down the sluice box that are occasionally or historically occupied by tadpoles. Dewatering may expose the tadpoles to an unnatural condition and increase the risk for predation. The stream channel has been modified to accommodate the mining equipment and to expose bedrock contact areas, which is the same areas where oviposition occurs. The change in water depth and velocity is also impacting oviposition. Frequent "turnover" of the streambed has been noted, thus the substrates may not have the ability to be colonized and develop the assemblage of algae in the quantity required for foraging by tadpoles.

Two other streams, **Gentry Gulch and Halls Gulch**, are within the range of the limestone and Hells Hollow salamander; however, surveys specific to detecting these species have not been conducted to date. Other primary habitat for the Hell Hollow salamander and limestone salamander is along the **Merced River**, which is a known area for suction dredging. It is unclear what impacts suction dredge mining has on limestone salamander (*Hydromantes brunus*) and Hell Hollow slender salamander (*Batrachoseps diabolicus*); however, since these species are limited in distribution, please consider modifying or reclassifying the streams where they exist. The Stanislaus National Forest has the details on the forest.

Hells Hollow, Big, Bean, and **Bull Creeks** provide suitable habitat for California red-legged frog (*Rana aurora draytonii*), as do portions of the other streams listed above.

Angeles National Forest

We recommend the continuation of "Class A" designation for portions of the San Gabriel River System. We also request that you consider closing the entirety of the **East Fork San Gabriel River** to suction dredge mining based on cumulative impacts within the watershed having deleterious effects to aquatic biota. Aquatic biota within the East Fork San Gabriel include Santa

Ana sucker (*Catostomus santaanae*), Santa Ana speckled dace (*Rhinichthys osculus ssp*), arroyo chub (*Gila orcutti*), mountian yellow-legged frog (*Rana muscosa*), and western pond turtle (*Clemmys marmorata pallida*). Hernandez (1997) conducted surveys in the East Fork San Gabriel and documented the absence of young of the year fish and recommended a seasonal closure to suction dredging. More recent field surveys on the East Fork San Gabriel found evidence of an extended spawning period indicating that a protracted spawning period is present in the stream (A. Backlin, U.S. Geological Survey, Personal Communcation). Santa Ana sucker fry in the West San Gabriel were found exclusively in edgewater habitat over silt at depths of less than 17cm where there was no measurable flow (Haglund and Baskin 2002). Creek bed alterations due to current suction dredging activities preclude edgewater habitat.

Suction dredge mining also currently alters the stream channel of the East Fork San Gabriel by building up rock dams to create large pools for floating equipment. A survey conducted in 1997 over a 3.8 mile stretch of East Fork San Gabriel from **Cattle Canyon** to **Allison Gulch** resulted in a count of 256 suction dredge holes in the river, and 65 mining holes associated with high-banking along the banks (Hernandez 1997).

Two major fires have burned in the East Fork San Gabriel watershed and resulted in impacts to the hydrology of East Fork San Gabriel. These fires include the Williams Fire 2002 and the Narrows Fire 1997. Invasive plants including tamarisk (*Tamarix spp.*) and eupatory (*Ageratina Adenophora)* have become established in the East Fork San Gabriel and are now well distributed along the stream channel. In May 2000, the Total Maximum Daily Load (TMDL) for garbage in East Fork San Gabriel was established. The TMDL was based on estimates of 8000 people visits/day during the summer generating approximately two hundred 32 gallon bags of uncontained trash in and adjacent to the creek each weekend day.

In **Big Tujunga**, there is a similar concern about cumulative impacts to aquatic biota. The biota includes Santa Ana sucker, Santa Ana speckled dace, arroyo chub, and arroyo toad (*Bufo californicus*). Recreation use within Big Tujunga is high. Water withdrawal and recent drought have left the river in a multiple pool state every summer, hence great concern for take on the amphibians or fish remaining in each pool. Invasive bullfrogs continue to impact the fisheries resource. White sweet clover (*Melilotus alba*) and Arundo donax is well established and pervasive in Big Tujunga Watershed. Highbanking has been documented within Big Tujunga as well.

Based on the cumulative impacts on the East Fork San Gabriel and Big Tujunga, we request you consider a change of status to Class A for suction dredge mining.

<u>San Bernardino National Forest</u>

The San Bernardino National Forest has identified a need to close **Lytle Creek (below Miller Narrows)** to suction dredging due to the presence of the Santa Ana speckled dace which is threatened with extinction in the watershed due to many contributing factors. Due to the low water levels in this area, fish are concentrated in a few pools in the summer months and substantial take could occur when suction dredging takes place. We have learned about the

significance of this population in the last few years as a result of a range-wide assessment and FERC relicensing.

The San Bernardino National Forest has identified a need to close **Cajon Creek (below Highway 138)** to suction dredging due to the presence of and threats to arroyo toads and Santa Ana speckled dace. The speckled dace population and threats have really come to light in a recent range-wide assessment and numerous damaging projects such as highway and railroad expansion. Suction dredging and associated disturbance of stream banks will result in take of dace and potential take of arroyo toads. The arroyo toad population in Cajon Creek is isolated and extremely vulnerable due to the many human intrusions in the watershed such as freeways, railroads, pipelines and other human disturbances.

Cleveland National Forest

We recommend continuation of the Class A designation for San Mateo Creek and its tributaries from its mouth upstream, San Juan Creek and its tributaries from its mouth upstream, and Santiago Creek and its tributaries within the Cleveland National Forest. Southern steelhead (*Oncorhynchus mykiss*) and its critical habitat are federally listed and are found within San Mateo Creek.

The following stream segments have known populations of Arroyo toad and are requested to be reclassified as Class A Streams. These areas are documented in the attached maps on the compact disc:

a. **Arroyo Seco Creek** - from Dripping Spring Campground, upstream to the boundary of Agua Tibia Wilderness. 1 mile. (San Diego/Riverside Counties, map 2).

b. **San Diego River**- between Ritchie Creek and Boulder Creek, above El Capitan Reservoir - known toad populations. Approximately 2 miles. (San Diego County, map 3.)

c. **Pine Creek and its tributaries including Noble Creek**- to a point one mile upstream of confluence with Pine Creek; Pine Creek from 2 miles upstream of confluence with Noble Creek to the Pine Creek Wilderness boundary, near Pine Valley. Approximately 8 miles. (San Diego County, map 4)

d. **Kitchen Creek** - From Cibbets Flat campground south for 2 miles. (San Diego County, map 4)

e. **Cottonwood Creek**- from Boulder Oaks (confluence of Cottonwood/Kitchen Creeks), 2 miles south to Buckman Springs. (San Diego County, map 4)

f. **Morena Creek**- and its tributaries between Kernan Road and Morena conservation camp. Approximately 2 miles. (San Diego County, map 4)

In addition, there are several Congressionally-designated Wildernesses within the Cleveland National Forest that are withdrawn from mineral entry and closed to mining, except for those mining claim with valid existing rights before the Wilderness was established. Arroyo toads and Western pond turtle (*Clemmys marmorata pallida*) are found within these areas, which are identified on the maps included on the compact disc. These include the **Agua Tibia Wilderness** (established 1975), **San Mateo Canyon Wilderness** (established 1984), **Pine Creek Wilderness** (established 1984), and **Hauser Wilderness** (established 1984). Lands that have been recommended for Wilderness designation include the **Cutca Valley** area, **Pine Creek**, and **Hauser Canyon**. These are also identified on the maps on the compact disc. All streams within Wilderness and recommended Wilderness should be classified as closed to dredging at all times.

Changed Circumstances and New Information Since 1994

Your public notice asks for new information, since 1994 when the DFG's regulations were last established, on the environmental impacts of suction dredging. There have been several major changes since the 1994 regulations were set. An important change has been the 1997 listing under the Endangered Species Act of the coho salmon requiring federal protection on the Klamath, Salmon and Trinity Rivers and having the Salmon River classified as "Designated Critical Habitat". The primary objective of the *Recovery Strategy for California Coho Salmon* (CDFG 2004) is to return coho salmon to a level of sustained viability, while protecting the genetic integrity of both ESU's, so that they can be delisted and regulations or other protections under the CESA will not be necessary. All watersheds that fall within the range of California coho salmon should be a priority for assessing potential impacts associated with suction dredge mining activity. Protection of the best remaining habitat, especially in areas where coho are still present, and improvements to degraded habitat are both necessary to the recovery of this species.

The other major change has been the die off of salmon in the lower Klamath River due to fatal summertime water temperatures. Limiting disturbance in cold water refugia is critical and should include protection at the mouths of tributaries and prohibition of suction dredging in designated major tributaries. The number and seasons of suction dredging operations must be examined in a particular reach of river.

Also limiting or in some case prohibiting the seasons for suction dredging activities on reaches of the Klamath and Trinity The actions will go a long way in protecting not only the federally listed coho salmon but also the Forest Service sensitive steelhead, lamprey, and green sturgeon.

In conclusion, thank you for this opportunity to provide information for your consideration. I also want to note the positive continued coordination between our agencies to provide for resource protection. Many policies and regulations have changed since 1994 that could affect suction dredging, such as the Best Management Practices (BMPs), forest plans, 303(d) listed waters, and new or revised TMDLs for several rivers and streams. Most of this information can be found within each individual National Forest website (www.fs.fed.us). For details or further information, please contact Hilton Cass, Regional Locatable Minerals Program Manager, at (707) 562-8967 or e-mail: hcass@fs.fed.us or Travis Coley, Regional Fish Program Manager, at (707) 562-8940 or e-mail: tcoley@fs.fed.us.

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California Department of Fish and Game. 2004. Recovery strategy for California coho salmon. Report to the California Department of Fish and Game Commission. California Dept. of Fish and Game. Sacramento, CA. 594pp.

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Hernandez, Juan. 1997. Memorandum to Dr. Dwayne Maxwell, Senior Fisheries Biologist. Region 5-IF. Fish survey on the East Fork of the Gabriel River and Cattle Creek, August 10, 1997. CDFG – Long Beach. 10 pp.

Sincerely,

RANDY MOORE
Regional Forester

Enclosures

cc: Forest Supervisors

United States Department of Agriculture **Forest Service** **Plumas National Forest**

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File Code: 2600/2810 **Date:** December 6, 2007
Route To:

Subject: California Fish and Game Suction Dredging Regulations

To: Regional Forester

The following are comments relating to California Department of Fish and Game (CDFG) Suction Dredging Regulations and impacts from resulting mining activities on the Plumas National Forest. Plumas National Forest comments are provided under the categories outlined by your office in the internal memo issued on November 16, 2007.

1) Whether suction dredge mining activities results in adverse impacts to the environment:

- The Plumas NF has documented incidences (see Attachment 1, Figures 2 and 3) where suction dredging has modified in-stream fisheries and amphibian habitat. Based on Regional Office letter dated May 26, 2004, suction dredging is defined as "the excavation of unconsolidated sands and gravels from the streambed with a motorized, hand held device." The movement of large boulders by a winch and chain (Figure 2) and the excavation of streambanks (Figure 3) do not appear to meet the intent of the suction dredging definition.

  The Plumas NF requests that the CDFG clarify in their suction dredging regulations the definition of what constitutes unconsolidated sands and gravels, and whether the movement of large boulders and the excavation of a streambank are compatible with existing or revised suction dredging regulations.

- Of the 1000 estimated mining claims we have on the Mt. Hough and Feather River Ranger Districts, only 3% of the operators submit a notice of intent to operate on Federal lands. Of those 3% that are monitored, the Forest has documented adverse impacts to the environment that include, but are not limited to: high banking, excessive sediment, modification of large in-stream habitat structures (boulders), occupation of federal lands longer than 30 days, and sanitation issues (human waste). The cumulative effects of the other 97% of dredgers operating on the Plumas NF are estimated to be at significant levels and causing adverse impacts to water quality, in-stream fish habitat, streambank stability, and aquatic species survival.

  As a result of the high number of operators that do not submit a notice of intent, the Plumas NF recommends the following courses of action:

  1. Increased cooperative enforcement efforts between CDFG field personnel and Forest Service minerals personnel to monitor a

greater number of the 97% of operators that do not submit Notices of Intent.

2. The CDFG modify their regulations to impose suspension or sanctions on mining operations and claims for up to 3 years for operators that do not file Notices of Intent with the Forest Service.

2) Whether suction dredge mining under CDFG's current regulations governing such activities results in deleterious effects to fish;

- Existing suction dredging operations do appear to have deleterious effects to fish. The suction dredging operation documented in Figure 2 is resulting in the downstream effects to fish and amphibians noted in Figure 1. This level of sediment results in deleterious effects to aquatic species in the form of inhibiting the hatching of eggs, development of fry, fingerlings and tadpoles, as well as the survival of adults. These sediment levels also adversely affect the food source (benthic invertebrates) of trout in our fish bearing streams.

  As a result of these deleterious effects to fish noted above, the Plumas NF recommends that the CDFG consider moving the beginning of dredging season on perennial fish bearing waters from the 4th Saturday in May to the 4th Saturday in June.

3) Whether there are changed circumstances or new information available since 1994 regarding suction dredge mining and the environment generally, and whether changed circumstances or new information available since 1994 indicates suction dredge mining under the CDFG's existing regulations is resulting in new significant or substantially more severe environmental impacts than previously considered by the CDFG.

- Since 1994, the Mountain Yellow-legged Frog (MYLF) has remained on our Regional Forester's Sensitive Species list, but it status has been heightened by the U.S. Fish & Wildlife Service (FWS). The FWS has concluded in its status review of listing proposals that the MYLF is warranted for listing, but precluded by higher priority listings. The FWS fully expects the MYLF to be listed under the Endangered Species Act in the near future (within the next 18 months). The Plumas NF is concerned about suction dredging within occupied MYLF streams, as the effects noted in items 1 and 2 above have been documented in occupied streams.

  1. As impacts continue within occupied MYLF streams, the Plumas NF recommends that the CDFG's suction dredging regulations require that operators to submit a Plan of Operations for any operation occurring within a Critical Aquatic Refuge and/or MYLF occupied stream.

  2. For suction dredging operations within occupied MYLF streams, the Plumas NF recommends that the CDFG's suction dredging regulations require a limited operating period (LOP) from May 1st (or beginning of the suction dredging season) to August 30th. This

LOP would significantly reduce adverse impacts to MYLF while still allowing suction dredging operations to continue during part of the year.

If you have any questions regarding the input provided above, please contact George Garcia, WFRP Program Manager at (530) 283-7828.

/s/Maria T. Garcia (for)
ALICE B. CARLTON
Forest Supervisor

cc: Patricia A Krueger
Hilton Cass

Attachment 1 - Impacts from Suction Dredging Operations on the Plumas NF

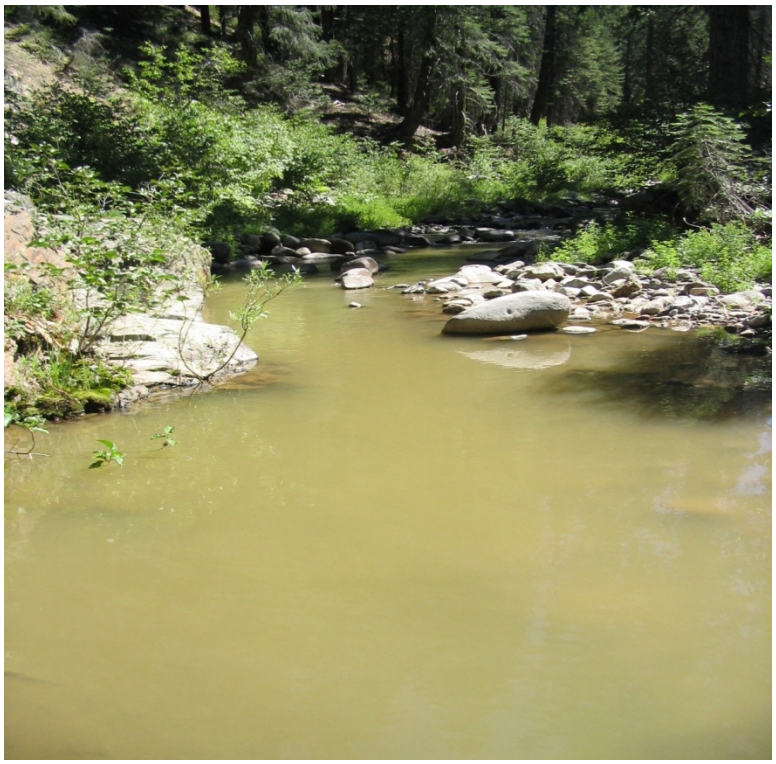

Figure 1. Sediment impacts from suction dredging on Hopkins Creek, Plumas NF. Sediment impacts fish reproduction (eggs) development (fry, fingerlings) and survival (adults) on this Trout stream. A food source such as the macroinvertebrate community is also impacted by this level of sediment.

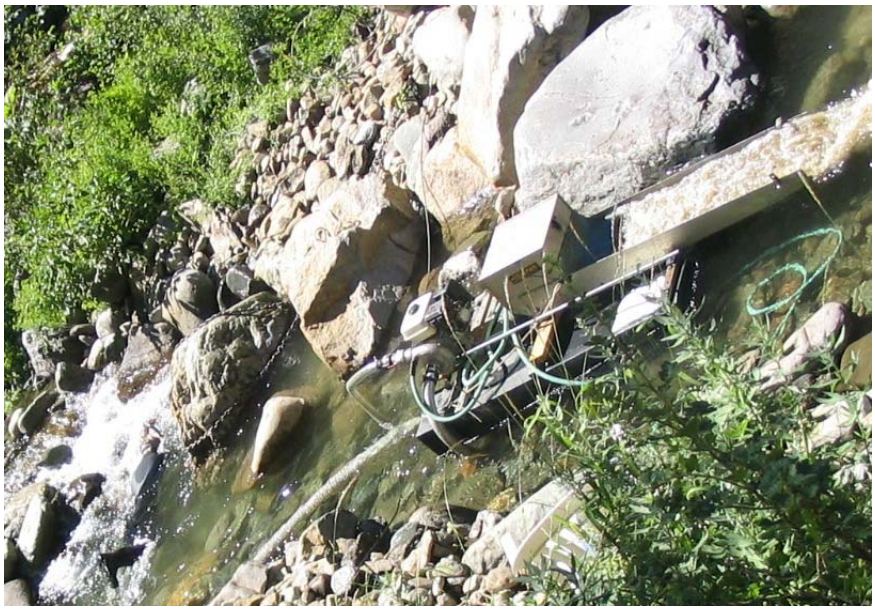

Figure 2. Suction dredging operation on Hopkins Creek, Plumas NF. Note large boulder being moved by chain and winch resulting in modification of fish and amphibian habitat.

Figure 3. Suction Dredging Operation on the Little North Fork Middle Fork Feather River. Operator in this photo cut riparian vegetation (alder) from stream bank and dug out a hole in the stream bank behind large boulder for suction dredging access. Stream bank material excavated was moved into channel, modifying in-stream habitat and flows on this trout bearing stream.

Attachment 4 – San Bernardino National Forest Riparian Biological Assessment – Tables 1 and 2

Table 1 – San Bernardino National Forest

Table 1. Summary of Known Occurrences of T/E Riparian Species On and Near the SBNF				
Occurrence Location (Ranger District)	NFS Acreage*		Non-NFS Acreage*	
Shay Unarmored Three-Spine Stickleback				
Shay Creek and Baldwin Lake (MTRD)	634		463	
Sugarloaf Meadow Pond (MTRD)	16		0	
Juniper Springs (MTRD)	12		0	
Arroyo Toad	Breeding	Upland	Breeding	Upland
Bautista Creek (SJRD)	270	384	95	291
Cajon Creek/Wash (FCRD)	326	832	556	1254
Cleghorn Arm/Silverwood (MTRD)	60	72	0	307
Cucamonga Canyon (FCRD)	3	5	21	61
Lower Deep Creek (MTRD)	1156	1860**	3938**	7465**
Deep Creek – Devil's Hole (MTRD)	384	**	0	**
Deep Creek – Hot Springs (MTRD)	133	**	0	**
Deep Creek – Mojave Forks Dam (MTRD)	318	**	13	**
Deep Creek – Summit Valley/Spillway (MTRD)	45	**	3301	**
Deep Creek – Warm Springs (MTRD)	67	**	0	**
Kinley Creek (MTRD)	8	**	0	**
Little Horsethief Canyon (FCRD)	201	**	625	**
Non-FS: Grass Valley Creek (Adjacent to MTRD)	0	**	11	**
Arroyo Toad Critical Habitat				
Bautista Creek – Unit 9 (SJRD)	673		Did Not Calculate	
South Fork San Jacinto River – Unit 9 (SJRD)				
Cajon Wash –Unit 20 (FCRD)	483		Did Not Calculate	
Mountain Yellow-Legged Frog				
City Creek (FCRD)	90		4	
Day Creek (FCRD)	49		3	
East Fork Barton Creek (MTRD)	1		0	
Fuller Mill Creek (SJRD)	48		25	
Indian Creek @ Hall Canyon (SJRD)	46		6	
Mill Creek @ Thurman Flats (FCRD)	24		8	
North Fork San Jacinto River (SJRD)	49		14	
Mountain Yellow-Legged Frog Critical Habitat				
Andreas Canyon – Subunit 3D (SJRD)	109		Did Not Calculate	
City Creek, East and West Fork – Subunit 2A (FCRD)	1268		Did Not Calculate	
Day Canyon – Subunit 1E (FCRD)	635		Did Not Calculate	
East Fork Barton Creek – Subunit 2B (MTRD)	193		Did Not Calculate	
Indian Creek – Subunit 3B (SJRD)	126		Did Not Calculate	
North Fork (of Middle Fork of) Whitewater River – Subunit 2C (FCRD)	74		Did Not Calculate	
North Fork of San Jacinto River – Subunit 3A (SJRD)	823		Did Not Calculate	
Tahquitz Creek – Subunit 3C (SJRD)	217		Did Not Calculate	

Table 1. Summary of Known Occurrences of T/E Riparian Species On and Near the SBNF		
Occurrence Location (Ranger District)	NFS Acreage*	Non-NFS Acreage*
Southwestern Willow-Flycatcher		
Arrastre Creek (MTRD)	3	0
Banning Canyon (FCRD)	28	6
Barton Creek (Owl Site) and Jenks Meadow (MTRD)	<1	17
Bautista Canyon 1-4 (SJRD)	15.7	30.6
Bear Creek #2 and #3 (FCRD)	9	11
Cajon Creek #2 (FCRD)	2	4
Cajon Creek #4 (FCRD)	20	21
Cienaga Seca (MTRD)	9	<1
City Creek (FCRD)	<1	9
Clark's Ranch (MTRD)	46	0
Cold Creek (FCRD)	14	0
College Camp (MTRD)	16	0
Cucamonga Canyon (FCRD)	3	0
Day Creek (FCRD)	26	4
Deep Creek 1 & 2 (MTRD)	31	0
Deer Creek (FCRD and MTRD)	6	0
East Etiwanda Creek (FCRD)	4	9
Forest Falls on Mill Creek (FCRD)	4	16
Green Canyon (MTRD)	4	0
Heart Bar (MTRD)	4	0
Jacoby Canyon (MTRD)	13	0
Jenks Lake (MTRD)	9	0
Keenbrook – Cajon Creek (FCRD)	6	5
Little Bear Springs 1-4 – Holcomb Creek (MTRD)	21	0
Lost Lake (FCRD)	8	0
Rattlesnake Creek 1 & 2 (MTRD)	13	0
Sand Creek (MTRD)	14	0
Santa Ana River/Barton (MTRD)	56	0
Santa Ana River/Crystal Creek (FCRD)	5	11
Seven Oaks (MTRD)	14	0
Sheep Creek (FCRD)	15	0
Terrace Springs (MTRD)	2	0
Thurman Flats Picnic Area on Mill Creek (FCRD)	20	0
Van Dusen Canyon (MTRD)	8	0
Non-FS: Chino Canyon (Adjacent to SJRD)	0	4
Non-FS: Metcalf Creek South (Adjacent to MTRD)	0	3
Non-FS: Mill Creek Gauging Station (Adjacent to the FCRD)	<1	6
Non-FS: Morton Canyon (Adjacent to the FCRD)	0	13
Non-FS: North Fork San Jacinto River (Adjacent to SJRD)	<1	8
Non-FS: Oak Glen (Adjcent to FCRD)	0	6
Non-FS: Waterman Creek #1 (Adjacent to FCRD)	0	12
Southwestern Willow Flycatcher Critical Habitat		
Santa Ana Unit – includes Santa Ana River, Bear Creek, Mill Creek, and Waterman Canyon (MTRD and FCRD)	934	Did Not Calculate
Mojave Unit – includes Holcomb Creek and Deep Creek (MTRD)	527	Did Not Calculate
Least Bell's Vireo		

Table 1. Summary of Known Occurrences of T/E Riparian Species On and Near the SBNF			
Occurrence Location (Ranger District)	NFS Acreage*		Non-NFS Acreage*
Bautista Creek (SJRD)	9		0
Cajon Creek #1 (FCRD)	3		2
Cajon Creek #3 (FCRD)	1		0
Cajon Creek #4 (FCRD)	7		4
Little Sand Canyon (FCRD)	7		14
Lost Lake (FCRD)	8		0
Non-FS: Badger Canyon (Adjacent to FCRD)	0		8
Non-FS: Cable Creek (Adjacent to FCRD)	0		17
Non-FS: Cajon Creek #2 (Adjacent to FCRD)	0		2
Non-FS: Chino Canyon (Adjacent to SJRD)	0		14
Non-FS: Cushenbury Springs (Adjacent to MTRD)	0		22
San Bernardino Kangaroo Rat			
Bautista Creek (SJRD)	272		208
Cajon Wash (FCRD)	314		1403
Lytle Creek (FCRD)	127		536
North Fork San Jacinto River @ Cranston (SJRD)	37		361
Non-FS: Santa Ana River (SBNF Air Tanker Base Administrative Site)	0		8159
San Bernardino Kangaroo Rat Critical Habitat	Designated	Proposed	
Santa Ana River and Wash (Unit 1) (FCRD)	6	0	Did Not Calculate
Lytle/Cajon Creek Wash Unit (Unit 2) (FCRD) *Note: under the proposed revision, most of the SBNF portion of the CH would be dropped*	644	86	Did Not Calculate
San Jacinto River Wash Unit (Unit 3) (includes Bautista Canyon) (SJRD) *Note: under the proposed revision, most of the SBNF portion of the CH would be dropped.*	293	110	Did Not Calculate
Etiwanda Fan and Wash Unit (Unit 4) (FCRD) *Note: under the proposed revision, all of this CH unit would be dropped.*	6	0	
Slender-Horned Spineflower			
Bautista Creek (SJRD)	103		0
Keenbrook/Cajon Wash (FCRD)	20		0
North Fork San Jacinto River @ Cranston (SJRD)	30		30
Non-FS: Devore (Adjacent to FCRD)	0		50
Non-FS: Lytle Creek (Adjacent to FCRD)	<1		187
*Acreages were calculated using GIS layers of mapped habitat polygons. The mapping was accomplished using digital aerial photography and has not been ground-verified for suitability. Thus, these acreages should be considered as approximations. ** Upland arroyo toad habitat was mapped using the 2000 SCCS model as a starting point. The upland model was clipped at a mile from known occurrences. In some cases, the model was edited to fit with what looked like suitable upland habitat. The upland toad habitat for the lower Deep Creek area was not broken out by site.			

Table 2 – San Bernardino National Forest

Table 2. Summary of Known T/E Occurrences by District							
Site	UTS	ARTO	MYLF	SWWF	LBVI	SBKR	DOLE

Table 2. Summary of Known T/E Occurrences by District							
Site	UTS	ARTO	MYLF	SWWF	LBVI	SBKR	DOLE
Front Country Ranger District							
Badger Canyon					X*		
Banning Canyon				X			
Bear Creek				X/CH			
Cable Creek					X*		
Cajon Creek/Wash (including Keenbrook)		X/CH		X	X	X/CH	X
City Creek			X/CH	X			
Cold Creek				X			
Cucamonga Canyon		X		X			
Day Creek			X/CH	X			
Deer Creek				X			
Devore							X*
East Etiwanda Creek				X			
Etiwanda Fan						CH	
Forest Falls on Mill Creek				X			
Little Horsethief Canyon		X**					
Little Sand Canyon					X		
Lost Lake				X	X		
Lytle Creek						X/CH	X*
Mill Creek Gauging Station				X*			
Mill Creek				CH			
North Fork (of Middle Fork) Whitewater River			CH				
Santa Ana River/Crystal Creek				X/CH			
Morton Canyon				X*			
Oak Glen				X*			
Santa Ana River				CH		X*/CH	
Sheep Creek				X			
Thurman Flats Picnic Area on Mill Creek			X	X/CH			
Waterman Canyon #1				X*/CH			
Mountaintop Ranger District							
Arrastre Creek				X			
Barton Creek (Owl Site) and Jenks Meadow				X/CH			
Cienaga Seca				X			
Clark's Ranch				X/CH			
Cleghorn Arm/Silverwood		X					
College Camp				X/CH			
Cushenbury Springs					X*		
Lower Deep Creek		X		X/CH			
Deep Creek - Devil's Hole		X		CH			
Deep Creek – Hot Springs		X		CH			
Deep Creek – Mojave Forks Dam		X		X/CH			
Deep Creek – Summit Valley/Spillway		X		CH			
Deep Creek – Warm Springs		X		CH			
Deep Creek				CH			
Deer Creek				X			
East Fork Barton Creek			X/CH				
Grass Valley Creek		X*					
Green Canyon				X			
Heart Bar				X			
Holcomb Creek				CH			
Little Bear Springs – Holcomb Creek				X/CH			

Table 2. Summary of Known T/E Occurrences by District							
Site	UTS	ARTO	MYLF	SWWF	LBVI	SBKR	DOLE
Jacoby Canyon				X			
Jenks Lake				X			
Juniper Springs	X						
Kinley Creek		X					
Metcalf Creek #1				X*			
Rattlesnake Creek 1 & 2				X			
Sand Creek				X			
Santa Ana River @ Barton				X/CH			
Seven Oaks				X/CH			
Shay Creek and Baldwin Lake	X**						
Sugarloaf Meadow Pond	X						
Terrace Springs				X			
Van Dusen Canyon				X			
San Jacinto Ranger District							
Andreas Canyon			CH				
Bautista Creek		X/CH		X	X	X/CH	X
Chino Canyon				X*	X*		
Fuller Mill Creek			X/CH				
Indian Creek @ Hall Canyon			X/CH				
North Fork San Jacinto River			X/CH	X*		CH	
San Jacinto River @ Cranston						X/CH	X
South Fork San Jacinto River		CH					
Tahquitz Creek			CH				
Other SBNF Sites							
Air Tanker Base						X*/CH*	
*=On Non-FS lands within 1-mile of NFS land. X=species occurs CH=critical habitat							

United States Department of Agriculture **Forest Service** **Pacific Southwest Region**

Regional Office, R5
1323 Club Drive
Vallejo, CA 94592
(707) 562-8737 Voice
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File Code: 2600/2800
Date: December 4, 2009

Mark Stopher
Environmental Program Manager
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

Dear Mr. Stopher:

This letter is in response to your request for comments dated October 26, 2009 on the Notice of Preparation of a Draft Subsequent Environmental Impact Report for the State of California suction dredge permitting program. The National Forests of the Pacific Southwest Region (Forests) submitted comments regarding potential impacts of suction dredge to the California Department of Fish and Game in a letter dated December 27, 2007 (Attachment 1) and those issues are still valid. The Forests reviewed your Initial Study, Suction Dredge Permitting Program; Subsequent Environmental Impact Report dated November 2009 and found it to be quite comprehensive, although several Forests have additional comments. The Forests found some additional issues that needed to be addressed and some potential impacts that, based on Forest Service mineral administration experience, appear to be greater than indicated in your study. I have summarized each of the Forests response in Attachment 2.

In conclusion, thank you for this opportunity to provide information for your consideration. Please contact Rich Teixeira, Washington Office Minerals and Geology Mineral Exam Team Leader at (707)562-8965 or rteixeira@fs.fed.us for additional information.

Sincerely,

/s/ Thomas A. Contreras (for)
RANDY MOORE
Regional Forester

Enclosures

cc: Christine Nota
Debra Whitman
Barnie Gyant
Joseph Furnish
Michael Kellett
Rich Teixeira

Tony L Ferguson
Tracy Parker

USDA United States Department of Agriculture | Forest Service | Pacific Southwest Region

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In conclusion, thank you for this opportunity to provide information for your consideration. Please contact Rich Teixeira, Washington Office Minerals and Geology Mineral Exam Team Leader at (707)562-8965 or rteixeira@fs.fed.us for additional information.

Sincerely,

Rhonda Peters (FOR)

RANDY MOORE
Regional Forester

Enclosures

cc: Christine Nota, Debra Whitman, Barnie Gyant, Joseph Furnish, Michael Kellett, Rich Teixeira, Tony L Ferguson, Tracy Parker

Attachment 4 – San Bernardino National Forest Riparian Biological Assessment – Tables 1 and 2

Table 1 – San Bernardino National Forest

Table 1. Summary of Known Occurrences of T/E Riparian Species On and Near the SBNF				
Occurrence Location (Ranger District)	**NFS Acreage***		**Non-NFS Acreage***	
Shay Unarmored Three-Spine Stickleback				
Shay Creek and Baldwin Lake (MTRD)	634		463	
Sugarloaf Meadow Pond (MTRD)	16		0	
Juniper Springs (MTRD)	12		0	
Arroyo Toad	**Breeding**	**Upland**	**Breeding**	**Upland**
Bautista Creek (SJRD)	270	384	95	291
Cajon Creek/Wash (FCRD)	326	832	556	1254
Cleghorn Arm/Silverwood (MTRD)	60	72	0	307
Cucamonga Canyon (FCRD)	3	5	21	61
Lower Deep Creek (MTRD)	1156	1860**	3938**	7465**
Deep Creek – Devil's Hole (MTRD)	384	**	0	**
Deep Creek – Hot Springs (MTRD)	133	**	0	**
Deep Creek – Mojave Forks Dam (MTRD)	318	**	13	**
Deep Creek – Summit Valley/Spillway (MTRD)	45	**	3301	**
Deep Creek – Warm Springs (MTRD)	67	**	0	**
Kinley Creek (MTRD)	8	**	0	**
Little Horsethief Canyon (FCRD)	201	**	625	**
Non-FS: Grass Valley Creek (Adjacent to MTRD)	0	**	11	**
Arroyo Toad Critical Habitat				
Bautista Creek – Unit 9 (SJRD)	673		Did Not Calculate	
South Fork San Jacinto River – Unit 9 (SJRD)				
Cajon Wash –Unit 20 (FCRD)	483		Did Not Calculate	
Mountain Yellow-Legged Frog				
City Creek (FCRD)	90		4	
Day Creek (FCRD)	49		3	
East Fork Barton Creek (MTRD)	1		0	
Fuller Mill Creek (SJRD)	48		25	
Indian Creek @ Hall Canyon (SJRD)	46		6	
Mill Creek @ Thurman Flats (FCRD)	24		8	
North Fork San Jacinto River (SJRD)	49		14	
Mountain Yellow-Legged Frog Critical Habitat				
Andreas Canyon – Subunit 3D (SJRD)	109		Did Not Calculate	
City Creek, East and West Fork – Subunit 2A (FCRD)	1268		Did Not Calculate	
Day Canyon – Subunit 1E (FCRD)	635		Did Not Calculate	
East Fork Barton Creek – Subunit 2B (MTRD)	193		Did Not Calculate	
Indian Creek – Subunit 3B (SJRD)	126		Did Not Calculate	
North Fork (of Middle Fork of) Whitewater River – Subunit 2C (FCRD)	74		Did Not Calculate	
North Fork of San Jacinto River – Subunit 3A (SJRD)	823		Did Not Calculate	
Tahquitz Creek – Subunit 3C (SJRD)	217		Did Not Calculate	

Table 1. Summary of Known Occurrences of T/E Riparian Species On and Near the SBNF		
Occurrence Location (Ranger District)	NFS Acreage*	Non-NFS Acreage*
Southwestern Willow-Flycatcher		
Arrastre Creek (MTRD)	3	0
Banning Canyon (FCRD)	28	6
Barton Creek (Owl Site) and Jenks Meadow (MTRD)	<1	17
Bautista Canyon 1-4 (SJRD)	15.7	30.6
Bear Creek #2 and #3 (FCRD)	9	11
Cajon Creek #2 (FCRD)	2	4
Cajon Creek #4 (FCRD)	20	21
Cienaga Seca (MTRD)	9	<1
City Creek (FCRD)	<1	9
Clark's Ranch (MTRD)	46	0
Cold Creek (FCRD)	14	0
College Camp (MTRD)	16	0
Cucamonga Canyon (FCRD)	3	0
Day Creek (FCRD)	26	4
Deep Creek 1 & 2 (MTRD)	31	0
Deer Creek (FCRD and MTRD)	6	0
East Etiwanda Creek (FCRD)	4	9
Forest Falls on Mill Creek (FCRD)	4	16
Green Canyon (MTRD)	4	0
Heart Bar (MTRD)	4	0
Jacoby Canyon (MTRD)	13	0
Jenks Lake (MTRD)	9	0
Keenbrook – Cajon Creek (FCRD)	6	5
Little Bear Springs 1-4 – Holcomb Creek (MTRD)	21	0
Lost Lake (FCRD)	8	0
Rattlesnake Creek 1 & 2 (MTRD)	13	0
Sand Creek (MTRD)	14	0
Santa Ana River/Barton (MTRD)	56	0
Santa Ana River/Crystal Creek (FCRD)	5	11
Seven Oaks (MTRD)	14	0
Sheep Creek (FCRD)	15	0
Terrace Springs (MTRD)	2	0
Thurman Flats Picnic Area on Mill Creek (FCRD)	20	0
Van Dusen Canyon (MTRD)	8	0
Non-FS: Chino Canyon (Adjacent to SJRD)	0	4
Non-FS: Metcalf Creek South (Adjacent to MTRD)	0	3
Non-FS: Mill Creek Gauging Station (Adjacent to the FCRD)	<1	6
Non-FS: Morton Canyon (Adjacent to the FCRD)	0	13
Non-FS: North Fork San Jacinto River (Adjacent to SJRD)	<1	8
Non-FS: Oak Glen (Adjcent to FCRD)	0	6
Non-FS: Waterman Creek #1 (Adjacent to FCRD)	0	12
Southwestern Willow Flycatcher Critical Habitat		
Santa Ana Unit – includes Santa Ana River, Bear Creek, Mill Creek, and Waterman Canyon (MTRD and FCRD)	934	Did Not Calculate
Mojave Unit – includes Holcomb Creek and Deep Creek (MTRD)	527	Did Not Calculate
Least Bell's Vireo		

Table 1. Summary of Known Occurrences of T/E Riparian Species On and Near the SBNF			
Occurrence Location (Ranger District)	**NFS Acreage***		**Non-NFS Acreage***
Bautista Creek (SJRD)	9		0
Cajon Creek #1 (FCRD)	3		2
Cajon Creek #3 (FCRD)	1		0
Cajon Creek #4 (FCRD)	7		4
Little Sand Canyon (FCRD)	7		14
Lost Lake (FCRD)	8		0
Non-FS: Badger Canyon (Adjacent to FCRD)	0		8
Non-FS: Cable Creek (Adjacent to FCRD)	0		17
Non-FS: Cajon Creek #2 (Adjacent to FCRD)	0		2
Non-FS: Chino Canyon (Adjacent to SJRD)	0		14
Non-FS: Cushenbury Springs (Adjacent to MTRD)	0		22
San Bernardino Kangaroo Rat			
Bautista Creek (SJRD)	272		208
Cajon Wash (FCRD)	314		1403
Lytle Creek (FCRD)	127		536
North Fork San Jacinto River @ Cranston (SJRD)	37		361
Non-FS: Santa Ana River (SBNF Air Tanker Base Administrative Site)	0		8159
San Bernardino Kangaroo Rat Critical Habitat	**Designated**	**Proposed**	
Santa Ana River and Wash (Unit 1) (FCRD)	6	0	Did Not Calculate
Lytle/Cajon Creek Wash Unit (Unit 2) (FCRD) *Note: under the proposed revision, most of the SBNF portion of the CH would be dropped*	644	86	Did Not Calculate
San Jacinto River Wash Unit (Unit 3) (includes Bautista Canyon) (SJRD) *Note: under the proposed revision, most of the SBNF portion of the CH would be dropped.*	293	110	Did Not Calculate
Etiwanda Fan and Wash Unit (Unit 4) (FCRD) *Note: under the proposed revision, all of this CH unit would be dropped.*	6	0	
Slender-Horned Spineflower			
Bautista Creek (SJRD)	103		0
Keenbrook/Cajon Wash (FCRD)	20		0
North Fork San Jacinto River @ Cranston (SJRD)	30		30
Non-FS: Devore (Adjacent to FCRD)	0		50
Non-FS: Lytle Creek (Adjacent to FCRD)	<1		187

*Acreages were calculated using GIS layers of mapped habitat polygons. The mapping was accomplished using digital aerial photography and has not been ground-verified for suitability. Thus, these acreages should be considered as approximations.

** Upland arroyo toad habitat was mapped using the 2000 SCCS model as a starting point. The upland model was clipped at a mile from known occurrences. In some cases, the model was edited to fit with what looked like suitable upland habitat. The upland toad habitat for the lower Deep Creek area was not broken out by site.

Table 2 – San Bernardino National Forest

Table 2. Summary of Known T/E Occurrences by District							
Site	UTS	ARTO	MYLF	SWWF	LBVI	SBKR	DOLE

Table 2. Summary of Known T/E Occurrences by District							
Site	UTS	ARTO	MYLF	SWWF	LBVI	SBKR	DOLE
Front Country Ranger District							
Badger Canyon					X*		
Banning Canyon				X			
Bear Creek				X/CH			
Cable Creek					X*		
Cajon Creek/Wash (including Keenbrook)		X/CH		X	X	X/CH	X
City Creek			X/CH	X			
Cold Creek				X			
Cucamonga Canyon		X		X			
Day Creek			X/CH	X			
Deer Creek				X			
Devore							X*
East Etiwanda Creek				X			
Etiwanda Fan						CH	
Forest Falls on Mill Creek				X			
Little Horsethief Canyon		X**					
Little Sand Canyon					X		
Lost Lake				X	X		
Lytle Creek						X/CH	X*
Mill Creek Gauging Station				X*			
Mill Creek				CH			
North Fork (of Middle Fork) Whitewater River			CH				
Santa Ana River/Crystal Creek				X/CH			
Morton Canyon				X*			
Oak Glen				X*			
Santa Ana River				CH		X*/CH	
Sheep Creek				X			
Thurman Flats Picnic Area on Mill Creek			X	X/CH			
Waterman Canyon #1				X*/CH			
Mountaintop Ranger District							
Arrastre Creek				X			
Barton Creek (Owl Site) and Jenks Meadow				X/CH			
Cienaga Seca				X			
Clark's Ranch				X/CH			
Cleghorn Arm/Silverwood		X					
College Camp				X/CH			
Cushenbury Springs					X*		
Lower Deep Creek		X		X/CH			
Deep Creek - Devil's Hole		X		CH			
Deep Creek – Hot Springs		X		CH			
Deep Creek – Mojave Forks Dam		X		X/CH			
Deep Creek – Summit Valley/Spillway		X		CH			
Deep Creek – Warm Springs		X		CH			
Deep Creek				CH			
Deer Creek				X			
East Fork Barton Creek			X/CH				
Grass Valley Creek		X*					
Green Canyon				X			
Heart Bar				X			
Holcomb Creek				CH			
Little Bear Springs – Holcomb Creek				X/CH			

Table 2. Summary of Known T/E Occurrences by District							
Site	UTS	ARTO	MYLF	SWWF	LBVI	SBKR	DOLE
Jacoby Canyon				X			
Jenks Lake				X			
Juniper Springs	X						
Kinley Creek		X					
Metcalf Creek #1				X*			
Rattlesnake Creek 1 & 2				X			
Sand Creek				X			
Santa Ana River @ Barton				X/CH			
Seven Oaks				X/CH			
Shay Creek and Baldwin Lake	X**						
Sugarloaf Meadow Pond	X						
Terrace Springs				X			
Van Dusen Canyon				X			
San Jacinto Ranger District							
Andreas Canyon			CH				
Bautista Creek		X/CH		X	X	X/CH	X
Chino Canyon				X*	X*		
Fuller Mill Creek			X/CH				
Indian Creek @ Hall Canyon			X/CH				
North Fork San Jacinto River			X/CH	X*		CH	
San Jacinto River @ Cranston						X/CH	X
South Fork San Jacinto River		CH					
Tahquitz Creek			CH				
Other SBNF Sites							
Air Tanker Base						X*/CH*	

*=On Non-FS lands within 1-mile of NFS land.
X=species occurs
CH=critical habitat

Attachment 1

The following is a list of suction dredging issues that each National Forest in the Pacific Southwest Region discussed. I have summarized each of the Forests response in an attachment.

Angeles National Forest

The Angeles National Forest comments and recommendations contained in the December 27, 2007 letter are still accurate though we have new information to include in our comments.

Potential post-fire hydrologic and geomorphic impacts associated with the Station fire (and to a lesser extent the Morris fire) will most likely materialize over the next couple of years within the four watersheds of the Forest. These potential mud flows and debris flows are expected to result in significant impacts to stream courses and the biota dependent upon them. In cooperation with California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), and the U.S. Geological Survey, the Forest is engaged in species salvage operations where listed species are being brought into captivity at local zoos until such a time as the watersheds recover. We are hoping that this drastic action will assist in promoting the long-term survival of these species. Additionally invasive species detection surveys are being conducted and the Forest plans to act aggressively to keep these invaders in check. Lastly, the Forest has issued a Closure Order for approximately one quarter of the Forest to safeguard human life and also minimize soil disturbance within the watershed to promote watershed recovery.

The topography of the Angeles National Forest causes human activities to be concentrated in the river bottoms. The canyons are steep-sided and narrow from a human use perspective which causes a higher probability of user group conflict and increases potential for resource damage. Every recreational use imaginable was represented in the East Fork of the San Gabriel River prior to the enactment of the State law prohibiting the issuance of suction dredging permits and suspending the operation of suction dredges permitted for use under the program. This concentrated use results in extreme pressure on the natural resources of the area and on public service providers. High numbers of Forest users involved in suction dredge mining, prolonged unauthorized occupancy, and other dispersed recreational opportunities along the East Fork caused parking issues, dumping and trash issues, health and safety issues, overuse of a picnic area located adjacent to the River, and resource damage. With this as background, the Forest suggests that the State has underestimated the incremental demand associated with suction dredge mining on public services and transportation/traffic. Please pass along our recommendation that each stream reach identified in the regulations be evaluated based on local characteristics and projected use.

Lastly, we would like to suggest that the State consider realigning their regulations that pertain to the Angeles National Forest to recognize the inherent conflict with federal law, namely the Watershed Withdrawal Act of 1928. Although the State asserts that nothing in the regulations authorize activities that are otherwise prohibited, we have witnessed the confusion of the public

when they figure out that large portions of the Angeles National Forest have been withdrawn from mineral entry and are not open to suction dredge mining. We are further put at a disadvantage to enforce federal law owing to lack of enforcement authority. The easiest solution to avoid public confusion and anger would be for the State to incorporate the restrictions of the Federal law within the State regulations.

Eldorado National Forest

We reviewed the 2007 Regional Office comments to the State for accuracy and to determine if there are any new issues that should be discussed in the upcoming study and SEIR. We would like to add the following discussion of known effects to aquatic species on the Eldorado National Forest.

On the Rubicon River, aquatic surveys of the past few years for the relicensing of the Middle Fork American Project have concluded that the best population of foothill yellow-legged frogs (*Rana boylii*) in the project lies near a site where suction dredge mining occurs. The population is already reduced due to the effects of irregular stream flows from the hydropower project on the Middle Fork American River. The Rubicon River tends to have ideal flows for foothill yellow-legged frogs but suction dredging may be affecting populations where it is occurring during critical periods. Gravel and rocks can be moved many feet during suction dredging, and this is the same substrate where egg masses are attached or where tadpoles reside. Survival of eggs or tadpoles where disrupted at their habitat site is unlikely. In dry years, most egg masses hatch by the beginning of June, although in wetter years, this time period could be much later, even into July.

We have observed effects of suction dredging upon foothill yellow-legged frogs at Camp Creek where foothill yellow-legged frog egg masses have been observed. Egg masses occurred in the same pool where suction dredging was later observed. It is possible that egg masses were destroyed or tadpoles were buried by this activity. The early summer appears to be the critical time period since later in the summer the older tadpoles may be able to move out of the way from a localized disturbance from suction dredging.

Both the Rubicon River and Camp Creek also support western pond turtles (*Clemmys marmorata*). The juvenile and adult life stages could be disturbed by suction dredging, although it is most likely that western pond turtles would move out of the way from such disturbance. Downstream water turbidity reduces high water quality.

The Eldorado NF Fisheries Biologist also suggested that CDFG use a start date on streams with Foothill Yellow-Legged Frogs based on the water year since the amount of water flow (water year) is a determining factor on when the eggs hatch and the tadpoles are mature enough to get out of the way of suction dredge intake hoses.

Inyo National Forest

The Inyo NF felt the issues are adequately discussed in the subject documents.

Lassen National Forest

The Lassen National Forest streams provide habitat to State and federally listed anadromous fish (steelhead and Spring-Run Chinook salmon and other aquatic life). We are concerned about any potential negative impacts resulting from suction dredge activities on the Forest.

Plumas National Forest

The Plumas National Forest would like to reiterate that most common issues related to suction dredging are camping and residential occupancy, which requires significant commitments of time from the Forest Service mineral administrators. The Forest would also like to see a requirement that large rocks or boulders (e.g. larger than three feet in diameter) that are moved by mechanized equipment during suction dredging be replaced in their original position to minimize impacts to stream stability and aesthetics.

In response to the Region's request for comment on the Initial Study Suction Dredge Permitting Program Subsequent Environmental Impact Report, the Plumas National Forest included two documents that are included in this letter: 1) Plumas National Forest letter dated December 6th, 2006 (Attachment 3) comments to the California Department of Fish and Game (CDFG) Suction Dredging Regulations and impacts from resulting mining activities on the Plumas National Forest; and 2) photographs of effects to habitat by dredging activities, Plumas National Forest memo dated July 17th, 1997 with (Attachment 4). The Plumas NF also include a paper of "Effects of Suction Dredging on Streams: A review and Evaluation Strategy" dated, July 14, 1995 in hardcopy that is available upon request.

In 1997 the Forest responded to a Regional request on Suction Dredging Activities, the following is a summary of these comments, and includes some additional new information. Those comments are in the hard copy addressed to Hilton Cass, Regional Mining Geologist, dated July 17, 1997.

In addition, the Plumas National Forest proposes the following wild trout streams should be closed to suction dredge mining or at a minimum implement a season of use (to protect fish spawning habitat and young of the year within spawning gravels) in the following drainages: Yellow Creek (Plumas Co.), Nelson Creek (Plumas Co.), and Middle Fork of the Feather River (Plumas and Butte Co.): Class B (Open dredging from July1 through August 31) or Class C (open dredging from July 1 through Sept. 15th).

Section 5.5.9 (pg. 19), Timing: The Forest recommends a season of use to protect the California red-legged frog (USFWS Federally listed as Threatened), mountain yellow- legged frog (USFWS Candidate Species) and the foothill yellow-legged frog (USFS Sensitive Species).

The Plumas National Forest recommends the following streams be closed to suction dredge mining. No dredging should be permitted at any time (Class A) within the following drainages because of known populations of the California red-legged frogs; French Creek, Jack's Creek, Pinkard, (Butte County) and Little Oregon Creek (Yuba County), and within the following drainages because of known populations of the mountain yellow-legged frogs; Boulder, Lone Rock, Pierce, West Branch Lights Creek, Rowland, Clark's, Grizzly Creek, Cat, Dark Ravine, Big Ravine, South Fork Rock Creek, Willow Creek, Sulfur, Sawmill Tom, Cooks, Wolf Creek , (Plumas Co.), Pine Grove Creek, Rabbit, Potosi, Slate and tributaries (Plumas/Sierra Counties), Lower Mill Creek, Fall River (Butte Co.) ,Upper Middle Fork Feather River, Gold Run, (Sierra/Plumas Co.).

The Plumas National Forest recommends that at a minimum a season of use as described below be implemented to reduce effects to these TES amphibian species. The Plumas National Forest has a few streams with mountain yellow-legged frogs (USFWS candidate species), as described above; and numerous streams with known populations of foothill yellow-legged frogs (Forest Service sensitive species), as identified below. Suction dredging has the potential to impact these populations. In previous comments submitted by Plumas NF for suction dredging, a limited operating period was suggested to help protect the frogs. Information we have obtained since those comments were submitted indicates the limited operating period suggested may be insufficient to protect vulnerable life stages of frogs. In streams occupied by foothill yellow-legged frogs, we recommend that season of use for suction dredging begin after September 1st and extends no longer than March 31st, unless surveys show there are no foothill-yellow legged frogs in that section of stream. Foothill yellow-legged frogs metamorphose from tadpoles to frog metamorphs in one season. Beginning the season of use late in the summer will ensure that most tadpoles have reached a life stage less vulnerable to suction dredging. In streams occupied by mountain yellow-legged frogs, we recommend that suction dredging not be allowed. Unlike foothill yellow-legged frogs, mountain yellow-legged frogs usually take two seasons to mature, so there are tadpoles present in streams year-round. Because mountain yellow-legged frogs are a candidate species for listing under the Endangered Species Act, caution is warranted. A season of use starting after September 1st and extending no longer than April 30th, would better protect mountain yellow-legged frog tadpoles from impacts from suction dredging than current regulations, but a limited season of use would not fully protect frogs.

At a minimum; the Plumas National Forest recommends that a season of use (September 1st – March 31st) be implemented for streams with known populations of foothill yellow-legged frogs: Butte County - Concow, Dogwood, Magalia, Pine Cluster, Pulga, American House Ravine, Barnards Diggings, Bean, Bear Ranch, Carpenter, Flea Valley, Frazier Cabin, Grizzly, Hunters Ravine, Kanaka Creek, Little North Fork Feather River; Plumas County/Butte County - Indian Creek, Meadow Valley Creek, Spanish Creek, McNair Meadow, Middle Fork of the Feather River, North Fork of the Feather River, Little North Fork of the Feather River, South

Fork Feather River, South Fork Rock Creek; Plumas/Sierra Co's - Slate Creek and tributaries, Rock Creek, Onion Creek, Oroleve Creek, Valley Creek, Woodleaf Creek; Yuba County - Yuba River.

In addition, there is one Congressionally-designated Wilderness within the Plumas National Forest that is withdrawn from mineral. The Buck's Lake Wilderness also is within the Buck's Critical Aquatic Refuge and the mountain yellow-legged frog (*Rana muscosa*) and foothill yellow-legged (*Rana boylii*) frogs are found within these areas. In addition; the Lake's Basin Recreation Area (which is on both the Plumas NF and the Tahoe NF) is within the Lakes Basin Critical Aquatic Refuge and the Mountain yellow-legged frog (*Rana muscosa*) is found within this area. All streams within the Buck's Lake Wilderness and the Lakes Basin Recreation Area should be classified as closed to dredging at all times.

Other general comments:

Please clarify that the definition of fish includes all biological management indicators (BMI) such as benthic macroinvertebrates and amphibians (all life stages).

Section 5.5.10 – Encampments (pg. 20): Sanitation and lack of restroom facilities, and potential for disposal of human waste adjacent to stream, and contamination of streams.

Page 50, discussion of impacts to wildlife, include a discussion on effects to amphibians by removal of LWD through dredging practices.

Safety issues for anglers and other recreational users are not addressed. There are large deep holes caused by dredging (example Chip's Creek on the NFFR – a hole that is approximately 4 feet in diameter and over 5 feet deep), also cables and other equipment in the rivers that can be hazardous to anglers and recreationists.

San Bernardino National Forest

The following recommendations are clarifications to that letter to protect threatened, endangered, and sensitive species on the San Bernardino National Forest in regard to suction dredging activities:

Forest-wide:

1. Recognize that the San Bernardino National Forest has newly designated wilderness on the San Jacinto Ranger District in addition to areas that were recommended to be wilderness as identified in the 2005 Land Management Plan. Suction dredging should not be allowed in these special designation areas; such as research natural areas, wilderness areas, etc.

2. In order to provide protection to known federally-endangered riparian bird breeding activities, please identify the need for miners to contact the Forest Service prior to any

suction dredging activities proposed on the San Bernardino National Forest. This will allow communications with the miners to coordinate performance of dredging operations outside of the breeding season for these species. If possible, please accomplish this through the CEQA process and subsequent implementation of the proposed action.

Mountaintop Ranger District:

1. Please exclude suction dredging from any perennial or intermittent water source that occurs on the Mountaintop Ranger District, to minimize impacts to know occurrences, critical habitat, and suitable habitat for federally threatened, endangered, and sensitive species.

San Jacinto Ranger District:

1. Please exclude suction dredging from streams that were designated as Critical Biological Zones in the 2005 Land Management Plan. This includes Bautista Creek, Fuller Mill Creek, and North Fork San Jacinto River.

2. The 2008 Riparian Biological Assessment (Attachment 4) for ongoing effects to seven listed riparian/aquatic species contains all known occurrences and critical habitat of threatened and endangered species on the Forest by Ranger District (see Attachment 4 - Table 2). In order to protect these species, we recommend that streams that are identified on this list as occupied or critical habitat for mountain yellow-legged frog, arroyo toad, San Bernardino kangaroo rat, and slender-horned spineflower be excluded from suction dredging.

3. The Forest requests that suction dredging be excluded from any perennial or intermittent water sources that are identified in the above bullet statement.

Front Country Ranger District:

1. Please include the requests made in a letter addressed to the California Department of Fish and Game dated December 27, 2007.

2. To protect Forest Service Sensitive listed fish species, Santa Ana speckled dace, please exclude suction dredging from Plunge Creek.

3. The 2008 Riparian Biological Assessment for ongoing effects to seven listed riparian/aquatic species contains all known occurrences and critical habitat of threatened and endangered species on the Forest by Ranger District (see Attachment 4 - Table 2). In order to protect these species, we recommend that streams that are identified on this list as occupied or critical habitat for mountain yellow-legged frog, arroyo toad, San Bernardino kangaroo rat, and slender-horned spineflower be excluded from suction dredging.

4. To protect the habitat in the Santa Ana River, please consider excluding it from suction dredging. The Santa Ana River has been identified as a suitable location to re-establish populations of native fish including the endangered Santa Ana Sucker.

Shasta-Trinity National Forest

The last couple years has seen a drastic increase in the number of suction dredges in operation in Trinity County. One small creek in particular, Dutch Creek has a claim that is owned by an operator that leases rights out to dredgers. This creates a situation where multiple dredging operations can effectively take place on one claim. Dutch Creek is small (2 cubic feet per second (CFS) summer base flow and average wetted channel width of 8 feet) and having multiple mining operations on one claim has really altered the particle size distribution. Gravels are becoming scarce as mining has created geomorphic instability and allowed the gravels to be transported downstream to the mainstem Trinity River. This has resulted in an abundance of boulders and a lack of gravels. The creek has also become entrenched within and below the mining activity. With the creek effectively disconnected from its floodplain the channel acts mainly as a transport pathway for bedload and depositional (spawning) areas are hard to come by. This creek serves as spawning and rearing areas for winter steelhead, coho, and fall-run chinook. Canyon Creek has also been heavily impacted by suction dredge mining. This creek is listed as a Tier 1 watershed and is also listed as a key watershed and supports winter and summer steelhead, coho, and spring and fall chinook. The North Fork Trinity River and its largest tributary the East Fork North Fork Trinity River are also listed as a key watershed. Suction dredge mining operations here are adversely impacting anadromous fish. The North Fork Trinity River is one of the top summer-run steelhead streams in California and measures should be taken to insure that they are protected. In addition, this stream supports spring and fall chinook, winter steelhead, and coho. The New River is the single largest producer of summer run steelhead in California and is also listed as a key watershed. Suction dredge mining has occurred extensively here and is impacting summer and winter steelhead and spring and fall chinook. There are countless other creeks that are impacted from suction dredge mining in Trinity County as well. The Trinity River watershed is an incredible fisheries resource and suction dredge mining appears to be hampering efforts to recover SONCC Coho. Suction dredge mining in any waters that have anadromous fish within the Trinity River watershed should be evaluated for impacts on those fisheries. Currently, our fisheries program is in the planning phases for gravel injection and large woody debris placement for several creeks to mitigate for lack of suitable size spawning gravels.

In addition to the previously listed Trinity River tributaries, Soldier Creek, Hayfork Creek, Deadwood Creek, Rush Creek, Brown's Creek, Reading's Creek, Big French Creek, and Manzanita Creek also host significant anadromous fisheries represent the bulk of our creeks that support anadromous fish and have had recent suction dredge operations.

Other impacts that have not been mentioned are that suspended sediment: (1) increases daytime water temperatures, this is important to note as most of our creeks temperatures during midsummer approach the threshold of concern (TOC) value of 67 F for salmon; (2) Suspended sediment increases the mobility of waterborne pathogens; (3) Turbidity decreases light levels reaching the stream bottom thereby inhibiting primary productivity of the aquatic system. Many types of aquatic macroinvertebrates utilize aquatic vegetation as a primary food source and in turn many anadromous juveniles utilize these bugs as food.

Stanislaus National Forest

We would like to commend the agency for its thorough consideration of the resources potentially affected by suction dredging and the extensive use of literature to support the rationale for establishing significance.

We would like the SEIR to additionally consider the impact of suction dredging on reproductive success of the foothill yellow-legged frog, particularly as pertains to early season breeding activity. In late spring, male foothill yellow-legged frogs congregate near suitable breeding habitats where individuals establish and defend territories (Wheeler and Welsh 2008) and employ calling to entice a mate. MacTague and Northern (1993) reported a majority of calling for mates involved underwater vocalizations; however, Davidson (199) reported calling also occurred above water. We believe the early season operation of dredges has the potential to disrupt breeding activities in two primary ways. The presence of dredgers in or near suitable breeding habitat during the breeding season may result in regular disturbance of males which may cause them to abandon preferred calling locations which may have social implications in frog mating and may result in impaired reproductive success as described in Wheeler and Welsh (2008). The operation of dredges may interfere with the vocalizations of males and impact breeding success since the vocalizations are used to attract suitable mates. On the Stanislaus National Forest, dredging occurs in several locations where the population size is believed to be small and the dredging impacts that may be affecting these occurrences may have broader implications relative to long term viability of the populations. We recommend that the season of operation for streams with known populations of the frog start on or later than June 15 to mitigate these potentially significant impacts. Since surveys have not covered all streams potentially affected by suction dredging, we also recommend that the season of use be adjusted accordingly should additional populations of the frog be discovered in the future.

The Stanislaus NF would like CDFG to provide a process for the Forest Service to provide feedback to CDFG regarding start and end dates or closures for stream reaches. Monitoring of sensitive species may indicate trends in populations and adjustments in the suction dredging season may be warranted.

Tahoe National Forest

The issues described in DFG's SEIR and the Initial Study adequately addresses the issues surrounding the controversy of suction dredging, except for the following items:

1. Suction dredging utilizes mechanized equipment; so an approved Plan of Operations is necessary for suction dredging activity on Forest Service lands. Many adverse impacts of suction dredging can be mitigated by compliance with Conditions of Approval.

2. Vehicles, trailers and suction dredges can introduce and spread noxious weeds, including aquatic weeds, to the riparian ecosystem.

3. Encampment, which is the act of setting up a physical living area, involves activities that can be deleterious to riparian habitat, aquatic resources, and water quality. The adverse impacts of encampment include:
    a. Unauthorized roads and/or trails to the camping area;
    b. Compaction of the soil on the road, camp and stream bank;
    c. Introduction and spread of noxious weeds;
    d. Removal of riparian vegetation;
    e. Lack of adequate sanitation;
    f. Disposal of human waste and garbage on land and into water;
    g. Contamination of domestic water supplies;
    h. Inadequate fuel storage;
    i. Soil erosion;
    j. Noise from dredges could adversely affect forest sensitive wildlife species;
    k. Abandoned equipment and vehicles;
    l. Unauthorized permanent structures; and
    m. Unauthorized occupancy.

The potential impacts of suction dredging are *more* than was described in the CDFG Initial Study. For example, Section XIII, of the Initial Study, Public Services, does not adequately represent the adverse impact of dredging on the Forest Service Law Enforcement work force and the Department of Fish and Game Wardens.

Section XIV. Recreation states that there is a Less-than-Significant Impact to recreational facilities. Suction dredgers on the Tahoe NF do contribute to an increase in campsites being utilized, often for the entire summer.

Section XV. Transportation/Traffic states that there is a Less-than-Significant Impact to inadequate parking capacity. The Tahoe NF has reached full parking capacity on the Highway 49 Scenic Corridor due to suction dredgers requesting to camp near their claim.

The Tahoe NF does not believe that the current CDFG suction dredging regulations are adequate. The Tahoe NF does not have time during this initial comment period to adequately describe

which suction dredge regulations are inadequate; however, Tahoe NF Fisheries Biologist prepared the following comment:

Suction dredging overlaps the habitats of both foothill yellow-legged frog (*Rana boylii*) and rainbow trout (*Oncorhynchus mykiss*) in the following streams, Duncan Creek, North Yuba, Downie River, North Fork of the Middle Fork and Eldorado Canyon Creek. The timing of spawning for rainbow trout in the above watersheds occurs from February through May. For foothill yellow-legged frogs on the Tahoe National Forest, breeding and egg laying usually await the end of spring flooding and may commence any time from mid-March to May, depending on local water conditions. The breeding season at any locality is usually about two weeks for most populations. Based on known occupancy and habitat, the Tahoe National Forest is in agreement with the Plumas National Forest, which states in the Forest Service December 17, 2007 letter that "Due to the deleterious effects seen to fish and amphibian, specifically in the form of inhibiting the hatching of eggs, development of fry, fingerlings and tadpoles, and the survival of adults, as well as the sediments levels also adversely affect the food source (benthic invertebrates) of trout in our fish bearing streams, we request that consideration be granted for moving the beginning of dredging season on perennial fish bearing waters from the 4th Saturday in May to the 4th Saturday in June.

USDA United States Department of Agriculture | Forest Service | Pacific Southwest Region

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File Code: 2600/2810
Date: DEC 2 7 2007

California Department of Fish and Game
Attn: Suction Dredge Mining
1416 Ninth Street
12th Floor
Sacramento, CA 95814

Dear Sirs:

This letter is in response to your public notice of October 19, 2007, seeking information on suction dredge mining in California. The National Forests of the Pacific Southwest Region have collected much information on suction dredging operations over the past several years. Attached for your convenience and consideration is a compact disc that contains maps, photographs, memo's and monitoring reports prepared by Forest Service personnel that document their observations on suction dredging within the National Forests. I am also attaching a table of contents for the compact disc.

Environmental Impacts of Suction Dredging

The adverse impacts of suction dredging generally fall under the following descriptions:

- Suction dredging can leave piles of loose gravels which attract spawning fish but are inherently unstable resulting in loss of eggs and redds when these loose gravels are displaced in higher stream flows.
- Every effort should be made to ensure suction dredge mining activities do not jeopardize the continued existence of listed species or adversely modify critical habitat.
- Suction dredging can raise the turbidity and increase suspended sediment, particularly when more than one suction dredging operation is occurring in a short length of spawning habitat.
- Chronic disturbance of fishes creates a significant impact by moving organisms to less favorable habitats. This is especially critical in summer when temperatures reach 65 – 70° F. Even minor disturbances form dredging reduces the carrying capacity of aquatic organisms during times of increased natural stress, e.g. water temperature.
- Anadromous lamprey (Pacific and river) are particularly susceptible to dredging since ammocoetes spend up to five years in streams before emigration. The ammocoetes preferred habitat is fines and detritus, making them extremely vulnerable to dredging.

- Freshwater mussels are extremely susceptible to dredging and are imperiled species in California.
- Studies have determined that dredging causes the remobilization of mercury causing mercury to be released to the environment.
- Suction dredging can cause changes in stream channel geomorphology leading to stream channel instability.
- Disturbance to riparian vegetation, downed woody debris and large rock/boulders outside the wetted stream surface is created by high-banking, camping, trail and access route creation.

Suction Dredging Under Current California Department of Fish and Game Regulations

Most National Forests have reported adverse environmental impacts to fish, amphibians, and invertebrates from suction dredging on rivers and streams that are currently open to suction dredging under a California Department of Fish and Game (DFG) permit. Many of these impacts can be addressed by modifying the DFG's classification of the stream and adding language to the regulations to provide better surface resources protection. Please consider the following general recommendations:

- The number of dredges (and sizes) within various reaches (concentration) of waterways have potential to adversely effect through cumulative effects.
- The number of hours each dredge is allowed to operate effects how much material (cu.yds.) potentially is moved. Perhaps limited hours of operation would help in reduction of volume moved as well as with other user conflicts (for example, fisherman, swimmers etc).
- Regulation should define how much of the stream bed can be impacted by dredge holes or piles to help alleviate impacts (for example, dredge piles should not extend more than 1/4 of the wetted channel width).
- Permit limitations on high-banking and trail and access-building in riparian areas outside the wetted stream perimeter would greatly improve water quality/aquatic habitat.
- The use of winches is common and stream alteration permits are rarely applied for or enforced. Most dredgers think that if boulders are not *removed* from the wetted stream surface, a permit is not required. Strong language in the dredge permit that defines when an alteration permit is required may help.
- Human sanitation issues are not addressed in current regulations.
- Fuel storage language as well as fueling requirements can help prevent accidental spills.

Suction Dredging in Water Quality Limited Segments, Clean Water Act Section 303(d) listed waters:

On NFS lands in California many streams are currently listed as impaired waters under Section 303(d) of the Clean Water Act. In those cases where the source of the impairment is sediment, or habitat degradation, the Forest Service is required to improve those waters to meet State water quality standards. In almost all cases, suction dredging is unlikely to be compatible with our Clean Water Act responsibilities. However, individual operators may still obtain approval for their operations, but only when their plan of operations includes steps to result in a net improvement to instream or riparian resources. The local Regional Water Quality Control Board performs the evaluation of the plan of operations and indicates whether it meets State water quality objectives. The Forest Service can not approve a plan of operations without a 401 certification from the State.

In addition, please consider the following specific comments from the National Forests:

Klamath National Forest and Six Rivers National Forest

In November, 2004, the Forest Supervisors for the Klamath National Forest and the Six Rivers National Forest shared with your office via letter their concerns with DFG's classification of the streams of the Klamath River system. Specifically, the Forest Supervisors pointed to overlaps between the periods allowed for suction dredging and the spawning periods and egg-alevin developmental phases for coho, Chinook salmon, steelhead, green sturgeon, and lamprey. The letter makes recommendations on modifying the stream classifications to reduce the potential for adverse impacts. Those concerns and recommendations are still valid. A copy of that letter and supplemental information is included on the attached compact disc.

Plumas National Forest

On the Mt. Hough and Feather River Ranger Districts, the Forest has documented adverse impacts to the environment that include, but are not limited to: high banking, excessive sediment, modification of large in-stream habitat structures (boulders). The cumulative effects are estimated to be at significant levels and causing adverse impacts to water quality, in-stream fish habitat, streambank stability, and aquatic species survival. Please see the attached photos within the enclosed compact disc of suction dredging sites on **Hopkins Creek** and the **Little North Fork Middle Fork Feather River** for illustration.

Due to the deleterious effects seen to fish and amphibian, specifically in the form of inhibiting the hatching of eggs, development of fry, fingerlings and tadpoles, and the survival of adults, as well as the sediment levels also adversely affect the food source (benthic invertebrates) of trout in our fish bearing streams, we request that consideration be granted for moving the beginning of dredging season on perennial fish bearing waters from the 4th Saturday in May to the 4th Saturday in June.

Mountain Yellow-legged frogs (*Rana muscosa*) occur within many of the streams and rivers within the Plumas National Forest. Due to the same concerns as stated above, for suction dredging operations within occupied mountain yellow-legged frog streams or within designated critical aquatic refuges, we recommend that the DFG's suction dredging regulations require a limited operating period (LOP) from May 1st (or beginning of the suction dredging season) to August 30th. This LOP would significantly reduce adverse impacts to mountain yellow-legged frog while still allowing suction dredging operations to continue during part of the year.

The Plumas National Forest is updating their GIS layer for mountain yellow-legged frog and will be available for your use by February, 2008.

Stanislaus National Forest

The Stanislaus National Forest has one of the largest known remaining populations of foothill yellow-legged frog (*Rana boylii*) within national forest lands. Suction dredging overlaps the habitats of both foothill yellow-legged frog and western pond turtle (*Clemmys marmorata pallida*), in the following streams: **Hells Hollow Creek, Big Creek, Bean Creek, Bull Creek, Rose Creek, South Fork Stanislaus River, and the North Fork Tuolumne River**. Local observations on **Rose Creek** confirm that habitat impacts are occurring which includes changes in water flow regimes and sediment regimes. Dewatering has been noted as the streamflow is directed down the sluice box that are occasionally or historically occupied by tadpoles. Dewatering may expose the tadpoles to an unnatural condition and increase the risk for predation. The stream channel has been modified to accommodate the mining equipment and to expose bedrock contact areas, which is the same areas where oviposition occurs. The change in water depth and velocity is also impacting oviposition. Frequent "turnover" of the streambed has been noted, thus the substrates may not have the ability to be colonized and develop the assemblage of algae in the quantity required for foraging by tadpoles.

Two other streams, **Gentry Gulch and Halls Gulch**, are within the range of the limestone and Hells Hollow salamander; however, surveys specific to detecting these species have not been conducted to date. Other primary habitat for the Hell Hollow salamander and limestone salamander is along the **Merced River**, which is a known area for suction dredging. It is unclear what impacts suction dredge mining has on limestone salamander (*Hydromantes brunus*) and Hell Hollow slender salamander (*Batrachoseps diabolicus*); however, since these species are limited in distribution, please consider modifying or reclassifying the streams where they exist. The Stanislaus National Forest has the details on the forest.

Hells Hollow, Big, Bean, and **Bull Creeks** provide suitable habitat for California red-legged frog (*Rana aurora draytonii*), as do portions of the other streams listed above.

Angeles National Forest

We recommend the continuation of "Class A" designation for portions of the San Gabriel River System. We also request that you consider closing the entirety of the **East Fork San Gabriel River** to suction dredge mining based on cumulative impacts within the watershed having deleterious effects to aquatic biota. Aquatic biota within the East Fork San Gabriel include Santa

Ana sucker (*Catostomus santaanae*), Santa Ana speckled dace (*Rhinichthys osculus ssp*), arroyo chub (*Gila orcutti*), mountian yellow-legged frog (*Rana muscosa*), and western pond turtle (*Clemmys marmorata pallida*). Hernandez (1997) conducted surveys in the East Fork San Gabriel and documented the absence of young of the year fish and recommended a seasonal closure to suction dredging. More recent field surveys on the East Fork San Gabriel found evidence of an extended spawning period indicating that a protracted spawning period is present in the stream (A. Backlin, U.S. Geological Survey, Personal Communcation). Santa Ana sucker fry in the West San Gabriel were found exclusively in edgewater habitat over silt at depths of less than 17cm where there was no measurable flow (Haglund and Baskin 2002). Creek bed alterations due to current suction dredging activities preclude edgewater habitat.

Suction dredge mining also currently alters the stream channel of the East Fork San Gabriel by building up rock dams to create large pools for floating equipment. A survey conducted in 1997 over a 3.8 mile stretch of East Fork San Gabriel from **Cattle Canyon** to **Allison Gulch** resulted in a count of 256 suction dredge holes in the river, and 65 mining holes associated with high-banking along the banks (Hernandez 1997).

Two major fires have burned in the East Fork San Gabriel watershed and resulted in impacts to the hydrology of East Fork San Gabriel. These fires include the Williams Fire 2002 and the Narrows Fire 1997. Invasive plants including tamarisk (*Tamarix spp.*) and eupatory (*Ageratina Adenophora)* have become established in the East Fork San Gabriel and are now well distributed along the stream channel. In May 2000, the Total Maximum Daily Load (TMDL) for garbage in East Fork San Gabriel was established. The TMDL was based on estimates of 8000 people visits/day during the summer generating approximately two hundred 32 gallon bags of uncontained trash in and adjacent to the creek each weekend day.

In **Big Tujunga**, there is a similar concern about cumulative impacts to aquatic biota. The biota includes Santa Ana sucker, Santa Ana speckled dace, arroyo chub, and arroyo toad (*Bufo californicus*). Recreation use within Big Tujunga is high. Water withdrawal and recent drought have left the river in a multiple pool state every summer, hence great concern for take on the amphibians or fish remaining in each pool. Invasive bullfrogs continue to impact the fisheries resource. White sweet clover (*Melilotus alba*) and Arundo donax is well established and pervasive in Big Tujunga Watershed. Highbanking has been documented within Big Tujunga as well.

Based on the cumulative impacts on the East Fork San Gabriel and Big Tujunga, we request you consider a change of status to Class A for suction dredge mining.

<u>San Bernardino National Forest</u>

The San Bernardino National Forest has identified a need to close **Lytle Creek (below Miller Narrows)** to suction dredging due to the presence of the Santa Ana speckled dace which is threatened with extinction in the watershed due to many contributing factors. Due to the low water levels in this area, fish are concentrated in a few pools in the summer months and substantial take could occur when suction dredging takes place. We have learned about the

significance of this population in the last few years as a result of a range-wide assessment and FERC relicensing.

The San Bernardino National Forest has identified a need to close **Cajon Creek (below Highway 138)** to suction dredging due to the presence of and threats to arroyo toads and Santa Ana speckled dace. The speckled dace population and threats have really come to light in a recent range-wide assessment and numerous damaging projects such as highway and railroad expansion. Suction dredging and associated disturbance of stream banks will result in take of dace and potential take of arroyo toads. The arroyo toad population in Cajon Creek is isolated and extremely vulnerable due to the many human intrusions in the watershed such as freeways, railroads, pipelines and other human disturbances.

Cleveland National Forest

We recommend continuation of the Class A designation for San Mateo Creek and its tributaries from its mouth upstream, San Juan Creek and its tributaries from its mouth upstream, and Santiago Creek and its tributaries within the Cleveland National Forest. Southern steelhead (*Oncorhynchus mykiss*) and its critical habitat are federally listed and are found within San Mateo Creek.

The following stream segments have known populations of Arroyo toad and are requested to be reclassified as Class A Streams. These areas are documented in the attached maps on the compact disc:

a. **Arroyo Seco Creek** - from Dripping Spring Campground, upstream to the boundary of Agua Tibia Wilderness. 1 mile. (San Diego/Riverside Counties, map 2).

b. **San Diego River**- between Ritchie Creek and Boulder Creek, above El Capitan Reservoir - known toad populations. Approximately 2 miles. (San Diego County, map 3.)

c. **Pine Creek and its tributaries including Noble Creek**- to a point one mile upstream of confluence with Pine Creek; Pine Creek from 2 miles upstream of confluence with Noble Creek to the Pine Creek Wilderness boundary, near Pine Valley. Approximately 8 miles. (San Diego County, map 4)

d. **Kitchen Creek** - From Cibbets Flat campground south for 2 miles. (San Diego County, map 4)

e. **Cottonwood Creek**- from Boulder Oaks (confluence of Cottonwood/Kitchen Creeks), 2 miles south to Buckman Springs. (San Diego County, map 4)

f. **Morena Creek**- and its tributaries between Kernan Road and Morena conservation camp. Approximately 2 miles. (San Diego County, map 4)

In addition, there are several Congressionally-designated Wildernesses within the Cleveland National Forest that are withdrawn from mineral entry and closed to mining, except for those mining claim with valid existing rights before the Wilderness was established. Arroyo toads and Western pond turtle (*Clemmys marmorata pallida*) are found within these areas, which are identified on the maps included on the compact disc. These include the **Agua Tibia Wilderness** (established 1975), **San Mateo Canyon Wilderness** (established 1984), **Pine Creek Wilderness** (established 1984), and **Hauser Wilderness** (established 1984). Lands that have been recommended for Wilderness designation include the **Cutca Valley** area, **Pine Creek**, and **Hauser Canyon**. These are also identified on the maps on the compact disc. All streams within Wilderness and recommended Wilderness should be classified as closed to dredging at all times.

Changed Circumstances and New Information Since 1994

Your public notice asks for new information, since 1994 when the DFG's regulations were last established, on the environmental impacts of suction dredging. There have been several major changes since the 1994 regulations were set. An important change has been the 1997 listing under the Endangered Species Act of the coho salmon requiring federal protection on the Klamath, Salmon and Trinity Rivers and having the Salmon River classified as "Designated Critical Habitat". The primary objective of the *Recovery Strategy for California Coho Salmon* (CDFG 2004) is to return coho salmon to a level of sustained viability, while protecting the genetic integrity of both ESU's, so that they can be delisted and regulations or other protections under the CESA will not be necessary. All watersheds that fall within the range of California coho salmon should be a priority for assessing potential impacts associated with suction dredge mining activity. Protection of the best remaining habitat, especially in areas where coho are still present, and improvements to degraded habitat are both necessary to the recovery of this species.

The other major change has been the die off of salmon in the lower Klamath River due to fatal summertime water temperatures. Limiting disturbance in cold water refugia is critical and should include protection at the mouths of tributaries and prohibition of suction dredging in designated major tributaries. The number and seasons of suction dredging operations must be examined in a particular reach of river.

Also limiting or in some case prohibiting the seasons for suction dredging activities on reaches of the Klamath and Trinity The actions will go a long way in protecting not only the federally listed coho salmon but also the Forest Service sensitive steelhead, lamprey, and green sturgeon.

In conclusion, thank you for this opportunity to provide information for your consideration. I also want to note the positive continued coordination between our agencies to provide for resource protection. Many policies and regulations have changed since 1994 that could affect suction dredging, such as the Best Management Practices (BMPs), forest plans, 303(d) listed waters, and new or revised TMDLs for several rivers and streams. Most of this information can be found within each individual National Forest website (www.fs.fed.us). For details or further information, please contact Hilton Cass, Regional Locatable Minerals Program Manager, at (707) 562-8967 or e-mail: hcass@fs.fed.us or Travis Coley, Regional Fish Program Manager, at (707) 562-8940 or e-mail: tcoley@fs.fed.us.

Literature Cited

California Department of Fish and Game. 2004. Recovery strategy for California coho salmon. Report to the California Department of Fish and Game Commission. California Dept. of Fish and Game. Sacramento, CA. 594pp.

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Sincerely,

RANDY MOORE
Regional Forester

Enclosures

cc: Forest Supervisors

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File Code: 2600/2810 **Date:** December 6, 2007
Route To:

Subject: California Fish and Game Suction Dredging Regulations

To: Regional Forester

The following are comments relating to California Department of Fish and Game (CDFG) Suction Dredging Regulations and impacts from resulting mining activities on the Plumas National Forest. Plumas National Forest comments are provided under the categories outlined by your office in the internal memo issued on November 16, 2007.

1) Whether suction dredge mining activities results in adverse impacts to the environment:

- The Plumas NF has documented incidences (see Attachment 1, Figures 2 and 3) where suction dredging has modified in-stream fisheries and amphibian habitat. Based on Regional Office letter dated May 26, 2004, suction dredging is defined as "the excavation of unconsolidated sands and gravels from the streambed with a motorized, hand held device." The movement of large boulders by a winch and chain (Figure 2) and the excavation of streambanks (Figure 3) do not appear to meet the intent of the suction dredging definition.

  The Plumas NF requests that the CDFG clarify in their suction dredging regulations the definition of what constitutes unconsolidated sands and gravels, and whether the movement of large boulders and the excavation of a streambank are compatible with existing or revised suction dredging regulations.

- Of the 1000 estimated mining claims we have on the Mt. Hough and Feather River Ranger Districts, only 3% of the operators submit a notice of intent to operate on Federal lands. Of those 3% that are monitored, the Forest has documented adverse impacts to the environment that include, but are not limited to: high banking, excessive sediment, modification of large in-stream habitat structures (boulders), occupation of federal lands longer than 30 days, and sanitation issues (human waste). The cumulative effects of the other 97% of dredgers operating on the Plumas NF are estimated to be at significant levels and causing adverse impacts to water quality, in-stream fish habitat, streambank stability, and aquatic species survival.

  As a result of the high number of operators that do not submit a notice of intent, the Plumas NF recommends the following courses of action:

  1. Increased cooperative enforcement efforts between CDFG field personnel and Forest Service minerals personnel to monitor a

greater number of the 97% of operators that do not submit Notices of Intent.

2. The CDFG modify their regulations to impose suspension or sanctions on mining operations and claims for up to 3 years for operators that do not file Notices of Intent with the Forest Service.

2) Whether suction dredge mining under CDFG's current regulations governing such activities results in deleterious effects to fish;

- Existing suction dredging operations do appear to have deleterious effects to fish. The suction dredging operation documented in Figure 2 is resulting in the downstream effects to fish and amphibians noted in Figure 1. This level of sediment results in deleterious effects to aquatic species in the form of inhibiting the hatching of eggs, development of fry, fingerlings and tadpoles, as well as the survival of adults. These sediment levels also adversely affect the food source (benthic invertebrates) of trout in our fish bearing streams.

  As a result of these deleterious effects to fish noted above, the Plumas NF recommends that the CDFG consider moving the beginning of dredging season on perennial fish bearing waters from the 4th Saturday in May to the 4th Saturday in June.

3) Whether there are changed circumstances or new information available since 1994 regarding suction dredge mining and the environment generally, and whether changed circumstances or new information available since 1994 indicates suction dredge mining under the CDFG's existing regulations is resulting in new significant or substantially more severe environmental impacts than previously considered by the CDFG.

- Since 1994, the Mountain Yellow-legged Frog (MYLF) has remained on our Regional Forester's Sensitive Species list, but it status has been heightened by the U.S. Fish & Wildlife Service (FWS). The FWS has concluded in its status review of listing proposals that the MYLF is warranted for listing, but precluded by higher priority listings. The FWS fully expects the MYLF to be listed under the Endangered Species Act in the near future (within the next 18 months). The Plumas NF is concerned about suction dredging within occupied MYLF streams, as the effects noted in items 1 and 2 above have been documented in occupied streams.

  1. As impacts continue within occupied MYLF streams, the Plumas NF recommends that the CDFG's suction dredging regulations require that operators to submit a Plan of Operations for any operation occurring within a Critical Aquatic Refuge and/or MYLF occupied stream.

  2. For suction dredging operations within occupied MYLF streams, the Plumas NF recommends that the CDFG's suction dredging regulations require a limited operating period (LOP) from May 1st (or beginning of the suction dredging season) to August 30th. This

LOP would significantly reduce adverse impacts to MYLF while still allowing suction dredging operations to continue during part of the year.

If you have any questions regarding the input provided above, please contact George Garcia, WFRP Program Manager at (530) 283-7828.

/s/Maria T. Garcia (for)
ALICE B. CARLTON
Forest Supervisor

cc: Patricia A Krueger
Hilton Cass

Attachment 1 - Impacts from Suction Dredging Operations on the Plumas NF

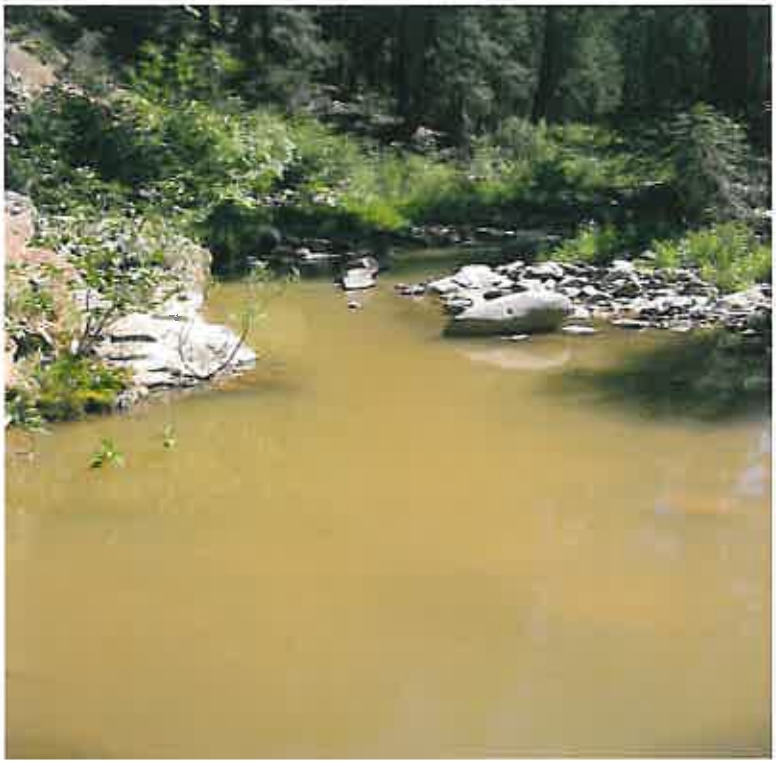

Figure 1. Sediment impacts from suction dredging on Hopkins Creek, Plumas NF. Sediment impacts fish reproduction (eggs) development (fry, fingerlings) and survival (adults) on this Trout stream. A food source such as the macroinvertebrate community is also impacted by this level of sediment.

Figure 2. Suction dredging operation on Hopkins Creek, Plumas NF. Note large boulder being moved by chain and winch resulting in modification of fish and amphibian habitat.

Figure 3. Suction Dredging Operation on the Little North Fork Middle Fork Feather River. Operator in this photo cut riparian vegetation (alder) from stream bank and dug out a hole in the stream bank behind large boulder for suction dredging access. Stream bank material excavated was moved into channel, modifying in-stream habitat and flows on this trout bearing stream.