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December 4, 2008

Bob Williams
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Re: Shasta River Watershed-Wide Permitting Program, SCH#2006102093

California Department of Fish and Game:

Following are the comments submitted by and on behalf of Klamath Riverkeeper (KRK), the Pacific Coast Federation of Fishermen's Associations (PCFFA) and the Institute for Fisheries Resources (IFR) regarding the Draft Environmental Impact Report (DEIR) for the proposal to issue watershed-wide permits for stream bed alteration actions and incidental coho take in the Shasta River watershed, where coho salmon are both state listed under the California Endangered Species Act (CESA) and federally listed under the federal Endangered Species Act (ESA).

Klamath Riverkeeper's projects and campaigns help restore water quality on the Klamath River, bringing vitality and abundance back to the river and its people. The Pacific Coast Federation of Fishermen's Associations (PCFFA) is the west coast's largest organization of commercial fishing families, many of whose members depend on a healthy Klamath salmon population for their livelihoods, and has worked for more than 30 years to restore healthy salmon runs to the Klamath Basin. The Institute for Fisheries Resources (IFR), which is closely affiliated with PCFFA, funds and manages multiple salmon restoration efforts for PCFFA and on behalf of salmon fishing-dependent coastal communities throughout the Klamath Basin.

Our organizations are all deeply committed to making the Klamath fishable and swimmable again—and to working with all the people and their communities who need clean water and healthy fisheries in the Klamath watershed.



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Summary and General Comments

Overall, we find that while the DEIR contains some well-intended proposals to help recover coho and prevent the need for regulatory enforcement, it falls far short of the level of adequate analysis required under the California Environmental Quality Act (CEQA). Additionally, the DEIR shows some troubling inconsistencies that work at cross-purposes with prescriptions in the Coho Recovery Plan referenced in the document as well as the North Coast Regional Water Quality Control Board's TMDL basin plans.

Progressive dewatering and over-appropriation of the Scott River's limited groundwater inflows has been an ongoing problem throughout the basin and is probably the *single largest adverse impact* on coho populations in the river. Refer to ATTACHMENT 1, which are PCFFA/IFR *et al.* comments on the current Scott River TMDL dated June 12, 2006, for information on this ongoing over-appropriation problem. We include and incorporate this ATTACHMENT 1 and the references, data and charts therein as part of these comments.

The number of groundwater permits or irrigation well has skyrocketed in recent years throughout the Scott River, yet little study has been done to assess the adverse impacts on local stream flows of drawing down local aquifers on such a scale. Dry channels correlate closely with recent increases in groundwater pumping (see ATTACHMENT 1, especially Attachment A to that document).

Unfortunately the measures contemplated under the DEIR do not address this core dewatering issue – excessive basin-wide over-appropriation of water that dries up *increasingly large portions* of the Scott River every year – and thus will not lead to the restoration of endangered and threatened fish species. Indeed, allowing these practices to continue through permits issued pursuant to this program would not only violate CESA and various state and federal clean water laws including California's TMDL standards in that river system, but would ultimately lead to coho extinction in that basin.

Our analysis also finds that the facilitation of take permitting for sub-permittees in this program is impossible to justify in light of persuasive



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scientific data showing that some of these same projects (particularly water diversions) are resulting in a net loss of year classes or broods returning to the Scott River (see ATTACHMENT 1, particularly at pp.25-28). In addition, with respect to the Incidental Take Permits contemplated in this program, the DEIR: (1) does not fully describe these projects, and does not disclose their impacts on ESA and CESA listed coho and other salmonids present in the river system; (2) does not adequately identify biological thresholds of major significance that, if exceeded, with result in not only unnecessary “take” of these species but jeopardy resulting in eventual extinction.

CDFG cannot and should not delegate enforcement of CESA and DFG codes and regulations to the local Resource Conservation Districts (RCDs). These organizations (which are made up of and controlled entirely by the landowners who would be subject to these same regulations) have an *inherent conflict of interest* that cannot be overcome. Asking them to regulate themselves and their neighbors also puts them in an untenable political position, the end result of which will almost certainly be little or no regulation at all of actions (such as increasing over-diversion of the Scott sub-basin’s limited water supply) that *clearly* jeopardize the future existence of coho and other salmonids in the basin.

Likewise, privatizing data from publicly funded flow and water gauges is also not appropriate and is likely illegal. The Program described in the DEIR would allow for this data to be withheld from the public through mechanisms to put control over this data in the sole hands of the RCDs.

Our organizations are concerned that, however well-intended, the program proposed in this DEIR would even further jeopardize threatened coho salmon in the basin, thereby making the program a potential violation of CDFG's obligations under the California Endangered Species Act as well as its federal equivalent. Furthermore, these actions would jeopardize the ability of the sub-basin to meet current TMDL standards as well as USFS adjudicated minimum instream flows needed for fish migration, spawning and rearing in August, September and October. Current Scott River flows are already *far below* these adjudicated USFS minimum flow obligations (see ATTACHMENT 1, Figure 3 on pg. 13).



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Implementation of these mitigation measures and provisions is also not clearly specified, but appears to be lacking. In particular, CDFG should not agree to keep wardens off these streams which the State of California is responsible for protecting. Coho poaching in these streams is not an insignificant problem. Allowing locals to simply deny river and stream access to CDFG officials charged with statutory responsibility to protect those public trust resources is contrary to state law and should not become *de facto* policy.

The DEIR also does not include, and is therefore not based on, the best available science. Conspicuously absent, for instance, is any reference to "Relative Effects of Climate and Water: Use of Base-flow Trends in the Lower Klamath Basin," by Van Kirk, Robert W. and Naman, Seth W., Journal of the American Water Resources Association, vol. 44, Number 4 (August 2008), pp. 1035-1052 (18). In general there is relatively little discussion or inadequate discussion of the need to maintain minimum instream flows and how decades of largely agricultural diversions of these flows (either directly from the stream or indirectly via groundwater aquifers reducing spring inflows to these streams) has been the primary driver of coho habitat destruction in the river.

Finally, Fish and Game Code 2081 (b) and (c), referenced throughout the DEIR, stipulates that authorized take mitigation measures "must be roughly proportional in extent to the impact of the taking on the species, maintain the applicant's objectives to the greatest extent possible and must be capable of successful implementation." Unfortunately, the permitting structure proposed by CDFG for this program fails to meet these stipulations because: 1) the DEIR does not adequately characterize the risk of extinction facing Scott River coho due to agricultural practices and therefore underestimates the proportional need for mitigation; (2) the project proposed in the DEIR is unlikely to reduce the need for enforcement, citizen suits under CESA and other regulatory tightening to protect threatened and endangered coho, therefore failing to meet a key objective for applicants; and (3) the DEIR does not provide the necessary information or trigger mechanisms for successful implementation of such a project.

Section Specific Comments



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The following additional comments serve to evaluate the contents of the DEIR, breaking the document down by sections we are primarily concerned about, but also serve to evaluate the overall legal, biological and economic adequacy of the approach contemplated in the proposed permitting project or “program”:

1.2.3—Scope of the Draft EIR

The programmatic scope of this document is problematic, incomplete and inappropriate. Aggregation of streambed alteration and coho take by many individual agricultural operators into one watershed-wide permit creates an accountability gap and deprives the public of its legally assured right to comment on important details unique to each specific land use under CEQA.

2.1.1—Program Objectives

While we recognize and appreciate the effort taken to improve conditions for coho by working with agricultural operators to improve their practices and mitigate their damages, we find that the stated objectives either ignore, are inconsistent with, or would work at cross-purposes with the stated objectives in the referenced *Coho Recovery Strategy* approved by the Fish and Game Commission as state coho recovery policy in 2004.¹

Page ES-2 of the *Coho Recovery Strategy* states:

“The primary objective of this Recovery Strategy is to return coho salmon to a level of sustained viability, while protecting the genetic integrity of both ESUs, so that they can be delisted and regulations or other protections under the CESA (FGC §2050et seq.) will not be necessary. The Department defines sustained viability as a future condition when naturally producing coho salmon are adequately abundant and occupy a sufficient range and distribution to ensure against extinction due to environmental fluctuations, stochastic events, and human land and water-use impacts.

¹ “Recovery Strategy for California Coho Salmon,” Report to the California Fish and Game Commission (adopted by the Fish and Game Commission as formal policy on February, 2004).



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“A second objective of this Recovery Strategy is to achieve harvestable populations of coho salmon for Tribal, recreational, and commercial fisheries, so important to the cultural and economic well-being of California.”

However, the DEIR does not furnish nearly enough detail as to how, exactly, the proposed program would meet the above stated objective of the Coho Recovery Strategy. What's more, the DEIR fails to identify abundance, delisting or harvestable fisheries as objectives of the program. Furthermore, the DEIR does not offer any metrics or benchmarks to quantify the net coho recovery resulting from restoration actions proposed in the program. Without such a quantifying mechanism, it is biologically impossible to measure whether the objective, not just to maintain or increase coho populations, but also to recover Scott River coho runs to the point of abundance and delisting, has been or even ever could be achieved.

More specifically, the *Coho Recovery Strategy* provides a set of criteria for recovery. The first criterion (Goal I) listed on page 4.4 of the recovery plan: “Maintain and improve the number of key populations and increase the number of populations and brood years of coho salmon.”

The reality is that as long as the root causes of coho declines in the Scott River watershed such as excessive groundwater pumping, illegal diversions, stream dewatering, lack of enforcement and permitted habitat fragmentation go unaddressed, coho there will continue to decline. *As long as coho continue to decline, CDFG must act to reverse the trend.* Failure to do so would be arbitrary and capricious as well as a derogation of CDFG’s statutory duties as the Trustee Agency over fish and wildlife in California.

Unfortunately, this DEIR offers no evidence that the proposed program would do enough to reverse the current trend toward salmonid extinction in the river. Indeed, the program seems designed instead to allow CDFG to “opt out” of its remediation and enforcement responsibilities by illegally delegating those responsibilities to RCDs and other entities directly controlled by the regulated community.



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Although most Tribal and commercial fishermen who would benefit from a harvestable coho fishery live and work outside the Scott River watershed, they are directly affected by salmon declines in the Scott sub-basin. Indeed, as we saw during 2006, greatly reduced numbers of salmon surviving in the Klamath River can force “weak stock management” closures to ocean salmon harvests as far south as Monterey, CA and as far north as northern Oregon – nearly 700 miles of coastline. As such, the omission of any demonstrable benefits to these groups from the program’s objectives represents an imbalanced set of priorities that fail to sync up with CDFG's commitment to the needs and historic uses of those groups in the *Coho Recovery Strategy*.

2.3.1—General Conditions in the ITP

General condition C delegates enforcement responsibility to non-enforcement representatives. The DEIR does not provide any analysis showing that CDFG is legally allowed to delegate its legal obligation under CESA to protect public trust resources such as abundant, clean water and viable fish populations to any other agency.

This section also requires that the non-enforcement representative provide at least 48 hours of notice to landowners and obtain written permission to access public river systems through a permittee's land. Such a stipulation is unreasonable because it weakens CDFG's ability to effectively monitor, regulate or enforce the permits it issues, running the risk that permit conditions go unenforced. If permit conditions went unenforced, coho would likely continue to decline, ironically causing the need for still more strict regulation and enforcement under CESA.

2.3.2—Additional Obligations in the ITP to Avoid and Minimize Take of Coho Salmon

Additional Avoidance and Mitigation Obligation A is insufficiently vague in its description of how water rights compliance will be verified, especially in light of weak enforcement provisions in 2.3.1.

Publicly funded stream gauges should generate data that is publicly available. CDFG should require that gauge and meter readings be posted on the internet in real-time for public access to help ensure that this obligation is met.



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Additional Avoidance and Mitigation Obligation D is insufficiently vague, and fails to explain if and why limiting livestock and vehicle crossings only to the wet season adequately protects the stream channel's hydrologic integrity, water quality and habitat, as required under CESA and the Scott River basin plan.

Additional Avoidance and Mitigation Obligation E should specify a minimum riparian vegetation buffer requirement of 50-150 feet, depending on stream size and presence of typical salmonid habitat characteristics. Smaller buffers are simply inadequate to prevent land erosion and intrusion of cattle and sheep into these fragile riparian areas.

Additional Avoidance and Mitigation Obligation J states the commendable goal of reconnecting Shackleford Creek with the Scott River channel during coho rearing in the spring, but is insufficiently vague as to how much water diverters must refrain from using and how diverters will be compelled to comply with this obligation. However, we support the goal of reconnecting tributaries and other refugia to the main Scott River channel, and advocate similar projects elsewhere in the basin.

2.3.3—Mitigation Obligations of SQRCD: Flow Enhancement, Habitat Improvement, and Fish Passage

Flow Enhancement Mitigation 1 provides for a water trust account to be established by SQRCD, but fails to mention how much water will be stored there and at what cost to whom. The questions of water quantity and cost should be analyzed under CEQA before the permitting program is approved or any incidental take protection is extended.

The stock water plan referenced in Flow Enhancement Mitigation 5 lacks a funding mechanism and timetable. Without identified funding and deadlines, this mitigation measure could go unimplemented, leaving adult coho without the flows they need to migrate to preferable spawning gravels. If instream flow measures go unimplemented and coho, chinook and steelhead slip further towards extinction, this already deficient program will fall even further short of recovery goals. Additionally, effectiveness of the plan should be completed and analyzed under CEQA prior to extending incidental take protection, not one year after the effective date of the ITP.



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Flow Enhancement Mitigation 6 lacks specificity about where the proposed additional 5 cfs will come from, at what time of year it will be made available and how it will be legally secured. These details should be provided in CEQA analysis so members of the public and experts can evaluate and comment on them.

The spawning gravel enhancement plan in Habitat Improvement Mitigation 1 needs to be completed and analyzed under CEQA before incidental take protection is approved or extended, not two years after the effective date of the ITP.

Habitat Improvement Mitigation 2 calls for at least 20 instream habitat improvement structures. Why this number was used lacks explanation and therefore appears arbitrary. Further, the DEIR provides no information as to where these 20 structures will be installed according to which priorities, nor how their effectiveness will be determined. This should be analyzed under CEQA before incidental take protection or streambed alteration agreement is approved or extended.

Habitat Improvement Mitigation 3 lacks explanation for the prescribed acreages and timeframes, which therefore appear arbitrary. Additionally, this mitigation measure is too weak and sets a very low bar for riparian planting. In reality, much more can be done and should be required of an agricultural operator or other sub-permittee during the 10 years covered under the ITP.

Barrier removal and Fish Passage Mitigation Obligation 1 and 3 offer no explanation for the seven year time frame, which therefore appears arbitrary. Further, this section of the DEIR provides no supporting analysis to show that these modifications will adequately maintain or recover coho populations. This should be analyzed under CEQA before streambed alteration agreements are approved or incidental take protections are extended.

While we generally commend and support the goal of replacing the gravel dams with boulder vortex weirs as a fisheries restoration technique, this DEIR later states that the diverters who use Farmer's Ditch have the right to divert the entire stream in August and September, coinciding with salmon migration



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needs for instream flows (3.2-33.) In this case, the gravel dam replacement would seem to be just a band-aid on the much larger problem of a routinely dewatered stream channel. Therefore, we ask whether Farmer's Ditch should qualify for a permit under this program, given the legal mandate to recover coho and the impossibility of doing so with a dewatered river. This DEIR does not provide any evidence that installation of such a boulder vortex weir in place of the gravel dam will yield adequate coho repopulation, particularly given those facts.

2.3.4—Monitoring and Adaptive Management Program

Putting SQRCD in the role of monitor suggests that the program will be at least as ineffective as past monitoring and enforcement enactment, if not more so, due to the political nature of RCD appointments. What's more, putting SQRCD in the role of monitor, and thereby informal enforcer, introduces a middle-agency, creating room for new inefficiencies in the system and slowing down the timetable for coho recovery. It also muddies the role of the RCDs, which has typically been a cooperative one, not a regulatory one. Such a blanket delegation of authority and accountability is legally insupportable and essentially constitutes bad policy.

Chapter 3 Intro—Environmental Setting

The DEIR sets out an inadequate baseline against which to measure impacts of the program. Establishment of the baseline conditions as those existing in 2005 when composition of this program began runs a significant risk of shortchanging coho recovery potential by excluding historically abundant coho populations, lower water diversions and much less groundwater pumping from the baseline – in other words, when conditions in the Scott supported viable and non-listed coho populations.

To provide some scale, the *Coho Recovery Strategy* this DEIR claims to align with prescribes a temporal baseline for the purpose of defining viability of coho populations (*Coho Recovery Strategy*, pg. 2.11):

“McElhaney et al. (2000) define a viable salmonid population for purposes of the ESA as ‘an independent population of any Pacific salmonid (genus *Oncorhynchus*) that has a negligible risk of extinction



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due to threats from demographic variation (random or directional), local environmental variation, and genetic diversity changes (random or directional) over a one-hundred year time frame.’ One hundred years was chosen to represent the time frame over which to evaluate risk of extinction.”

Then, on page 3.11, the *Coho Recovery Strategy* states:

“In some watersheds, the demand for water has already exceeded the available supply and some water rights have been allocated through court adjudication. These adjudications usually did not consider coho salmon habitat needs at a level that could be considered protective under CESA.”

The Scott River sub-basin is surely one of the watersheds referred to in this statement with three main water rights court decrees recognized: Shackleford Creek Decree (1950), French Creek Decree (1958) and Scott River Decree (1980). *The total combined allotment of water in these three decrees exceeds the river's flows between June and December. See Coho Recovery Strategy, pg. 3.11-3.12.*

Yet, the baseline established in this DEIR document inappropriately fences off those adjudications from revisitation, in effect making a widespread dewatering of the river and consequent “take” (not to mention “jeopardy”) of coho the environmental baseline. The DEIR states categorically that, “Some of the activities the Program covers are historic, ongoing activities that have caused and will continue to cause environmental impacts within the Program Area, including, for example, take of coho salmon..... These activities and their impacts are part of the baseline and are expected to continue regardless of the program; that is they will not be caused by the program.....” (Scott Watershed-wide Permitting Program DEIR, pg. 3-2)

Effectively, the DEIR says in several sections including that one that re-adjudication is an infeasible alternative -- but without any supporting evidence, citation of Water Board analysis or further explanation. CDFG has no authority to assert such a categorical claim, much less to make the highly depleted current river conditions the environmental baseline for CEQA.



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Perhaps more worrisome still is the likelihood that the program proposed in this DEIR would supply *de facto* ITP regulatory approval for admittedly excessive current water diversions, many of which were allocated without considering CESA requirements and under which coho recovery would likely be impossible. In approving (and essentially shielding from regulatory action) the covered activities in this document, this program would thereby foreclose some of the most crucial flow-related coho, chinook and steelhead recovery measures needed on the Scott River -- and potentially forever preventing recovery of coho year-classes or broods and further jeopardizing coho runs by locking in what biologists now know are highly damaging agricultural water uses and over-appropriations that can only lead to coho extinction in the sub-basin.

3.1.1-3.1.5—Environmental Setting, Impacts and Mitigation Measures

Social and economic analysis and value mapping of cold-water salmon fisheries is almost completely absent from this DEIR document as compared with those exercises for agricultural land uses, which are richly represented. Under CEQA such a comprehensive analysis and mapping should also include historic coho range, abundance, profitability and some quantification of loss of profits since then due to widespread loss of Klamath coho fisheries, including widespread closures triggered by recent ESA listings and under “weak stock management” constraints under the Magnuson-Stevens Sustainable Fisheries Act and state law.

For example, Tribal members in the area historically fished a much longer subsistence season, starting with Pacific lamprey, then moving on to spring and fall chinook and finally coho. Today Tribal subsistence fishing is much more difficult due to smaller and shorter runs, and coho catch is now severely curtailed everywhere in their historic range both under the ESA/CESA and under basic “weak stock management” requirement under other laws. This loss of Tribal subsistence fisheries once supplied by abundant coho runs has had devastating impacts on Tribal cultures and economies.

Coastal salmon fisheries have been subject to partial to complete closures for Klamath salmon since 1978, partial closures for coho since the mid-1980’s and zero catch of coho with constraints on other salmon for incidental impacts on



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coho since 1994. Coastal fishing-dependent communities have lost thousands of jobs and much of the infrastructure that supports fisheries.

Coho were also once abundant throughout northern California, with the Klamath supplying by far the largest component of these once-healthy runs. Today Klamath coho salmon are down to only about 1-2% of their historic abundance, which is why they are ESA/CESA listed. Without quantifying the massive economic and cultural losses suffered by Tribal and commercial fishing economies because of these coho fishery losses, the socioeconomic sections of the DEIR are misleading as well as incomplete, and therefore fail to meet CEQA's requirement that *all impacts* of a project be disclosed and avoided, minimized or mitigated for.

Another glaring gap in the DEIR is its total lack of analysis on pesticide application in the Shasta River and its impacts on water quality, fisheries and ecological health in the basin. Thousands of pounds of pesticides known to be harmful to salmon are applied to agricultural lands in the basin (Ewing 1999, NCAP 1999.) Significant impacts to threatened and endangered species from chemicals including chlorpyrifos, diazinon, and malathion—all reportedly used in the Scott River basin according to the California Pesticide Use Reporting Database—are well documented (NMFS Biological Opinion. 2008) We are concerned that while the toxic substances in these pesticides may break down quickly in the atmosphere, they can persist in groundwater supplies, thereby potentially impacting water quality and salmonid survival rates for long periods of time (Gilliom et al. 2006.)

3.2-36-37—Geomorphology, Hydrology and Water Quality

The part of this section which discusses the impact of diversions on flow volume and water quality states that “Implementation of the program would not cause Agricultural Operators to increase their surface water diversions or increase the amount of water they are entitled to divert. To the contrary, the Program, by means of a number of required measures, would provide a mechanism to verify, monitor and control the diversion and use of water within the Program Area to ensure that such diversion and use is based on a valid water right.”



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However, this statement is inconsistent with earlier parts of the section, where the DEIR itself acknowledges that use of groundwater is largely unregulated, while at least half of all water rights decreed in the watershed are not overseen by a water master. This section of the DEIR fails to make clear what, specifically, is the mechanism for verifying, monitoring and controlling diversions. The paragraph here refers vaguely to “a number of required measures” as a “means” to ensure that diversions covered for streambed alteration and take are “otherwise legal.” But given the program's lack of accountability and authority over monitoring and enforcement, this DEIR fails to clarify how those measures will be actively required or enforced.

3.2-60--Impact 3.2.4—Groundwater Impacts and Mitigations to Geomorphology, Hydrology and Water Quality

In considering the possible impacts of the program on groundwater, the DEIR concedes that agricultural operators may favor groundwater use more heavily due to regulatory burdens the program places on surface water diversions. The DEIR also acknowledges that “Increased use of groundwater during dry conditions in order to curb the consumptive use of surface water...could decrease groundwater discharge into the Scott River and its tributaries,” (3.2-61, Scott River Watershed-wide Permitting Program DEIR.)

In turn, “a reduction in groundwater discharge could decrease baseflow volumes and could contribute to increased water temperatures.” (3.2-61.) Yet, a paragraph later, the DEIR erroneously states that the program would not substantially increase the draw on groundwater and pronounces the Scott River's groundwater problem less-than-significant. This is an internal contradiction that cannot be reconciled.

The arbitrary and somewhat contradictory conclusion that impacts to groundwater would be less-than-significant is not consistent with the *Coho Recovery Plan* (pp. 3.11-3.12), recent findings by USGS or information elsewhere in the DEIR regarding groundwater. The categorization of groundwater use as less-than-significant in this document also needs further analysis and explanation in the context of the Scott River 303d listing for high water temperatures, associated TMDLs and beneficial uses including cold-water fisheries—all processes overseen under the State Water Board's Clean Water



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Act authority. It is unacceptable under the federal CWA and CESA to permit a diversion that heats up the water, degrades water quality and habitat, fails to protect a beneficial use and further jeopardizes salmonid viability in the Scott River watershed.

The nexus between quantity of groundwater pumped from the interconnected zone and water quality in the Scott River is not addressed adequately in this DEIR. Numerous connections between groundwater and stream inflow are well known and currently being investigated in much greater detail. For instance, the program purports to cover surface water diversions, but ignores the well-documented interaction between surface water and groundwater (California Water Code 2500.5.) It is unclear whether program limitations on surface water diversions might also extend to groundwater supplies, at least in the interconnected zone. The DEIR needs to address whether people using pumps and wells to extract groundwater need to quantify or scale back their use, including mechanism for determining if such actions should be taken in the future.

3.3-53-54—Impact 3.3-2—Groundwater Impacts and Mitigation to Fisheries and Aquatic Habitat

The arbitrary and somewhat contradictory conclusion that impacts to groundwater would be less-than-significant is not consistent with the *Coho Recovery Plan* (pp. 3.11-3.12), recent findings by USGS or information elsewhere in the DEIR regarding groundwater.

4.1-4.4—Cumulative Effects

The cumulative impacts analysis contained in this DEIR is flawed in assuming the historic illegal “take” of CESA-listed coho as well as over-allocation of water as the environmental baseline.

Rather, the baseline should be the environmental conditions (including instream flows) necessary to prevent significant “take” of CESA-listed coho, and which will foster coho’s ultimate recovery. This level of take is not analyzed.

How many protected fish will actually be taken by these program actions under an ITP is certainly not identified quantitatively, nor even qualitatively. Will this



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so-called “incidental take” be *de minimus* or will it be a major population-level adverse impact. Will coho survive these impacts? Will they recover? In the Scott watershed? Overall, in the entire ESU? Adequate analysis on the topic is not provided in this DEIR, leaving too many unanswered questions about Scott River coho salmon’s ultimate chances for recovery.

Section 4.4 in this DEIR lacks adequate analysis of *why* and *how* “Activities implemented by Program participants would not commit future generations to undesirable uses and would not involve a use from which irreversible damage could result,” (p. 4-38, Scott River Watershed-wide Permitting Program DEIR). In our view, the opposite of the above statement is true. Permitting ongoing diversions, dam impoundment, unregulated groundwater use and resultant coho decline without proportionally adequate mitigation does commit future generations to undesirable uses and could potentially cause irreversible damage to the Shasta River as a viable salmonid-bearing stream. This alone should be enough to make the proposed program detailed in the DEIR unacceptable under CEQA.

This section of the DEIR is embarrassingly deficient and does not satisfy CEQA requirements.

5.1-5.3—Alternatives to the Program

The DEIR uses faulty logic in its rejection of the consistency determination alternative, claiming it would allow *status quo* conditions to go on too long while awaiting a NMFS section 10 permit and subsequent consistency determinations. In the meantime, “many if not all of the ongoing historic activities would continue” (Scott River Watershed-wide Permitting Program DEIR, 5-2).

This reflects the overall flawed approach of assuming existing illegal activity to be the required baseline. Yet the DEIR itself documents that existing historic activities are perpetuating extensive illegal take. The DEIR thus assumes, as part of its analysis, that individuals will continue to knowingly break the law with impunity, and that CDFG can and *will* do nothing to enforce the law.



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The DEIR makes the unfounded assertion that readjudication of water rights is infeasible because “it is not certain it would go far enough to protect the public trust” (Scott River Watershed-wide Permitting Program DEIR, 5-4). However, the Water Board could, if it wishes and for good cause, impose additional conditions on the existing water rights sufficient to be in compliance with existing law. This issue needs further consultation with the Water Board and analysis under California Water Code.

In short, the no-program alternative, basically representing the *status quo*, would allow CESA violations to continue, the DEIR concedes. However, ongoing CESA violations should not be considered a legitimate option at all. There should also be some viable program of enforcement.

Conclusion

It is important to note that NONE of the activity that the program covers that perpetuate take have been authorized before under the CESA. So all of these are newly authorized activities under the CESA that are and will continue to perpetuate take:

1. Water diversions
2. Water diversion structures, including pushup dams
3. Stream crossings
4. Fencing
5. Instream structures (road crossings, etc.)
6. Grazing and livestock

In closing, We would prefer an alternative that would require complete site specific study of the impacts on the coho from given agricultural activities and adequate assessment of how these impacts need to be reduced such that the coho will survive and recover BEFORE any incidental take protection is extended to these activities. This is what the CESA requires. While this study is being completed, MOUs and/or enforcement actions (judicial consent decrees, etc.) should be pursued/issued/secured that will require appropriate interim steps to reduce taking of coho, such as the mitigation measures outlined in the DEIR.



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In submission of these comments, we herein refer to and append comments submitted by the Pacific Coast Federation of Fishermen's Associations, the Quartz Valley Indian Reservation, The Karuk Tribe and the Yurok Tribe.

Thank you for your time spent reviewing and responding to these comments.

Erica Terence,
Klamath Riverkeeper

Glen H. Spain, J.D.,
Northwest Regional Director
Pacific Coast Federation of Fishermen's Associations
and the Institute for Fisheries Resources

ATTACHMENT 1: Comments of PCFFA/IFR, et al., to the State Water Resources Control Board dated June 12, 2006, *Re: Joint Comments on the Proposed Action Plan for the Scott River Watershed Sediment and Temperature TMDL*.

ATTACHMENT 2: Relative Effects Of Climate And Water Use On Base-Flow Trends In The Lower Klamath Basin, Robert W. Van Kirk and Seth W. Naman. August, 2008.

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Consultation Biological Opinion. NMFS, Silver Springs Md. 478 p.



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Summary and General Comments

Overall, we find that while the DEIR contains some well-intended proposals to help recover coho and prevent the need for regulatory enforcement, it falls far short of the level of adequate analysis required under the California Environmental Quality Act (CEQA). Additionally, the DEIR shows some troubling inconsistencies that work at cross-purposes with prescriptions in the Coho Recovery Plan referenced in the document as well as the North Coast Regional Water Quality Control Board's TMDL basin plans.

Progressive dewatering and over-appropriation of the Shasta River's limited groundwater inflows has been an ongoing problem throughout the basin and is probably the *single largest adverse impact* on coho populations in the river. Refer to ATTACHMENT 1, which are PCFFA/IFR comments on the current Shasta River TMDL dated October 29, 2006, for information on this ongoing over-appropriation problem. We include and incorporate this ATTACHMENT 1 and the references, data and charts therein as part of these comments. We also incorporate attachment 2, which is a specific study on the impacts of the Shasta River on coho within the Nelson Ranch.

The number of groundwater permits or irrigation well has skyrocketed in recent years throughout the Shasta River, yet little study has been done to assess the adverse impacts on local stream flows of drawing down local aquifers on such a scale. Dry channels correlate closely with recent increases in groundwater pumping (see ATTACHMENT 1, especially Attachment A to that document).

Unfortunately the measures contemplated under the DEIR do not address this core dewatering issue – excessive basin-wide over-appropriation of water that dries up *increasingly large portions* of the Shasta River every year – and thus will not lead to the restoration of endangered and threatened fish species. Indeed, allowing these practices to continue through permits issued pursuant to this program would not only violate CESA and various state and federal clean water laws including California's TMDL standards in that river system, but would ultimately lead to coho extinction in that basin.

Our analysis also finds that the facilitation of take permitting for sub-permittees in this program is impossible to justify in light of persuasive scientific data showing that some of these same projects (particularly water diversions) are resulting in a net loss of year classes or broods returning to the



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Shasta River (see ATTACHMENT 1, particularly at pp.22-26; ATTACHMENT 2). In addition, with respect to the Incidental Take Permits contemplated in this program, the DEIR: (1) does not fully describe these projects, and does not disclose their impacts on ESA and CESA listed coho and other salmonids present in the river system; (2) does not adequately identify biological thresholds of major significance that, if exceeded, will result in not only unnecessary "take" of these species but jeopardy resulting in eventual extinction.

CDFG cannot and should not delegate enforcement of CESA and DFG codes and regulations to the local Resource Conservation Districts (RCDs). These organizations (which are made up of and controlled entirely by the landowners who would be subject to these same regulations) have an *inherent conflict of interest* that cannot be overcome. Asking them to regulate themselves and their neighbors also puts them in an untenable political position, the end result of which will almost certainly be little or no regulation at all of actions (such as increasing over-diversion of the Shasta sub-basin's limited water supply) that *clearly* jeopardize the future existence of coho and other salmonids in the basin.

Likewise, privatizing data from publicly funded flow and water gauges is also not appropriate and is likely illegal. The Program described in the DEIR would allow for this data to be withheld from the public through mechanisms to put control over this data in the sole hands of the RCDs.

Our organizations are concerned that, however well-intended, the program proposed in this DEIR would even further jeopardize threatened coho salmon in the basin, thereby making the program a potential violation of CDFG's obligations under the California Endangered Species Act as well as its federal equivalent. Furthermore, these actions would jeopardize the ability of the sub-basin to meet current TMDL standards as well as ITP proposed minimum instream flows of 20 cfs needed for fish migration, spawning and rearing in August, September and October. Current Shasta River flows are already *far below* these adjudicated USFS minimum flow obligations (see ATTACHMENT 1, Figure 2 on pg. 6).

Implementation of these mitigation measures and provisions is also not clearly specified, but appears to be lacking. In particular, CDFG should not agree to keep wardens off these streams which the State of California is responsible for



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protecting. Coho poaching in these streams is not an insignificant problem. Allowing locals to simply deny river and stream access to CDFG officials charged with statutory responsibility to protect those public trust resources is contrary to state law and should not become *de facto* policy.

The DEIR also does not include, and is therefore not based on, the best available science. Conspicuously absent, for instance, is any reference to "Relative Effects of Climate and Water: Use of Base-flow Trends in the Lower Klamath Basin," by Van Kirk, Robert W. and Naman, Seth W., Journal of the American Water Resources Association, vol. 44, Number 4 (August 2008), pp. 1035-1052 (18) An additional reference is enclosed as ATTACHMENT 3. In general there is relatively little discussion or inadequate discussion of the need to maintain minimum instream flows and how decades of largely agricultural diversions of these flows (either directly from the stream or indirectly via groundwater aquifers reducing spring inflows to these streams) has been the primary driver of coho habitat destruction in the river.

Finally, Fish and Game Code 2081 (b) and (c), referenced throughout the DEIR, stipulates that authorized take mitigation measures "must be roughly proportional in extent to the impact of the taking on the species, maintain the applicant's objectives to the greatest extent possible and must be capable of successful implementation." Unfortunately, the permitting structure proposed by CDFG for this program fails to meet these stipulations because: 1) the DEIR does not adequately characterize the risk of extinction facing Shasta River coho due to agricultural practices and therefore underestimates the proportional need for mitigation; (2) the project proposed in the DEIR is unlikely to reduce the need for enforcement, citizen suits under CESA and other regulatory tightening to protect threatened and endangered coho, therefore failing to meet a key objective for applicants; and (3) the DEIR does not provide the necessary information or trigger mechanisms for successful implementation of such a project.

Section Specific Comments

The following additional comments serve to evaluate the contents of the DEIR, breaking the document down by sections we are primarily concerned about, but also serve to evaluate the overall legal, biological and economic adequacy of the approach contemplated in the proposed permitting project or "program":



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1.2.3—Scope of the Draft EIR

The programmatic scope of this document is problematic, incomplete and inappropriate. Aggregation of streambed alteration and coho take by many individual agricultural operators into one watershed-wide permit creates an accountability gap and deprives the public of its legally assured right to comment on important details unique to each specific land use under CEQA.

Section 2.1.1—Program Objectives

While we recognize and appreciate the effort taken to improve conditions for coho by working with agricultural operators to improve their practices and mitigate their damages, we find that the stated objectives either ignore, are inconsistent with, or would work at cross-purposes with the stated objectives in the referenced *Coho Recovery Strategy* approved by the Fish and Game Commission as state coho recovery policy in 2004.¹

Page ES-2 of the *Coho Recovery Strategy* states:

“The primary objective of this Recovery Strategy is to return coho salmon to a level of sustained viability, while protecting the genetic integrity of both ESUs, so that they can be delisted and regulations or other protections under the CESA (FGC §2050et seq.) will not be necessary. The Department defines sustained viability as a future condition when naturally producing coho salmon are adequately abundant and occupy a sufficient range and distribution to ensure against extinction due to environmental fluctuations, stochastic events, and human land and water-use impacts.

“A second objective of this Recovery Strategy is to achieve harvestable populations of coho salmon for Tribal, recreational, and commercial fisheries, so important to the cultural and economic well-being of California.”

However, the DEIR does not furnish nearly enough detail as to how, exactly, the proposed program would meet the above stated objective of the Coho

¹ “Recovery Strategy for California Coho Salmon,” Report to the California Fish and Game Commission (adopted by the Fish and Game Commission as formal policy on February, 2004).



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Recovery Strategy. What's more, the DEIR fails to identify abundance, delisting or harvestable fisheries as objectives of the program. Furthermore, the DEIR does not offer any metrics or benchmarks to quantify the net coho recovery resulting from restoration actions proposed in the program. Without such a quantifying mechanism, it is biologically impossible to measure whether the objective, not just to maintain or increase coho populations, but also to recover Shasta River coho runs to the point of abundance and delisting, has been or even ever could be achieved.

More specifically, the *Coho Recovery Strategy* provides a set of criteria for recovery. The first criterion (Goal I) listed on page 4.4 of the recovery plan: "Maintain and improve the number of key populations and increase the number of populations and brood years of coho salmon."

The reality is that as long as the root causes of coho declines in the Shasta River watershed such as excessive groundwater pumping, illegal diversions, stream dewatering, lack of enforcement and permitted habitat fragmentation go unaddressed, coho there will continue to decline. *As long as coho continue to decline, CDFG must act to reverse the trend.* Failure to do so would be arbitrary and capricious as well as a derogation of CDFG's statutory duties as the Trustee Agency over fish and wildlife in California.

Unfortunately, this DEIR offers no evidence that the proposed program would do enough to reverse the current trend toward salmonid extinction in the river. Indeed, the program seems designed instead to allow CDFG to "opt out" of its remediation and enforcement responsibilities by illegally delegating those responsibilities to RCDs and other entities directly controlled by the regulated community.

Although most Tribal and commercial fishermen who would benefit from a harvestable coho fishery live and work outside the Shasta River watershed, they are directly affected by salmon declines in the Shasta sub-basin. Indeed, as we saw during 2006, greatly reduced numbers of salmon surviving in the Klamath River can force "weak stock management" closures to ocean salmon harvests as far south as Monterey, CA and as far north as northern Oregon – nearly 700 miles of coastline. As such, the omission of any demonstrable benefits to these groups from the program's objectives represents an imbalanced set of priorities that fail to sync up with CDFG's commitment to the needs and historic uses of those groups in the *Coho Recovery Strategy*.



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2.1.4—Program Permitting Structure

The DEIR's ITP and MLTC Covered Activity 9 proposes to complete a dam demobilization and water quality improvement project at Shasta Water Association's Dam as well as a fish barrier removal project by Grenada Irrigation District.

Table 4-1 in section 4.1.3 (p. 4-11) identifies Shasta River Water Association Fish Passage and Water Quality improvement project, specifying a new set of pumps, intake structure and a fish screen installation.

Appendix page A-17 in this DEIR, titled conditions of permit approval, documents plans to construct a new diversion structure and water transmission system eight years after an ITP is issued. How can CDFG condition permits it plans to issue to Grenada Irrigation District on a project planned for eight years after the effective date of the permit? This action would be unreasonable and inconsistent with CDFG's statutory and regulatory obligations. Further, it is likely that Grenada Irrigation District will increasingly resort to use of groundwater, which is inadequately regulated and improperly given away under this permitting program.

In the meantime, the DEIR projects a fish passage project at the Grenada Irrigation District diversion structure funded by SVRCD to be imminent or reasonably foreseeable (Table 4-5 on p. 4-22, Shasta Watershed-wide Permitting Program DEIR), although not technically covered under this program.

Fish passage projects, covered in Activity 9 herein, should not always be allowed as a substitute for more effective measures to increase instream flows. Improving the effectiveness of enforcement, actively regulating the use of groundwater and strategically denying permits to inefficient and low yield irrigators such as Grenada Irrigation District and Shasta River Water Association would certainly do more to recover coho. (Analysis of impacts to biological resources on p. 3.4-8-9 documents the riparian recovery potential of areas irrigated by GID, making it strategically smart to deny permits here.) This coverage is too broad and cannot be justified in light of data showing that at least two out of every three year classes are declining heavily in the Shasta River (see ATTACHMENT 1, particularly at pp.22-26).



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This DEIR does not adequately show how permitting ongoing irrigation by these two diverters, whether by withdrawal of surface or groundwater, will meet steelhead, chinook or coho recovery goals or needs. This DEIR also fails to show that mitigations described therein will adequately or proportionally aid in recovering Shasta River coho while permitting incidental take and streambed alteration, as required in Fish and Game Code 2081 (b) and (c).

While our comments have focused in on activity 9 project coverage, we see similar problems with providing permit coverage for diversions, diversion structures and fish screens in other locations throughout the Shasta River watershed. In other words, environmental damages to coho and other aquatic resources caused by many of the activities covered under this program would potentially be disproportionate to the mitigations required in this program. However, this is difficult to quantify or analyze, given the vague and general nature of this program's permitting structure.

2.3.1—General Conditions in the ITP

General condition C delegates enforcement responsibility to non-enforcement representatives. The DEIR does not provide any analysis showing that CDFG is legally allowed to delegate its legal obligation under CESA to protect public trust resources such as abundant, clean water and viable fish populations to any other agency.

This section also requires that the non-enforcement representative provide at least 48 hours of notice to landowners and obtain written permission to access public river systems through a permittee's land. Such a stipulation is unreasonable because it weakens CDFG's ability to effectively monitor, regulate or enforce the permits it issues, running the risk that permit conditions go unenforced. If permit conditions went unenforced, coho would likely continue to decline, ironically causing the need for still more strict regulation and enforcement under CESA.

2.3.2—Additional Obligations in the ITP to Avoid and Minimize Take of Coho Salmon

Additional Avoidance and Mitigation Obligation A is insufficiently vague in its description of how water rights compliance will be verified, especially in light of weak enforcement provisions in 2.3.1.



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Publicly funded stream gauges should generate data that is publicly available. CDFG should require that gauge and meter readings be posted on the internet in real-time for public access to help ensure that this obligation is met.

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Additional Avoidance and Mitigation Obligation A is insufficiently vague in its description of how water rights compliance will be verified, especially in light of weak enforcement provisions in 2.3.1.

Publicly funded stream gauges should generate data that is publicly available. CDFG should require that gauge and meter readings be posted on the internet in real-time for public access to help ensure that this obligation is met.

Chapter 3 Intro—Environmental Setting

The DEIR sets out an inadequate baseline against which to measure impacts of the program. Establishment of the baseline conditions as those existing in 2005 when composition of this program began runs a significant risk of shortchanging coho recovery potential by excluding historically abundant coho populations, lower water diversions and much less groundwater pumping from the baseline – in other words, when conditions in the Shasta supported viable and non-listed coho populations.

To provide some scale, the *Coho Recovery Strategy* this DEIR claims to align with prescribes a temporal baseline for the purpose of defining viability of coho populations (*Coho Recovery Strategy*, pg. 2.11):

“McElhaney et al. (2000) define a viable salmonid population for purposes of the ESA as ‘an independent population of any Pacific salmonid (genus *Oncorhynchus*) that has a negligible risk of extinction due to threats from demographic variation (random or directional), local environmental variation, and genetic diversity changes (random or directional) over a one-hundred year time frame.’ One hundred years was chosen to represent the time frame over which to evaluate risk of extinction.”

Then, on page 3.11, the *Coho Recovery Strategy* states:



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“In some watersheds, the demand for water has already exceeded the available supply and some water rights have been allocated through court adjudication.”

Yet, the baseline established in this DEIR document inappropriately fences off those over-appropriations from revisitation, in effect making a widespread dewatering of the river and consequent “take” (not to mention “jeopardy”) of coho the environmental baseline. The DEIR states categorically that, “Some of the activities the Program covers are historic, ongoing activities that have caused and will continue to cause environmental impacts within the Program Area, including, for example, take of coho salmon..... These activities and their impacts are part of the baseline and are expected to continue regardless of the program; that is they will not be caused by the program.....” (Shasta Watershed-wide Permitting Program DEIR, pg. 3-2)

Effectively, the DEIR says in several sections including that one that correcting existing water appropriations is an infeasible alternative -- but without any supporting evidence, citation of Water Board analysis or further explanation. CDFG has no authority to assert such a categorical claim, much less to make the highly depleted current river conditions the environmental baseline for the purposes of CEQA.

Perhaps more worrisome still is the likelihood that the program proposed in this DEIR would supply *de facto* ITP regulatory approval for admittedly excessive current water diversions, many of which were allocated without considering CESA requirements and under which coho recovery would likely be impossible. In approving (and essentially shielding from regulatory action) the covered activities in this document, this program would thereby foreclose some of the most crucial flow-related coho, chinook and steelhead recovery measures needed on the Shasta River -- and potentially forever preventing recovery of coho year-classes or broods and further jeopardizing coho runs by locking in what biologists now know are highly damaging agricultural water uses and over-appropriations that can only lead to coho extinction in the sub-basin.

3.1.1-3.1.5—Environmental Setting, Impacts and Mitigation Measures

Social and economic analysis and value mapping of cold-water salmon fisheries is almost completely absent from this DEIR document as compared with those exercises for agricultural land uses, which are richly represented. Under CEQA



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such a comprehensive analysis and mapping should also include historic coho range, abundance, profitability and some quantification of loss of profits since then due to widespread loss of Klamath coho fisheries, including widespread closures triggered by recent ESA listings and under “weak stock management” constraints under the Magnuson-Stevens Sustainable Fisheries Act and state law.

For example, Tribal members in the area historically fished a much longer subsistence season, starting with Pacific lamprey, then moving on to spring and fall chinook and finally coho. Today Tribal subsistence fishing is much more difficult due to smaller and shorter runs, and coho catch is now severely curtailed everywhere in their historic range both under the ESA/CESA and under basic “weak stock management” requirement under other laws. This loss of Tribal subsistence fisheries once supplied by abundant coho runs has had devastating impacts on Tribal cultures and economies.

Coastal salmon fisheries have been subject to partial to complete closures for Klamath salmon since 1978, partial closures for coho since the mid-1980’s and zero catch of coho with constraints on other salmon for incidental impacts on coho since 1994. Coastal fishing-dependent communities have lost thousands of jobs and much of the infrastructure that supports fisheries.

Coho were also once abundant throughout northern California, with the Klamath supplying by far the largest component of these once-healthy runs. Today Klamath coho salmon are down to only about 1-2% of their historic abundance, which is why they are ESA/CESA listed. Without quantifying the massive economic and cultural losses suffered by Tribal and commercial fishing economies because of these coho fishery losses, the socioeconomic sections of the DEIR are misleading as well as incomplete, and therefore fail to meet CEQA's requirement that *all impacts* of a project be disclosed and avoided, minimized or mitigated for.

Another glaring gap in the DEIR is its total lack of analysis on pesticide application in the Shasta River and its impacts on water quality, fisheries and ecological health in the basin. Thousands of pounds of pesticides known to be harmful to salmon are applied to agricultural lands in the basin (Ewing 1999, NCAP 1999.) Significant impacts to threatened and endangered species from chemicals including chlorpyrifos, diazinon, and malathion—all reportedly used in the Shasta River basin according to the California Pesticide Use Reporting



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Database—are well documented (NMFS Biological Opinion. 2008) We are concerned that while the toxic substances in these pesticides may break down quickly in the atmosphere, they can persist in groundwater supplies, thereby potentially impacting water quality and salmonid survival rates for long periods of time (Gilliom et al. 2006.)

3.2-42--Impact 3.2-4—Groundwater Impacts and Mitigations to Geomorphology, Hydrology and Water Quality

In considering the possible impacts of the program on groundwater, the DEIR concedes that agricultural operators may favor groundwater use more heavily due to regulatory burdens the program places on surface water diversions. The DEIR also acknowledges that “Increased use of groundwater during dry conditions in order to curb the consumptive use of surface water...could decrease groundwater discharge into the Shasta River and its tributaries,” (3.2-42, Shasta River Watershed-wide Permitting Program DEIR.)

In turn, “a reduction in groundwater discharge could decrease baseflow volumes and could contribute to increased water temperatures.” (3.2-42.) Yet, a paragraph later, the DEIR erroneously states that the program would not substantially increase the draw on groundwater and pronounces the Shasta River's groundwater problem less-than-significant. This is an internal contradiction that cannot be reconciled.

The arbitrary and somewhat contradictory conclusion that impacts to groundwater would be less-than-significant is not consistent with the *Coho Recovery Plan* (pp. 3.11-3.12), recent findings by USGS or information elsewhere in the DEIR regarding groundwater. The categorization of groundwater use as less-than-significant in this document also needs further analysis and explanation in the context of the Shasta River 303d listing for high water temperatures, associated TMDLs and beneficial uses including cold-water fisheries—all processes overseen under the State Water Board's Clean Water Act authority. It is unacceptable under the federal CWA and CESA to permit a diversion that heats up the water, degrades water quality and habitat, fails to protect a beneficial use and further jeopardizes salmonid viability in the Shasta River watershed.

The nexus between quantity of groundwater pumped from the interconnected zone and water quality in the Shasta River is not addressed adequately in this DEIR. Numerous connections between groundwater and stream inflow are well



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known and currently being investigated in much greater detail. For instance, the program purports to cover surface water diversions, but ignores the well-documented interaction between surface water and groundwater. It is unclear whether program limitations on surface water diversions might also extend to groundwater supplies, at least in the interconnected zone. The DEIR needs to address whether people using pumps and wells to extract groundwater need to quantify or scale back their use, including mechanism for determining if such actions should be taken in the future.

3.3-530-51—Impact 3.3-2—Groundwater Impacts and Mitigation to Fisheries and Aquatic Habitat

The arbitrary and somewhat contradictory conclusion that impacts to groundwater would be less-than-significant is not consistent with the *Coho Recovery Plan* (pp. 3.11-3.12), recent findings by USGS or information elsewhere in the DEIR regarding groundwater.

4.1-4.4—Cumulative Effects

Analysis contained on pp. 4-5 and 4-6 of this section of the DEIR does not clearly demonstrate how this permitting program is in keeping with the Shasta River TMDL action plan referenced therein. Therefore, the permitting program contemplated in this DEIR is inconsistent with water quality standards contained in the Shasta River TMDL basin plan and associated action plan. Fish passage and dam bypass projects would not sufficiently ameliorate the stream's status as impaired for dissolved oxygen content, nor would they adequately increase the dissolved oxygen load in the Shasta River. Additionally, sedimentation problems due to Dwinnell dam's impoundment of the river channel cannot be mitigated for by way of fish passage projects. Dissolved oxygen and sediment problems in the Shasta River are well documented and are responsible for considerable salmonid take, including coho. Therefore, it is inappropriate for this program to permit Dwinnell dam contingent upon mitigation, since it is impossible to adequately mitigate the biological and hydrological impacts from Dwinnell dam.

Again, the cumulative impacts analysis contained in this DEIR is flawed in assuming the historic illegal "take" of CESA-listed coho as well as over-allocation of water as the environmental baseline.



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Rather, the baseline should be the environmental conditions (including instream flows) necessary to prevent significant “take” of CESA-listed coho, and which will foster coho’s ultimate recovery. This level of take is not delineated nor analyzed.

How many protected fish will actually be taken by these program actions under an ITP is certainly not identified quantitatively, nor even qualitatively. Will this so-called “incidental take” be *de minimus* or will it be a major population-level adverse impact. Will coho survive these impacts? Will they recover? In the Shasta watershed? Overall, in the entire ESU? Adequate analysis on the topic is not provided in this DEIR, leaving too many unanswered questions about Shasta River coho salmon’s ultimate chances for recovery.

Section 4.4 in this DEIR lacks adequate analysis of *why* and *how* “Activities implemented by Program participants would not commit future generations to undesirable uses and would not involve a use from which irreversible damage could result,” (p. 4-39, Shasta River Watershed-wide Permitting Program DEIR). In our view, the opposite of the above statement is true. Permitting ongoing diversions, dam impoundment, unregulated groundwater use and resultant coho decline without proportionally adequate mitigation does commit future generations to undesirable uses and could potentially cause irreversible damage to the Shasta River as a viable salmonid-bearing stream. This alone should be enough to make the proposed program detailed in the DEIR unacceptable under CEQA.

This section of the DEIR is embarrassingly deficient and does not satisfy CEQA requirements.

5.1.1-5.1.7—Alternatives to the Program

In short, the no-program alternative, basically representing the *status quo*, would allow CESA violations to continue, as the DEIR concedes. However, ongoing CESA violations should not be considered a legitimate option at all. There should also be some viable program of enforcement.

The DEIR uses faulty logic in its rejection of the consistency determination alternative, claiming it would allow *status quo* conditions to go on too long while awaiting a NMFS section 10 permit and subsequent consistency determinations. In the meantime, “many if not all of the ongoing historic



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activities would continue” (Shasta River Watershed-wide Permitting Program DEIR, 5-3&4).

This reflects the overall flawed approach of assuming existing illegal activity to be the required baseline. Yet the DEIR itself documents that existing historic activities are perpetuating extensive illegal take. The DEIR thus assumes, as part of its analysis, that individuals will continue to knowingly break the law with impunity, and that CDFG can and *will* do nothing to enforce the law.

The DEIR makes the unfounded assertion that over-appropriation of water rights is infeasible because “it is not certain it would go far enough to protect the public trust” (Shasta River Watershed-wide Permitting Program DEIR, 5-4&5). However, the Water Board could, if it wishes and for good cause, impose additional conditions on the existing water rights sufficient to be in compliance with existing law. This issue needs further consultation with the Water Board and analysis under California Water Code.

Section 5.1.7 of this DEIR inappropriately rejects Dwinnell Dam Removal as an alternative. DFG’s Coho Recovery Strategy (2004) calls for study of Dwinnell removal and providing fish passage if the dam stays in place. It is inconsistent for DFG to recommend study of removal in the Coho Recovery Strategy, but not require this as part of ITP. It is improper under CESA to balance this take against costs of removal and decide removal is infeasible.

Furthermore, there is no study included or referenced in this DEIR of what the costs of removal are and incomplete study of the benefits, making the conclusion insupportable even if it were the proper basis to decide to reject removal. Further, the DEIR acknowledges that there is “insufficient information” to know the costs of removal or benefits.

Additionally, rejection of Dwinnell dam removal as an alternative is irreconcilably inconsistent with this DEIR's own analysis of program impacts on geomorphology, hydrology, fisheries and other aquatic resources found on pp. 3.2-13 and 3.3-18-19. Coho take caused by Dwinnell dam is, by definition, more than incidental and therefore cannot be permitted, avoided or adequately and proportionally mitigated. The only adequate way to mitigate for or prevent alterations to the Shasta River flow regime, sedimentation, flooding, longitudinal profile, lack of downstream spawning gravel and channel dynamics referred to on 3.2-13 is to remove Dwinnell dam.



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Coho range and spatial distribution need to be increased (Williams et al. 2006). Since the Shasta River is potentially one of the best refugia for declining aquatic species including coho, reopening some 22 % of historic coho habitat above Dwinnell dam would be a good first step towards species recovery and protection of public trust resources.

Rejection of Dwinnell dam removal is also inconsistent with water quality standards contained in the Shasta River TMDL basin plan and associated action plan (North Coast Regional Water Quality Control Board. 2006.) Water quality problems in Dwinnell Reservoir are well documented (Vignola, E and M. Deas. 2005.) and warm water fish species there are an indicator of these problems. Blue-green algae, some of it toxic, also pollutes the reservoir (NCRWQB, 2005.)

Mere fish passage and dam bypass projects would not sufficiently ameliorate the stream's status as impaired for dissolved oxygen content, nor would they adequately increase the dissolved oxygen load in the Shasta River. Additionally, sedimentation problems due to Dwinnell dam's impoundment of the river channel cannot be mitigated for by way of fish passage projects. Dissolved oxygen and sediment problems in the Shasta River are responsible for considerable salmonid take, including coho. Therefore, it is inappropriate for this program to permit Dwinnell dam contingent upon mitigation, since it is impossible to adequately mitigate the biological and hydrological impacts from Dwinnell dam.

Appendix A—Draft Incidental Take Permit

Additional SVRCD and sub-permittee avoidance and Mitigation Obligation J in section XV of the mock-permit appended to this DEIR stipulates that Montague Irrigation District will conduct a feasibility study on design and implementation of fish screens on its Parks Creek and Little Shasta diversions, as well as the possibility of providing fish passage beyond Dwinnell dam.

These feasibility studies, to include evaluation of “water budget for intake and delivery operations” and the proposition of “water management measures at Dwinnell Dam to improve coho habitat downstream of the dam”, should be completed and circulated to the public for CEQA review before incidental take or streambed alteration protection is extended, not after. This mitigation obligation does not go nearly far enough to truly mitigate for water diversions



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from these three instream structures and their associated impacts on fisheries, including significant “take.” As such, we find that adequate mitigation would necessitate removal of the three structures in question.

To be consistent with Fish and Game code 5937, since Dwinnell dam has eliminated some 22 % of Shasta River coho historical habitat (3.3-18, Shasta River Watershed-wide Permitting Program DEIR), has severely degraded the quality of that habitat, and continues to impact River hydrology, water quality coho survival and recovery (not to mention impacts to chinook, steelhead, lamprey and other aquatic species), feasibility of Dwinnell Dam must be at least considered and analyzed.

CDFG code 5937 mandates that: “The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam.” CESA and ESA should be consulted in a CEQA analysis to establish what constitutes “good condition” and “sufficient water” to achieve said good condition. This DEIR does neither and lacks any such analysis. However, conditions above and below Dwinnell dam—with or without fish passage—are not conducive to what we would characterize as good conditions.

Conclusion

It is important to note that NONE of the activity that the program covers that perpetuate take have been authorized before under the CESA. So all of these are newly authorized activities under the CESA that are and will continue to perpetuate take:

1. Water diversions
2. Water diversion structures, including pushup dams
3. Stream crossings
4. Fencing
5. Instream structures (road crossings, etc.)
6. Grazing and livestock

In closing, We would prefer an alternative that would require complete site specific study of the impacts on the coho from given agricultural activities and adequate assessment of how these impacts need to be reduced such that the coho will survive and recover BEFORE any incidental take protection is



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extended to these activities. This is what the CESA requires. While this study is being completed, MOUs and/or enforcement actions (judicial consent decrees, etc.) should be pursued/issued/secured that will require appropriate interim steps to reduce taking of coho, such as the mitigation measures outlined in the DEIR.

In submission of these comments, we herein refer to, incorporate herein and/or append comments on this DEIR submitted by the Pacific Coast Federation of Fishermen's Associations, the Quartz Valley Indian Reservation, The Karuk Tribe and the Yurok Tribe.

Thank you for your time spent reviewing and responding to these comments.

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Pacific Coast Federation of Fishermen's Associations and the Institute for Fisheries Resources

ATTACHMENT 1: PCFFA/IFR Comments on Shasta River Watershed DO and Temperature TMDLs to the State Water Resources Control Board (11/29/06).

ATTACHMENT 2: *Baseline Assessment of Salmonid Habitat and Aquatic Ecology of the Nelson Ranch, Shasta River, California Water Year 2007*, Jeffrey Mount, Peter Moyle and Michael Dias, Principal Investigators. A report prepared for the U.S. Bureau of Reclamation by the Center for Watershed Studies, UC Davis, CA (undated).

ATTACHMENT 3: *Relative Effects Of Climate And Water Use On Base-Flow Trends In The Lower Klamath Basin*, Robert W. Van Kirk and Seth W. Naman. August, 2008.

References



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