



AO_LT_1230_052

Ms. Elizabeth Vasquez
 Bureau of Reclamation
 2800 Cottage Way
 Sacramento, CA 95825

December 30, 2011

Dear Ms. Vasquez,

Comment 1a - Approves of Dam Removal

On behalf of the Sierra Club and our 1.4 million members and supporters, we would like to offer the following comments on the Klamath Hydroelectric Project Facilities Removal Draft Environmental Impact Statement and Draft Environmental Impact Report (DEIS/DEIR). The Sierra Club maintains a clear position in support of dam removal, and has consistently held the position that the mainstem dams of the Klamath River must be removed in order to reopen historic salmon spawning grounds and subsequently restore native Chinook salmon, Coho salmon, and steelhead runs. As such, the Sierra Club strongly favors full decommissioning of the lower four dams of the Klamath Hydroelectric Project (KHP). In addition, the Sierra Club does not believe that dam removal should necessarily be tied to implementation of the Klamath Basin Restoration Agreement (KBRA) and the current Klamath Basin Economic Restoration Act of 2011 (HR 3398, S 1851).

Comment 2 - NEPA/CEQA

Comment 3 - KHSA

General Comments

Under the Klamath Hydroelectric Settlement Agreement (KHSA), the Secretary of Interior is to determine whether the removal of the lower four Klamath River hydroelectric dams will advance restoration of the salmonid fisheries of the Klamath Basin and whether it is in the public interest. Section 3.3.1 of the KHSA states that the Secretary shall determine:

whether, in his judgment, Facilities Removal (i) will advance restoration of the salmonid fisheries of the Klamath Basin, and (ii) is in the public interest, which includes but is not limited to consideration of potential impacts on affected local communities and Tribes.

The issues in respect to this determination are much narrower than the issues and alternatives that must be addressed in the broader environmental review. With respect to a proper evaluation of the KHSA and the KBRA, the Department should be careful to

Comment 3 cont.

separate its narrow analyses related to the Secretarial Determination required by the KHSA in Section 3.3.1 from the more substantial issues that need to be addressed in the environmental review of the KHSA, the KBRA, and other alternatives. The Sierra Club recognizes that a careful analysis of the fish passage and water-quality benefits of facilities removal will demonstrate that facilities removal will advance the restoration of salmonid fisheries of the Klamath Basin and is in the public interest. While we believe the delay and uncertainties (regarding dam removal) in the KHSA, as well as its connection to the controversial KBRA, are of concern, these problems are immaterial to the Secretarial Determination required by KHSA Section 3.3.1. An affirmative Secretarial Determination for facilities removal must be made on the merits of "Facilities Removal" alone, as directed by the KHSA.

Comment 4 - Hydrology

Water Quality Background and Comments

In 2007, the Sierra Club helped fund scientific review of the effects of potentially unnaturally low Klamath River flows associated with the KBRA (Trush 2007, Kamman 2007). This review concluded that flows during particular times of year and types of water years (dry vs. normal vs. wet) would be insufficient to protect and restore salmon populations. Furthermore, the National Research Council (NRC 2004) report on recovering endangered fishes of the Klamath River recommended expanding marshes in Lower Klamath National Wildlife Refuge (NWR) and refilling Lower Klamath Lake in order to increase water storage and re-establish natural flow regimes in the Klamath's upper basin.

Within the past year, the Expert Panel on Coho Salmon and Steelhead (Dunne et al. 2011), convened to evaluate the KBRA, also concluded that refilling Lower Klamath Lake is needed to increase flows in spring and early summer in order to improve Klamath River water quality. There is no discussion of this action in the DEIS/DEIR, and the cumulative impacts analysis completely avoids the portion of the Upper Klamath Basin in California that includes the Lower Klamath Lake, lower Lost River and Tule Lake areas.

Under the KBRA, water storage in Upper Klamath Lake will be kept artificially high during particular times of year in order to maximize water availability to the upper basin's Bureau of Reclamation Klamath Irrigation Project. This holdover of valuable water resources will likely cause unnaturally low flows in the lower Klamath River from October through February. Such low flows could have serious negative consequences to fish populations, their habitat, and critical migration refugia (Hoopa Tribe 2011). In addition, algae blooms that contribute to pollution and increased fish disease risk will be more of a problem, due to lack of winter scour (produced by normal and high river flows). KBRA supporters promise pulse flows to try to counteract this problem, but the KBRA does not mandate pulse flows, and this approach does not address water years when resources are limited.

Low flows projected by select KBRA models (Appendix E-5) would be about 60% of those that caused the September 2002 fish kill, and far less than those recommended by the

← Comment 4 cont.

region's best available science, Hardy et al. (2006) and the National Marine Fisheries Service (2010) Biological Opinion (BO). Language within the DEIS/DEIR acknowledges "DOI, NOAA Fisheries Service, and the United States Department of Agriculture have each expressed their intent to take actions consistent with the KBRA to the extent that such actions are consistent with the agency's existing legal authorities and appropriations available for such purposes" (DEIS/DEIR 2-30). The Sierra Club remains concerned that an affirmative Secretarial Decision on dam removal, in conjunction with the river flow parameters identified in the KBRA, will undermine ESA enforcement and, in below average water years, allow lower Klamath River flows that may have significant and negative impacts on salmon.

Comment 5 - NEPA/CEQA

Inadequacies within the DEIS/DEIR

Recognizing the aforementioned research and subsequent concerns regarding water quality and the health of native Klamath fisheries under the current KBRA-KHSA package, ostensibly evaluated by the DEIS, the Sierra Club still has serious concerns about the feasibility of watershed recovery under these agreements and the DEIS/DEIR evaluation.

Unfortunately, the DEIS/DEIR is substantially shortsighted and thus seriously flawed, as it does not analyze the cumulative effects of the KBRA—some of which are noted above. As a result, the DEIS/DEIR is not in compliance with the National Environmental Policy Act (NEPA) or the California Environmental Quality Act (CEQA). Avoiding discussion of pertinent KBRA issues deprives the public and Congress of important information around the Secretarial Determination and decision making regarding dam removal.

The Sierra Club recognizes the need to abate water pollution from the Klamath Project. This pollution, which is highly concentrated in the Keno Reservoir reach through the Klamath Straits Drain and the Lost River Canal, is not addressed by the DEIS/DEIR, though there is general acknowledgment that the Klamath Project tailwater is a major driver (Goodwin et al. 2011) of water quality problems throughout the basin¹.

Comment 6 - Water Quality

Furthermore, the Sierra Club maintains concerns regarding the endangered Lost River and shortnose sucker species, as these species are primary indicators of Upper Klamath Basin ecosystem health. Under the KBRA, the suckers will not be restored in Lower Klamath Lake, lower Lost River or Tule Lake for at least the duration of the agreement (50 years). According to the Native Fishes Expert Panel, the Upper Klamath Lake

Comment 7 - Fish

¹ Signatories to the KBRA must approve of the continued leaseland agriculture in the Tule Lake and Lower Klamath Lake National Wildlife Refuges (NWR) for the duration of the agreement (50 years). In essence, this means that essential marsh and lake habitats on public lands will not be restored to increase water storage and reduce nutrient pollution. No other NWR in the nation supports commercial agricultural activities to the scale of those in the upper Klamath. In order to support improved water quality in the upper basin, these essential wetland habitats should be phased back into their natural state, one intended to provide fish and wildlife habitat, and thus enabling the restoration of the ecological balance of the Klamath River.

← Comment 7 cont.

populations of these sucker species are having multiple year-class failures (Buchanan et al. 2011). These failures suggest that re-establishment of populations in areas of former abundance is needed to hedge against extinction (NRC 2004). Ironically, under the KBRA (24.2.2), the California Department of Fish and Game is required to seek legislation that will amend the California Endangered Species Act (CESA) to allow "take" of suckers, bald eagles, sandhill cranes and peregrine falcons in the Lost River Basin (this will enable CDFG to then issue a "take" permit for these species) when the Secretarial Determination is filed.

Regarding the noted concerns regarding water quality as a result of intensive commercial agriculture in the Klamath River Upper Basin, as well as impacts to endangered suckers species, the DEIS/DEIR neglects to address either of these issues.

Summary

← Comment 8 - Alternatives

Overall, the alternatives offered by the DEIS/DEIR are insufficient. Those provided do not offer alternatives that significantly address water quality improvements, nor is there an alternative to fully consider dam removal on the Klamath River without implementation of the KBRA.

Recognizing the significant shortcomings of the DEIS/DEIR, the Sierra Club would have favored an "Alternative 8," implementation of the Klamath Hydropower Settlement Agreement (KHSA) and removal of the river's lower four dams without implementation of the KBRA. Given the alternatives available, the Sierra Club cannot support the preferred Alternative 2, which supports dam removal, because it implements the KBRA. The Sierra Club strongly encourages the agency to evaluate alternatives in the EIS that fully address issues related to water quality, independent dam removal (through federal takeover), comply with NEPA and CEQA, and do not include execution of the KBRA.

In conclusion, the Sierra Club strongly favors dam removal on the Klamath River and recognizes that it is necessary to the long-term health of the watershed. We encourage the Bureau and the Department to lay the groundwork for such an action (by either Interior or other responsible decision makers) by expeditiously making a determination that removing these dams will advance the restoration of salmonid fisheries in the Klamath Basin and is in the public interest .

← Comment 1b - Approves of Dam Removal

Thanks for this opportunity to comment.

Sincerely,

/s/
David Scott
Vice President for Conservation
Member, Board of Directors
Sierra Club

References

Buchanan, D., M. Buettner, T. Dunne and G. Ruggerone. 2010. Scientific Assessment of Two Dam Removal Alternatives on Resident Fish. Expert Panel Report for KBRA. Produced by Atkins Co., Portland, OR. 194 pp.

Dunne, T., G. Ruggerone, D. Goodman, K. Rose, W. Kimmerer, and J. Ebersole. 2011. Draft Scientific Assessment of Two Dam Removal Alternatives on Coho Salmon and Steelhead. KBRA Expert Panel produced with assistance from PBSJ, Portland, OR. 149 pp.

Hardy, T.B., R.C. Addley and E. Saraeva. 2006. Evaluation of Instream Flow Needs in the Lower Klamath River: Phase II, Final Report. Institute for Natural Systems Engineering, Utah State University, Logan. UT. 247 pp.

Hoop Valley Tribe. 2011. Comments of Hoopa Valley Tribe on DEIS/DEIR for Klamath Facilities Removal. Letter to Elizabeth Vasquez, U.S. BOR. Hoopa Valley Tribe, Hoopa, CA. 61 pp.

Kamman, G. 2007. Comments on Independent Model Review for Klamath Settlement Negotiations Klamath Independent Review Project (KIRP). Letter of November 9, 2007. Produced under contract to the Sierra Club. Kamman Hydrology, San Rafael, CA. 19 pp.

National Marine Fisheries Service, Southwest Region, March 2010, Final Klamath Project Biological Opinion, File Number 151422SWR2008AR00148.

National Research Council (NRC). 2004. Endangered and threatened fishes in the Klamath River basin: causes of decline and strategies for recovery. Committee on endangered and threatened fishes in the Klamath River Basin, Board of Environmental Toxicology, Division on Earth and Life Studies, Washington D.C. 424 pp.

Trush, W. 2007. Commentary on Klamath River Settlement. Letter of November 9, 2007. Produced under contract to the Sierra Club. McBain and Trush, Arcata, CA. 19 pp.

Comment Author Scott, David
Agency/Assoc. Sierra Club
Submittal Date December 30, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1230_052-1	<p>Comment Noted.</p> <p>Master Response GEN-2 Some People Approve of Dam Removal, Others Oppose Dam Removal.</p>	No
AO_LT_1230_052-2	<p>Master Response ALT-4 Elimination of Alternative 8-Dam Removal Without KBRA from Detailed Study.</p> <p>Master Response ALT-7 Elimination of KBRA and KHSA Including Alternatives 16-Dredge Upper Klamath Lake and 18- Partition of Upper Klamath Lake from Detailed Study.</p>	No
AO_LT_1230_052-3	<p>The KBRA and KHSA are inextricably linked.</p> <p>Master Response ALT-4 Elimination of Alternative 8-Dam Removal Without KBRA from Detailed Study.</p>	No
AO_LT_1230_052-4	<p>The Modeled KBRA Hydrology that is described in Reclamation (2012d) is the hydrology that is used in the analysis for the Proposed Action Alternative in the EIS/EIR and they are not identical to the KBRA hydrology found in Appendix E-5 of the KBRA. The text on p. 2-20 of the Draft EIS/EIR had been corrected to read "Operation of Reclamation's Klamath Project and the related river flows, measured at the United States Geological Survey gauge downstream of Iron Gate Dam, would be according to the hydrologic model outputs in Reclamation (2012d)."</p> <p>Master Response AQU-11 NMFS BO, ESA and KBRA Water Management.</p> <p>The comment states "Within the past year, the Expert Panel on Coho Salmon and Steelhead (Dunne et al. 2011), convened to evaluate the KBRA, also concluded that refilling Lower Klamath Lake is needed to increase flows in spring and early summer in order to improve Klamath River water quality." The text actually appears in Comment # 396 which was provided to the Expert Panel for consideration and does not accurately portray the conclusion of the Expert Panel. The Panel's response to the comment #396 was that "The Panel stated that changes in flows would be small under dams out with KBRA" (Dunne et al. 2011, p. 199).</p> <p>Master Response AQU-6A Expert Panel Coho, Steelhead and Chinook.</p> <p>Master Response AQU-16 Benefits to Coho.</p> <p>Master Response AQU-21 NRC Dam Removal Help Coho.</p>	No

Comment Author Scott, David
Agency/Assoc. Sierra Club
Submittal Date December 30, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1230_052-5	<p>Master Response WQ-4 Hydroelectric Project Impacts to Water Quality & Anticipated KHSA/KBRA Improvements.</p> <p>Master Response AQU-31 Thermal Lag and Diel Temperatures.</p> <p>Master Response WQ-6 Periphyton Growth and Fish Disease.</p> <p>Master Response HYDG-1 Flood Protection.</p> <p>Master Response AQU-33 ESA Compliance.</p> <p>The KHSA and KBRA are negotiated agreements and do not solve all water quality issues in the Klamath Basin. The KBRA is a negotiated agreement that attempts to balance interests of fish and agriculture; this necessarily involves compromise on all sides.</p> <p>Master Response N/CP-22 How KBRA Was Analyzed.</p>	No
AO_LT_1230_052-6	<p>Analysis contained within the Draft EIS/EIR indicates that diversion limitations under KBRA will provide a more reliable water supply to the NWRs and will be beneficial (see Section 3.14.4.3, page 3.14-26). Agricultural return flows in the Keno Reach are discussed in general terms with respect to water quality improvements under the TMDLs in Draft EIS/EIR Section 3.2. Explicit mention of Klamath Straits Drain has been added to 3.2.4.3.1.3 Nutrients-Upper Klamath River. As described in Draft EIS/EIR Section 3.2.4.3.2.10 KBRA (pages 3.3-125 to 3.2-132), resource management actions implemented under KBRA as part of the Proposed Action would accelerate long-term improvements in water quality, including those anticipated under the TMDLs. Trap and haul has been proposed to transport migrating adult fish upstream of the Keno Impoundment when certain adverse water conditions exist. Additional detail on the interaction of the TMDLs and the Alternatives is provided by the Water Quality SubTeam (2011) (also referred to as the Water Quality SubGroup), as cited in Draft EIS/EIR Section 3.3.5, page 3.3-241. This document, entitled "Assessment of Long Term Water Quality Changes for the Klamath River Basin Resulting from KHSA, KBRA, and TMDL and NPS Reduction Programs" can be found at http://klamathrestoration.gov/keep-me-informed/secretarial-determination/role-of-science/secretarial-determination-studies.</p> <p>The KBRA does not require the Lower Klamath Lake and Tule Lake National Wildlife Refuges to allow or continue lease land farming. The KBRA provides for an allocation of water to the refuges. Water required for lease land farming does not count</p>	Yes

Comment Author Scott, David
Agency/Assoc. Sierra Club
Submittal Date December 30, 2011

Comment Code	Comment Response	Change in EIS/EIR
	<p>against the Refuge Allocation (KBRA Section 15.1.2.D.i). See Klamathrestoration.gov for a copy of the KBRA.</p> <p>Master Response WSWR-11 Effects on Refuge Water Supply.</p> <p>Future refuge management decisions with respect to lease land farming would be speculative and are beyond the scope of the analysis of this EIS/EIR.</p>	
AO_LT_1230_052-7	<p>As described in the Section 3.3.4.3 of the Draft EIS/EIR, the Proposed Action results in higher water elevations in Upper Klamath Lake, which would benefit Lost River and shortnose suckers. The KBRA is expected to provide benefits to sucker populations through the following measures: nutrient reduction, reconnecting former wetlands to Agency Lake, reconstructing quality rearing habitat for early life stages, and restoring shoreline spring spawning habitat restoration, among others. Restoration actions associated with KBRA implementation under the Proposed Action could alter habitat availability and suitability and affect lost river and shortnose suckers and are anticipated in the long term to improve conditions for sucker populations within Klamath Lake. Based on improved habitat quality, the effect of the Proposed Action would be beneficial for Lost River and shortnose sucker populations in the long term.</p> <p>As discussed on p. 3.3-90 through 3.3-91, and 3.3-126 through 3.3-127 of the Draft EIS/EIR, from the Upstream End of J.C. Boyle Reservoir to Iron Gate Dam the Proposed Action would eliminate reservoir habitat. Under the Proposed Action sub-adult and adult Lost River and shortnose suckers in reservoirs downstream of Keno Dam would be captured and relocated to Upper Klamath Lake (Buchanan et al. 2011a). Those not relocated to the Upper Klamath Basin would likely be lost; however, little or no reproduction occurs downstream of Keno Dam (Buettner et al. 2006), there is no potential for interaction with upstream populations, and they are not considered to substantially contribute to the achievement of conservation goals or recovery (Hamilton et al. 2011).</p> <p>Lost River and shortnose suckers are listed as fully protected species under California Fish and Game code; thus, any take of these species is prohibited. However, a component of the Proposed Action includes legislation to permit the take of some individuals during implementation. Reservoir removal associated with dam removal under the Proposed Action could alter habitat availability and affect lost river and shortnose suckers (Draft EIS/EIR, § 3.3.4.3, p. 3.3-126 to 3.3-127.) Based on reduction in abundance within reservoirs, the effect of the Proposed Action</p>	No

Comment Author Scott, David
Agency/Assoc. Sierra Club
Submittal Date December 30, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1230_052-8	<p>would be significant for Lost River and shortnose sucker populations in the short term. (Ibid.) However, as discussed above, implementation of Mitigation Measure AR-6 could be implemented to reduce the impact to individuals within reservoirs by rescuing fish prior to reservoir drawdown. Based on small numbers of individuals affected after mitigation, the effect of the Proposed Action would be less-than-significant for Lost River and shortnose sucker populations in the short term after mitigation. (Ibid.)</p> <p>Master Response ALT-4 Elimination of Alternative 8-Dam Removal Without KBRA from Detailed Study.</p>	No

AO_WI_1108_028

From: lsheehan@earthlaw.org[SMTP:LSHEEHAN@EARTHLAW.ORG]
Sent: Tuesday, November 08, 2011 1:19:37 PM
To: BOR-SHA-KFO-Klamathsd; werner@wrinkledog.com
Subject: Web Inquiry: Full removal of Klamath Dams Auto forwarded by a Rule

Name: Linda Sheehan
Organization: Earth Law Center

Subject: Full removal of Klamath Dams

Comment 1 - Approves of Dam Removal

Body: Please register the strong support of Earth Law Center for Alternative 2 - Full dam removal. Thank you.

Comment Author Sheehan, Linda
Agency/Assoc. Earth Law Center
Submittal Date November 8, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_WI_1108_028-1	The Secretary of the Interior acknowledges that there are many people who support dam removal and there are many who maintain that the dams should stay in place. There are a range of reasonable alternatives presented in the Draft EIS/EIR; 18 alternatives are presented in the Draft EIS/EIR, five of which are examined in detail using the best available science. There are positive and negative aspects for each of these alternatives. The potential effect of each alternative is discussed in the EIS/EIR and will be fully considered by the Secretary, along with public input and peer reviewed science before making a final determination.	No

AO_LT_1020_010

**Statement to Klamath DEIS Hearings – Yreka, CA
October 20, 2011**

**Glen Spain, Northwest Regional Director
Pacific Coast Federation of Fishermen’s Associations (PCFFA)**

Comment 1 (Entire Doc) -
Approves of Dam Removal

Why Klamath Dam Removal Makes Economic Sense

The 1956 Federal Energy Regulatory Agency (FERC) 50-year license to operate the Klamath Hydropower Project expired in 2006. PacifiCorp, the company that owns the Klamath dams (J.C. Boyles Dam in Oregon, and CopCo Dams 1 & 2 and Iron Gate Dam in California, in river-descending order), can limp along on *temporary* one-year FERC license extensions only while an active application for FERC relicensing is pending. That time is coming to a close and a decision on the fate of these dams must soon be made. No privately owned dam can legally operate without a valid FERC license.

Whatever choice PacifiCorp (also known as “Pacific Power” in California) makes, the company’s costs of that decision will ultimately be charged to its customer/ratepayers. *This is how electrical utilities work.* Their only source of revenues is generally the creation of electrical power they then sell to their customers, collecting enough revenues from their customers to fund their operations. This is all regulated by state Public Utilities Commissions (PUCs) in each state where they operate, as the watchdog agencies that assures that their state’s customers get charged fair, reasonable – *and generally the lowest-cost* – power rates for the services they receive.

There are only two legal options for these Klamath Hydropower Project dams, both of which will cost Pacific Power’s ratepayers money:

(1) Fix them up and relicense them to modern standards, which turns out will cost *at least* \$460 million, and quite likely more than \$500 million once all (currently unknown) water quality mitigation costs are added in, according to Pacific Power’s own testimony to the PUCs,¹ or;

(2) Decommission and remove these aging dams entirely – which it can now do under the Klamath Hydropower Settlement Agreement (KHSA) for a “capped” cost to its customers of only \$200 million, with the rest paid by the State of California.²

MAINTAINING THE DAMS AS THEY ARE TODAY IS SIMPLY NOT A LEGAL OPTION.

¹ See CPUC Docket No. A10-03-015, *Testimony of Cory Scott*, Exhibit PPL-300 (March 18, 2010), pg. 6; Opening Brief of PacifiCorp (Nov. 17, 2010), pg. 6. The company “conservatively estimates” relicensing costs of at least \$400 million in capital improvements, plus \$60 million in operations costs and maintenance over a 40-year relicensing term, not counting likely large (but still unknown) additional costs for any water quality mitigations that may be required to meet state 401 Certification requirements in Oregon and California.

² The rationale for this bi-state equitable cost-sharing scheme is that nearly 600,000 Oregonians are Pacific Power customers already paying into a Klamath Dam Removal Trust Fund monthly, while only about 40,000 Californians are ratepayers – but most economic benefits for restored Klamath salmon fisheries will be in California.

The best current estimate for the total costs of decommissioning and full removal of the four dams and all their facilities, so that the Klamath River and its salmon can once move run freely through them, is only about \$290 million, including various environmental mitigation measures.³ By implementing dam removal through the KHSA Pacific Power thus saves its customers at least another \$90 million as well as reduces its own company and ratepayer risk and uncertainty. This is another reason the KHSA is a good deal for Pacific Power's customers.

On May 5th, 2011, the California Public Utilities Commission (CPUC) formally confirmed that the KHSA is indeed the most cost effective, least risk and therefore best alternative for Pacific Power's customers as compared to relicensing.⁴ A prior September 16, 2010, ruling by the Oregon PUC came to the same conclusion.⁵ And since under the KHSA these customer costs for dam removal are being spread out over more than 9 years, the current average Siskiyou County Pacific Power residential customer's rate increase for the costs of Klamath dam removal is presently only about \$1.61/month.

The reality is that all four dams combined do not generate all that much power. Although the whole Klamath Hydroelectric Project is technically rated for maximum power generation of about 169 megawatts (MW), these dams cannot run at maximum capacity 24/7, especially during summers when turbine flows are lowest. The entire Project combined actually generated only about 82 MW of power on average over the past 50 years, according to FERC records – and 78 MW combined for just the four dams in question here.⁶ By way of comparison, a single modern electrical power plant can continuously generate 1,000 MW or more.

And according to estimates by FERC, even after all the expensive retrofitting to meet modern standards for relicensing, these four dams combined would then only generate about 58 MW of power on average -- *about 26% less than they do today.*⁷

Relicensing thus means spending a *great deal* of money for what is actually *very little* power. In fact, FERC estimated in its 2007 Final Environmental Impact Report (FEIS) on relicensing that even if fully relicensed, the required retrofitting would be so expensive for so

³ See *Detailed Plan for Dam Removal – Klamath River Dams* (Sept. 15, 2011), Table ES-1, pg. 7, at: http://klamathrestoration.gov/sites/klamathrestoration.gov/files/Klamath_DetailedPlan2011.pdf. Partial removal, which means leaving some of the building structures in place but still removing the dams sufficiently to produce a free-flowing river, can be done even cheaper, estimate at about \$247 million.

⁴ California PUC Final Order at: <http://docs.cpuc.ca.gov/published/proceedings/A1003015.htm>.

⁵ Oregon PUC Final Order at: <http://apps.puc.state.or.us/orders/2010ords/10-364.pdf>.

⁶ The November, 2007 FERC Final EIS ("FERC FEIS") is available online at: http://elibrary.ferc.gov/idmws/File_list.asp?document_id=13555784 or found by a FERC docket search at www.ferc.gov, Docket No. P-2082-027 posted November 16, 2007, Document No. 20071116-4001. This number is taken from FERC FEIS, pg. 1-1, as 716,800 MWh, which divided by hours per year (24 hrs./day X 365.25 days/year) = 81.77 MW actual output, rounded to 82 MW – less than 2% of Pacific Power's total current power production. DEIS numbers are slightly lower (see DEIS Table ES-1 at page ES-14) because of not counting the very small amount of power generated by the Fall Creek and the East Side and West Side intakes and turbines at Link River Dam. East Side and West Side power plants are scheduled to be decommissioned regardless of relicensing. Excluding those three very small facilities gives an average 50-year annual generation record for the four remaining dams (J.C. Boyle, CopCo 1 & 2 and Iron Gate Dams) of only 78 MW.

⁷ FERC FEIS, Sec. 4.4, pg. 4-4 of 533,879 MWh = 60.90 MW relicensed output, rounded to 61 MW. Not counting Fall Creek, and the Eastside and Westside turbines, however, this comes to only 58 MW.

little return that these four dams would then operate *at more than a \$20 million/year net loss*.⁸ *This means a 40-year FERC license would cost the company's ratepayers a total of at least \$1.3 billion – about 6.5 times the \$200 million “cap” on dam removal under the KHSA.*

Relicensing is just not an economically sensible option for either the company or its ratepayer-customers. The economic “bottom line” is that it’s just a lot cheaper for customers to remove the dams than to keep them.

And all this is *completely ignoring* likely economic and jobs benefits of a restored world-class salmon run, a more stable irrigation system, better water quality for the river, the gain of up to 4,300 new jobs with nearly 3,200 long-term jobs (and the 1,400 short-term construction jobs nearly all in Siskiyou County) and the many other benefits also highlighted in the DEIS.

The majority of Siskiyou County residents are Pacific Power customers and ratepayers, and so Siskiyou County residents, more than anyone else, should be concerned about minimizing the costs they will have to pay for either option ultimately chosen. Many coastal commercial fishermen as also company ratepayers, particularly in Del Norte County and coastal Oregon, and we certainly don’t want to pay more than these dams are worth either. Keeping them in place would require us to do just that, costing at least \$1.3 billion but with no upper limit on how much it could ultimately cost. For all of Pacific Power’s customers, dam removal under the Klamath Hydropower Settlement Agreement (KHSA) is a really good deal!

The KHSA also guarantees that the City of Yreka’s water supply culvert from the Fall Creek inflow will be completely upgraded, to the tune of several million dollars, including new spring intake fish screens the City would otherwise have to pay for. Without the KHSA, however, much of this benefit to the City of Yreka could go away: with FERC relicensing the City would not get fish screen money or culvert upgrades and would have to pay for these out of pocket, and if dam decommissioning ultimately took place without the KHSA, Pacific Power would not have to undertake more than a fraction of these mitigation costs, and those would be subject to likely litigation. So the KHSA is a good deal for the City of Yreka as well.

As to replacement power, Pacific Power is already legally committed to bringing more than 1,400 MW of brand new, cost-effective renewable power online by 2015.⁹ This nearly *18 times more* power than the four Klamath dams generate all together. Adding at least 58 MW of cost-effective and clean (carbon-free) replacement power to its grid after 2020, as it intends to do under the KHSA, would be an almost trivial task by comparison. There are many options for the replacement of this power from comparable carbon-free or renewable sources by 2020.¹⁰

PCFFA-Statement for DEIS Record (10-20-11)

⁸ FERC FEIS (Nov. 2007), Table 4-3 on pg. 4-2.

⁹ See for instance, *Final Order*, Measure 41, in CPUC Docket A05-07-010.

¹⁰ A *single* modern wind turbine, for instance, can generate up to 6 MW of power and it would take only 39 such wind turbines, even at a very conservative estimated 25% efficiency, to *completely replace* the total amount of “green power” (58 MW) these four dams could produce after any hypothetical relicensing. A single modern “wind farm” may contain hundreds of such wind turbines. Also, even very modest conservation measures taken anywhere within Pacific Power’s six state power grid could replace this very small amount of power easily and cheaply.

Comment Author Spain, Glen
Agency/Assoc. Pacific Coast Federation of Fishermans Assoc.
Submittal Date October 20, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1020_010-1	<p>Comment Noted.</p> <p>EIS/EIR Section 3.18, Public Health & Safety, discusses replacement power as a result of hydroelectric facility removal. Section 3.15, Socioeconomics discusses effects to electricity rates and other economic effects, including job creation. Section 3.2, Water Quality, evaluates water quality effects and Section 3.3, Aquatic Resources, evaluate fisheries effects, including benefits of the Proposed Action.</p>	No

AO_LT_1228_038



Institute for Fisheries Resources (IFR)
Pacific Coast Federation of Fishermen's Associations (PCFFA)
C/o Northwest Regional IFR/PCFFA Office
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28 December 2011
Via Email - PDF format

Mr. Gordon Leppig
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RE: Formal written comments on Draft EIS on Klamath Facilities Removal

Dear Ms. Vasquez and Mr. Lepping:

These are the formal written comments of the Pacific Coast Federation of Fishermen's Associations (PCFFA) and the Institute for Fisheries Resources (IFR) for the public record for the Draft Environmental Impacts Statement/Report being prepared under both NEPA and CEQA to assess the impacts of the proposed removal of four small hydropower dams in the Klamath Basin. Please include them in the public record. These comments are provided via email, in PDF format for easy printing and convenience, before the extended December 30, 2011, deadline.

General Overview Comments: In general, we find this joint DEIS/DEIR to be an *exceptionally thorough, detailed and complete* analysis of all the likely impacts, positive and adverse, of the Proposed Action and Alternatives, including proposed mitigation measures for adverse impacts in many areas. Especially important are the mitigation alternatives, which we are very glad to see and generally believe to be necessary, useful and effective ways to mitigate

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for those adverse impacts identified. Our comments are intended to be additive to the already thorough analysis, including additional mitigations for certain impacts as suggested herein, and a few corrections to existing text to make it more accurate or to correct obvious errors.

Note on Terminology: Throughout these comments we will use the technical term “salmonid” to collectively refer to or mean all those species of the genus *Oncorhynchus* which are known to occur within the Klamath Basin and which are anadromous species in their life cycles. This includes “king” or chinook salmon (*Oncorhynchus tshawtscha*), coho or “silver” salmon (*Oncorhynchus kisutch*), steelhead (*Oncorhynchus mykiss gairdneri*) and coastal sea-run cutthroat (*Oncorhynchus clarki clarki*). When we use the term “salmon” alone, or use only the common name of a fish, we are referring to only one or some of these species, in accordance with the context of that sentence or discussion.

← Comment 1 - Approves of Dam Removal

Preference of Alternative: PCFFA and IFR both strongly support both Alternative 2 and 3. Both are functionally equivalent insofar as their impacts on salmonid fisheries and other aquatic resources, so the choice between them lies in factors other than salmonid restoration needs, such as costs. Either would satisfy the needs of PCFFA and IFR and lead to equivalent degrees of salmonid conservation.

Scope of Our Analysis: There are an impressive number of thoroughly considered facets of this DEIS analysis, but many of them are outside our direct expertise. We have therefore largely limited our detailed analysis herein to those issues directly related to the west coast salmonid fisheries or in which we have considerable expertise. We particularly paid attention to fisheries impacts and economic projections from the associated studies on likely fisheries impacts, as discussed below.

Importance of Mitigation: We have also given careful consideration to various mitigation measures which are either among those already proposed, or which could be added to the mitigation measures already proposed, to help reduce the “frictional costs” of change from the current *status quo* to a free-flowing river which supports expanded, healthy and diverse salmonid fisheries.

Consideration and crafting of appropriate mitigation measures to do our best to hold harmless those who might suffer adverse impacts from dam removal (such as certain Siskiyou County landowners around Copco Lake) would go a long way toward reducing the understandable political resistance to the changes proposed. And we also believe that it is only fair to do so.

Many of the impacts statements are repeated in multiple locations throughout the DEIS. Throughout this analysis, where we have identified an error or misstatement in the DEIS in one section, our suggested corrections should be applied to each comparable section elsewhere in the DEIS text in which that impact is discussed, for every relevant Alternative.

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Comment 2 - Alternatives

DISCUSSION OF ALTERNATIVES ANALYZED

Detailed Analysis of Alternative 8 Needed: As others have discussed in their comments, we too recommend that “Alternative 8 (Full Facilities Removal of Four Dams Without KBRA) be *fully analyzed*. There are several reasons for doing this, including: (1) if the Klamath Settlement Agreement collapses, this may become the primary path of choice in the FERC relicensing process as the only alternative to full relicensing; (2) there are many opponents of the KBRA who are pushing for this FERC-only alternative, believing it to be a superior outcome – and we believe such an analysis will likely show otherwise; (3) it would be relatively easy to do this analysis, as four-dam removal impacts alone have already been analyzed in the Proposed Action. Four dam removal without the KBRA would simply be the Proposed Action but without any of the additional water, power, refuge and other environmental or economic benefits of the KBRA, which are analyzed separately under the Proposed Action. Indeed, DEIS Appendix A states (pg. 4-8), relevant to Alternative 8:

“The impacts from dam removal would be the same as the Proposed Action, but the restoration elements of the KBRA would not provide benefits to help offset these environmental impacts.”

Four-dam removal pursuant to the FERC process only, and without the Klamath Settlement Agreements, would also eliminate the KHSA, including its: (1) various interim mitigation measures paid for by PacifiCorp; (2) its “customer cap” of \$200 million, thus exposing its customers to unknown higher liabilities, and also; (3) all potential PacifiCorp liability waivers as specified in the KHSA.

Making this Alternative 8 part of the explicit and detailed analysis will demonstrate quite clearly the benefits of the KBRA and KHSA Settlements, separate from dam removal *per se*, and thus particularly demonstrate more clearly the benefits of the KBRA toward salmonid recovery in the Klamath Basin. As much of this analysis has already been done in looking at the other Alternatives, the additional burden of compiling this analysis for a formal review of Alternative 8 should not be unduly burdensome. Including Alternative 8 would also make the Final EIS more immune to litigation over whether Alternative 8 should have been included in the formal and detailed analysis.

Comment 3 - Alternatives

Rationale For Rejection of Alternatives 10 & 11 As Unfeasible Should Be Amplified:

We also recommend a more detailed analysis on why Alternative 10 (Fish Bypass: Bogus Creek Bypass) and Alternative 11 (Fish Bypass: Alternative Tunnel Route) were correctly rejected because they are unfeasible.

These two fish passage proposals by way of constructed stream channel or “tunnel” bypass routes have been a favorite “alternative” proposed by the most ardent opponents of facilities removal in any form, and their specific exclusion from detailed analysis is likely to be the subject of later litigation. There are several additional reasons, in addition to the purely biological reasons given in DEIS Appendix A (pgs. 4-9 to 11) and in the CDFG 2009 reference, that these

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← Comment 3 cont.

options are unfeasible, including: (1) the need for routing such channels/tunnels over or underneath private lands, and thus the necessity of condemnation proceedings to have any certainty of obtaining rights of way and appropriate easements – *a condemnation process that PacifiCorp, which is a non-governmental entity, has no power to exercise and cannot feasibly accomplish*; (2) high costs of such construction, especially Alternative 11 which would require tunneling through a small mountain range; (3) the highly speculative and uncertain nature of whether such a grandly engineered fish bypass facilities would even work; (4) the fact that such a bypass facility would correct, mitigate or cure none of the many water quality problems (including poor water quality conditions that encourage toxic algae blooms in the reservoirs and fish pathogen transmission below Iron Gate Dam) that the existence of the dams in their current configuration create; (5) and; the fact that these expensive bypass projects would solve none of the fish passage problems at other facilities, but just add to the total costs of fish passage generally for a less certain outcome.

All of these additional feasibility factors should be discussed more fully in the DEIS Appendix A under discussions of Alternatives 10 and 11, if nothing else to help “litigation proof” the DEIS from legal attacks on the rejection of these two “Alternatives” from further consideration because of their unfeasibility.

DEIS SECTION-SPECIFIC COMMENTS

← Comment 4 - Alternatives

Alternative 5 is Inherently Unfeasible: Alternative 5 takes out the very large Copco 1 dam but leaves in the Copco 2 dam, which is a very small dam with very little water (or sediment) storage capacity behind it. However, the Copco 1 dam directly above it has an estimated 7,440,000 yd³ of sediment stored behind it (see DEIS Table 3.3-2, pg. 3.3.-31) of which an estimated 3.6 to 6.1 million yd³ is expected to rather quickly flow downriver (see DEIS Figure 3.3-8, pg. 3.3-79). This means the very small reservoir impounded behind Copco 2 dam would fill up within a few days, perhaps within a few hours, after the removal of Copco 1, leaving that dam and its fish passage facilities essentially non-functional and potentially a future safety hazard. Even after most of this initial sediment surge has washed through the system, and even if the Copco 2 reservoir were dredged out, under Alternative 5 the Copco 2 dam would still remain the first catch basin for all normal sediment loads eroding naturally downriver below J.C. Boyle dam. This alone would guarantee that the very small reservoir behind Copco 2 dam would remain continually overwhelmed and filled up by sediments.

Whether Copco 2 dam could even continue to generate power with a sediment-filled reservoir behind it is problematical. At best this sediment issue would also be problematical for the future functioning of any fish passage facilities at the Copco 2 dam, which would likely be continuously overwhelmed by mud and sediment flowing downriver even under normal conditions, and thus have to be frequently dredged out – all at great expense, especially given near total lack of access by road.

Our hypothesis is that these conditions make both continued power production and functional fish passage at Copco 2 unfeasible under this Alternative 5. This issue is touched upon briefly in

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← Comment 4 cont.

the DEIS discussion but needs to be amplified upon, and some feasibility assessment of continuing both power production and functional fish passage facilities in light of that overwhelming sediment load settling in and filling the very small Copco 2 reservoir should be made.

Comment 5 - Economics

Definition of “Jobs” Should Be Converted to “Full-Time Equivalent (FTE) Jobs Numbers Throughout the Economic Analyses: At numerous places within the DEIS an assessment of the impacts of the Proposed Action and its Alternatives is made in terms of job impacts. However, in many places it is unclear what is meant by the term “jobs,” which is used interchangeably in several places to refer to full-time, part-time *and* temporary employment opportunities. Comparing one type of “job” to other types of very dissimilar jobs is a classic “apples-to-oranges” comparison that can be very misleading and is very confusing in these DEIS discussions.

As much as possible, all average annual “jobs” impacts numbers should also be explicitly expressed in terms of full-time equivalent (FTE) jobs, thus removing the semantic confusions between part-time and full-time positions. For temporary construction jobs, these should also be converted to FTE “full time equivalent” numbers, but noted as of more limited duration (e.g., under two-years in duration).

The “Klamath Regional Economics Fact Sheet” highlights this confusion of terminology. In Table 1, column 3, titled “Average Annual Full-Time, Part-Time or Temporary Jobs,” these numbers are not very meaningful, nor cross-comparable, unless they are all first expressed in terms of FTE “full-time equivalent” numbers. Making that conversion throughout the DEIS wherever possible will make this chart much more useful and understandable to the general public.

Comment 6 - Fish

Impacts On Steelhead Need More Analysis: Both Klamath Basin-origin chinook and steelhead are harvested within the Klamath Basin or associated coastal areas. It is clear from all the careful analysis and modeling that has gone into the DEIS that the Proposed Action would greatly benefit several salmonid species, but this analysis is much more detailed with regard to the fall chinook salmon populations and their associated commercial, recreational and Tribal fisheries than it is for steelhead. This is in part a reflection of the much more detailed modeling that can be done for chinook salmon impact through the PFMC “harvest model” and through such modeling tools as SALMOD, all of which are calibrated with regard to fall-chinook as the primary commercially harvestable species.

However, to the degree it is possible to do so, additional modeling and economic impacts assessment work needs to be done to ascertain both the biological impacts and economic (harvest) impacts of the Proposed Action and other Alternatives on the basin’s steelhead populations. Steelhead are especially likely to recolonize the upper basin after dam removal. Evidence that steelhead populations were widespread in the upper basin in areas historically above the dams is well known. Steelhead typically thrive in upper portions of similar rivers, and are capable of swimming up gradients that would block coho or even chinook.

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← Comment 6 cont.

While steelhead are not a commercially harvested species, and thus not of direct interest to PCFFA or the commercial fishing industry, it is nonetheless an important part of the overall fishing-based economy of the Klamath Basin, and this in-river recreational steelhead fishery attracts many people to the basin, who also bring money to spend in the region. This was mentioned in some places in the DEIS but this discussion could benefit from some amplification on this additional potential economic benefit of the Proposed Action.

To the degree that we are able to do so, in terms of the impacts of all these Alternatives in the DEIS, they should also be assessed in terms of additional benefits of an expanded steelhead recreational fishery. If economic benefits of steelhead returns, and the resumption of steelhead fisheries above Iron Gate Dam, cannot be precisely quantified for lack of any way to quantify the total number of steelhead likely to recolonize the upper basin (as noted in the DEIS, pg. 3.15-59), it should still be possible to determine the amount of likely economic benefit per 1,000 fish harvested. This could be done by looking at the economic impacts of other, established steelhead fisheries in other basins, and then deriving such numbers of “economic benefits per 1,000 fish harvested” from these already existing fisheries, and then arguing by analogy that, since there is no fundamental difference in the potential steelhead or recreational fishing productivity between those other basins and the upper Klamath basin, that similar “benefits per 1,000 fish harvested” should also occur in the upper Klamath once these steelhead populations have been stabilized and are available for sportfishing harvest. This would then make it possible to estimate the economic benefits of a restored upper Klamath basin steelhead fishery based on whatever assumptions one would like to make of the number of steelhead likely to be caught per unit of effort.

If the Klamath basin restored upper basin steelhead fishery economic impact estimates are not quantitatively possible within current modeling and data from similar recreational steelhead fisheries elsewhere, at the least it should be noted in the DEIS that the additional economic impacts of the steelhead fisheries are not included in the overall economic impacts analysis, but that these are substantial – and thus make these existing economic numbers for recreational fisheries likely a substantial understatement of total economic benefits from full river restoration under the Proposed Action.

Comment 7 - GHGs

Greater Emphasis Needed on Dam Removal as Mitigation Against Global Warming:

There is no question that the Klamath Basin is already feeling the effects of global climate change (see for instance Barthelow, 2005). One of the most important mitigation measures that can be taken to protect river ecosystems (and especially cold-water anadromous salmonids) from the impacts of future watershed climate changes is to restore those watersheds as closely as possible to their normative hydrological functions so that they maintain as much of their biological diversity as possible. This “buffering effect” for healthy rivers has been verified by much recent research and should be given greater emphasis as a net benefit of KBRA river restoration under the Proposed Action. It is alluded to in some sections, in particular the Water Quality section of the DEIS, which states that:

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← Comment 7 cont.

“As described for the No Action/No Project Alternative, climate change is expected to increase summer and fall water temperatures in the Klamath Basin on the order of 1-3° C. (1.8-5.4° F.) (Bartholow, 2005, Perry et al. 2011). The Proposed Action would decrease long-term late summer/fall water temperatures and would therefore increase the likelihood that beneficial uses would be supported under climate change.” (DEIS, pg. 3.2-79)

Salmonid species in the Klamath are adversely affected by water temperatures above about 20° C. (68° F.), which is the water temperature point at which salmonid mortalities begin to greatly increase with rising water temperature. But projected slightly higher spring water temperatures would come at a time when water temperatures are already generally very low, and so any minor spring time increases would still be well within the range of temperature tolerances for salmonids species. Not so for higher temperatures in the late summer and fall, which is when current climate change increases accumulate and are additive to artificial increases caused by the thermal heat-sinks of the reservoirs behind the dams. This late summer/fall time frame is the period of most danger of major adult fish kills such as occurred in September, 2002. All in all, the decreases in water temperatures projected for the late summer and fall from Alternatives 2 & 3 are likely beneficial for in-river salmonids, while the slight temperature increases above already relatively cold water temperatures that are projected to occur during the spring are not likely to be significantly harmful. There is some discussion of these factors in Chapter 10 (Greenhouse Gasses/Global Climate Change), especially at DEIS pgs. 3.10-21 to 22, but more could well be said on this subject. In addition, the DEIS discussion on climate change impacts should underscore that the KBRA itself contains provisions for monitoring and mitigating the impacts of global climate change on the Klamath Basin and its water resources as well (at KBRA Sec. 19.4)

Comment 8 - Groundwater

Incorrect Explanation of KBRA Groundwater Pumping “6% Impacts” Rule: On DEIS pg. 3.3-142, the explanation of the KBRA’s “6% Impacts Rule” for determining whether or not there is a significant “adverse impact” on groundwater-fed river flows is incorrectly and simplistically stated as follows:

“A plan would be developed for monitoring groundwater in order to restrict pumping to no more than 6 percent of flows in the reach upstream of Copco 1 Dam that is fed predominately by springs.”

And again this mischaracterization is repeated on DEIS pg. 3.3-142:

“The On-Project Plan would include a groundwater monitoring plan that limits pumping so that flows from springs in the watershed upstream of Copco 1 Dam would not be reduced by more than 6 percent”

This is an incorrect formulation of this rule. The rule expressed in KBRA Sec. 15.2.4.A is one of *an absolute* “no adverse impact” standard on springs feeding local rivers as a flat rule. If

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← Comment 8 cont.

“adverse impacts” can actually be shown through modeling, monitoring or otherwise, these would be *absolutely* prohibited under this rule, not “allowed” for any way up to 6%.

The “6% rule” only acknowledges that hydrological monitoring is typically done with field equipment that currently has about a 5% plus or minus margin of measurement error, and so that any observed reduction of spring flows by 6% or more was simply *pre-defined* to be “significant” adverse impacts. Nonetheless, if such adverse impacts can be show by USGS or other modeling to any degree, then KBRA Sec. 15.2.4.A.i states at the end as follows:

“Determination of Adverse Impact will be based on the most probable value for a specific location provided by USGS modeling and monitoring, regardless of associated confidence intervals or expressions of uncertainty or imprecision.”

In addition, the baseline for comparison by which to determine “adverse impacts” was intentionally set back by the KBRA at those hydrological values observed in the year 2000 (KBRA Sec. 15.2.4.A.ii). This was a precautionary approach to protecting those groundwater-fed springs, given that many new wells were installed, particularly near Tule Lake on the California side of the border, in response to the record drought of 2001.

In short, this KBRA provision provides for much more protection against groundwater pumping having adverse impacts on spring-fed river flows than was portrayed in the language of the DEIS, and this language should be corrected accordingly. There is no “allowance” for a free 6% impact as incorrectly stated.

Comment 9 - Sediment Transport

Correcting Confusions on Estimates of Total Volumes vs. Weights of Sediment Likely to be Transported Due to the Proposed Action (Dam Removal): There seems to be an inconsistency in described estimates of total dam-stored sediment volumes vs. weights that should be explained with some reference to conversions between the two systems of measurement to prevent confusion.

In the DEIS section on Water Quality, for instance, sediments are express only in tons when it is stated on page 3.2-94 as follows:

“The predicted sediment release due to dam removal under the Proposed Action ranges from 1.5 to 2.6 million tons depending on water year types (see Figure 3.2-15) and is only about one-eighth of the cumulative sediment transport in the Klamath River at Hoopa in a four-day period during the December 1964 flood event.”

According to the accompanying text, this compares favorably to an estimated average annual sediment discharge to the estuary (Stillwater Sciences (2010)) of 5.8 million tons as the baseline or background annual average river sediment load. See also DEIS Table 3.11-1 (pg. 3.11-10)

However, in DEIS Section 3.3 (Aquatic Resources), at DEIS pg. 3.3-79, this same likely sediment discharge from the Proposed Act is expressed not in tons, but in cubic yards:

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← Comment 9 cont.

“The SRH-1D model estimated 41 to 66 percent (5.3 to 8.6 million yd³) of dam-stored sediment would be eroded the first year after dam removal depending on simulation type (wet, media, or dry) (Figure 3.3-8). Of this sediment, about 15 percent would be transported as bedload.”

Figure 3.3-8 (on pg. 3.3-79) and Figure 3.3-2 (on pg. 3.3-31) are also expressed as volumes of sediment in cubic yards (yd³), while Figure 3.2-14 (on pg. 3.2-95) is expressed as sediment weight, in tons. This use of inconsistent measuring systems (volumes vs. weights) should be explained in the text, and some sort of conversion factor mentioned in each section. It may be that each measurement system needs to be used for different reasons in different places, but I have been unable to find any clear references in most of the text as to how to convert cubic yards of sediments into tons (or fractions thereof) so that cross-comparisons between these two different number systems, and Figure charts, could easily be made.

We recommend that either one common standard for measurement be adopted (whether tons or cubic yards is unimportant) *or alternatively*, if both measurement expression systems are necessary for purpose related to each section, that at least some footnotes be added in the text of *each section* on how to convert cubic yards of sediment to tons of sediment and *vice versa* if desired by the reader for purposes of comparisons of these respective Figures. There is a footnote on Table 3.11-1 to the effect that sediment “density = 1.5 tons/yd³,” but without a similar footnote in the other Tables relevant to the measurement of sediment it is unclear whether this conversion still applies. Please place similar footnotes as appropriate to all similar sediment estimate tables.

Comment 10 - Sediment Toxicity

Amplify on Sketchy Alternative 2 Discussion of Issues of Human Health via Bioaccumulation of Chemical Contaminants from Retained Sediments Released Under the Proposed Action: DEIS pgs. 3.2-124 to 125 speaks very sparingly and briefly about potential human health risks from bioaccumulation of chemical contaminants from sediments released from behind dams pursuant to the Proposed Action (Alternative 2). However, what is not mentioned in that discussion is that there are similar bioaccumulation risks under the No Action/No Project Alternative 1, particularly since some bioaccumulation of microcystin and some other contaminants has already been documented, as noted in discussions at DEIS pgs. 3.2-71 to 3.2-76. In other words, such bioaccumulation and human health risks are not zero even under the “No Action” Alternative 1. This fact should be more explicitly stated in the text.

What is then most needed in this discussion in the DEIS at pgs. 3.2-71 (DEIS Sec. 3.2.4.3.1.7) is a comparison of the *relative* risks of bioaccumulation and human health impacts as between Alternatives 1 (No Action) and Alternative 2 (Proposed Action) and other analyzed Alternatives. It would seem to us to be a reasonable assumption or hypothesis that risks of such contaminants entering the human food chain through bioaccumulation could be greater under Alternative 1 due to the continuation of warm-water reservoirs which will continue to concentrate such contaminants, from which they can then enter into reservoir-resident species on which reservoir-based sports fishing human consumption would continue, than it would be under a free-flowing

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← Comment 10 cont.

river under Alternative 2 or 3, in which such contaminants would be routinely “washed through the system” out to sea on a continuous basis, and thus very much less likely to accumulate in the environment. If this hypothesis can be confirmed from the studies, this fact should be stated in the text.

In addition, risks from such in-river contamination entering salmonid species through their separate food chain, given that salmonids spend *the vast majority of their lives* as sea-going anadromous species and not in-river, should logically be correspondingly lower than the risks of such bioaccumulation in resident reservoir species who spend their whole lives exposed to reservoir-concentrated contaminants.

The potential for bioaccumulation and human health impacts under Alternative 3, of course, are likely to be identical in this regard as those under Alternative 2. It may not be zero under either dam removal scenario, *but it may well be less* than under Alternative 1 and the current *status quo*. This comparison should be at least discussed in the relevant sections of the DEIS dealing with Alternatives 2 & 3.

Proposed Mitigation Measure: Even though the risk is low, a good Mitigation Measure to minimize and prevent any significant human exposure to short-term contaminant impacts from contaminants in sediment flows under Alternatives 2 or 3 (through food chain bioaccumulation) would simply be 1 to 3 years of public health protection posted warnings (similar to microcystin postings now used around the reservoirs) urging the public to simply avoid catching and eating riverine fish or shellfish species likely to provide a significant pathway for such bioaccumulating toxins into humans, so long as such a risk is significant. As the dam-retained sediments (and their potential contaminants) wash through the system completely in about 3 years, such posted warning notices would then become unnecessary.

Comment 11 - FERC

Comments on Purely Economic Feasibility of FERC Relicensing with Fish Passage (Alternative 4): The DEIS correctly notes that in any FERC relicensing scenario, PacifiCorp would first be required to fix the dams up to provide adequate fish passage facilities in order to relicense them to modern standards, which turns out will cost *at least* \$460 million, and quite likely more than \$500 million once all (currently unknown) water quality mitigation costs are added in, according to estimates contained in PacifiCorp testimony to the California PUC.¹

And according to estimates by FERC, even after all the expensive retrofitting to meet modern standards for relicensing, these dams would then only generate about 61 MW of power on

¹ See CPUC Docket No. A10-03-015, *Testimony of Cory Scott*, Exhibit PPL-300 (March 18, 2010), pg. 6; Opening Brief of PacifiCorp (Nov. 17, 2010), pg. 6. PacifiCorp “conservatively estimates” relicensing costs of at least \$400 million in capital improvements, plus \$60 million in operations costs and maintenance over a 40-year relicensing term, not counting likely large (but still unknown) additional costs for any water quality mitigations that may be required to meet state 401 Certification requirements in Oregon and California.

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← Comment 11 cont.

average -- *about 26% less than they do today.*² Relicensing thus means spending a great deal of money for what is actually very little power. In fact, FERC estimated in its 2007 Final Environmental Impact Report (FEIS) on relicensing that even if fully relicensed, the required retrofitting would be so expensive that these dams would then have to operate *at more than a \$20 million/year net loss.*³

Thus between probable relicensing costs (~\$500 million) and the annual net losses projected by FERC even if relicensed (\$20 million/year net loss), this amounts to a probable cost or charge against PacifiCorp's ratepayers of \$1.3 billion over a 40-year term FERC license (\$500M plus (\$20M x 40 = \$800M)) as compared to a charge against ratepayers under the KHSA of merely \$200 million. *This makes FERC relicensing with fish passage (Alternative 4) at least \$1.1 billion more expensive than dam removal under the KHSA.*

Thus the statement in the DEIS at pgs. 3.15-84 to 85 to the effect that Alternative 4 would be far more costly to PacifiCorp ratepayers than dam removal under the KHS is absolutely correct, but could be at least roughly quantified in terms of the difference in ratepayer obligations per the above. These new numbers and the new CPUC ruling cited as Final Order of May 5, 2011, in CPUC Docket No. A10-03-015 also ruling that dam removal in accordance with the KHSA should also be referenced in the Final DEIS.

Under Alternative 5, there would also be high FERC relicensing costs, but less so than under Alternative 4, but also fewer compensating power sales benefit to help offset these costs. It is unclear what these numbers would amount to quantitatively in net, but the effect would likely be the same general impact of much higher ratepayer charges for FERC relicensing (even with some dams removed) than under the KHSA for four-dam removal and \$200 million "cost cap."

On May 5th, 2011, the California Public Utilities Commission (CPUC), like the Oregon Public Utility Commission (OPUC) before it, also formally confirmed that the KHSA is indeed the most cost effective, least risk and therefore best alternative for PacifiCorp's customers as compared to relicensing.⁴ This decision should also be referenced in the DEIS at the appropriate places in addition to the earlier OPUC decision.

² FERC FEIS, Sec. 4.4, pg. 4-4 of 533,879 MWh = 60.90 MW relicensed output, rounded to 61 MW. The DEIS estimate figure is slightly lower at 58 MW (see DEIS Table ES-1 at pg. ES-14) because it automatically deducts any of the very small amounts of power produced by the East Side and West Side and Fall Creek power plants from the initial number. The East Side and West Side turbines are being abandoned by the company and will not become part of any new FERC license, and the Fall Creek facility is likely to be sold to another entity or decommissioned as well.

³ FERC FEIS (Nov. 2007), Table 4-3 on pg. 4-2.

⁴ California PUC Final Order at: <http://docs.cpuc.ca.gov/published/proceedings/A1003015.htm>.

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← Comment 11 cont

We discussed these figures in more detail in a written statement presented for the DEIS Hearing in Yreka, CA on October 20, 2011. A copy of that written statement is enclosed for the hearing record as ATTACHMENT A to these written comments.

Comment 12 - Economics ↘

**COMMENTS ON COMMERCIAL FISHING ECONOMICS
TECHNICAL REPORT**

In addition to the *Commercial Fishing Economics Technical Report* (Thomson, 2011) we also reviewed *Forecasting the Response of Klamath Basin Chinook Populations to Dam Removal and Restoration of Anadromy Versus No Action* (Hendrix, 2011) and *Using Model Selection and Model Averaging to Predict the Response of Chinook Salmon to Dam Removal* (Lindley & Davis, 2011), the technical reports upon which the DEIS chinook salmon fishery response predictors and economic information is based. In general we find them to be complete, detailed and a thorough and useful compilation of information as well as useful models for making predictions of chinook run success and likely fishery economic impacts from the Proposed Action (i.e., four dam removal).

Throughout the modeling exercise, however, the analysis on this issue took a conservative approach. It is therefore quite likely that the estimates derived for increases in chinook populations resulting from dam removal under the Proposed Action (which includes KBRA habitat restoration actions) will prove to be understated.

Baseline Chosen Is Appropriate: The baseline years chosen by which to compare to analyzed alternatives are the years 2001 to 2005 fall-chinook salmon fishing seasons. This we believe to be an appropriate baseline. As noted in *Thomson*, this baseline period reflects a time when the current Klamath Management Zone (KMZ) “weak stock management” restrictions we experience today were all in place, but before the near total collapse of northern California and southern Oregon’s ocean commercial fishery due to issues in the California Central Valley that are completely unrelated to the Klamath basin. Again, this reflects a very conservative choice, as these numbers do not include any in-river steelhead fisheries, which although a recreational in-river fishery and not a commercial fishery, still represents a major economic boon to the basin’s economy.

Incorrect “Expansion Factor” for Monterey and Northern Oregon Regions: In the separate *Thomson* report (Thomson, 2011), at pgs. 19-20, the author correctly notes the “weak stock management” problems we in the fishing industry must deal with daily, by which large portions of the west coast salmon stocks are “out of bounds” whenever the Klamath River fall chinook (KRFC) population spawner escapement projections fall below the “minimum escapement floor.” In most regions both north and south of the Klamath estuary these closure economic impacts multiplier effects are quite large, as expressed in the “expansion factors” derived in the *Thomson* report to determine fisheries economic benefits from more abundant KRFC stocks.

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← Comment 12 cont.

Thomson notes, however, that the “expansion factor” she assumes for the Monterey and Northern Oregon regions under such weak stock management regimes is = 1.000, i.e., a one-to-one loss of Klamath fish when KRFC are missing due to a stock collapse, rather than loss of access to additional non-Klamath origin chinook as well. To justify this assumption, the author notes (pg. 20) that:

“For Monterey and Northern Oregon, Klamath Chinook is not a constraining stock except in years of very low Klamath Chinook abundance. For these latter two areas, the expansion factor was set equal to 1.000 to reflect the fact that Klamath Chinook availability in these areas does not affect the troll fishery’s access to other stocks....

Actually, lowered KRFC escapements below the “minimum escapement floor” do, as the author correctly notes, constrain access to other stocks “in years of very low Klamath Chinook abundance.” But these are precisely years like 2006. It is therefore incorrect to claim that this low KRFC factor does not constrain troll fleet access to other non-Klamath intermingling stocks within those very regions in years where the “minimum escapement floor” cannot be met. Thus by the author’s own logic the assumption of a zero expansion factor (=1.000) for the Monterey and Northern Oregon regions is simply too conservative, and also not in accordance with what actually happened during the most recent such closure year of 2006, which is likely typical of such closures should they occur in the future.

In the most recent KRFC collapse and Klamath-driven closures in 2006, for instance, as compared to a baseline year of 2004⁵, while the ocean troll fisheries in the Monterey and Northern Oregon regions were not completely closed for all chinook harvests that year, as were other regions closer to the KMZ management area, they were nonetheless severely restricted, thus restricting access to all other intermingling fall chinook stocks based on the need to preserve these very weak KRFC stocks.

For instance, the 2006 ocean troll season in the Northern Oregon region (Cape Falcon to Florence South Jetty, OR (Newport)) started very late, only on June 4th, was open only intermittently thereafter through the usual season and was limited to a total of 58 days that whole summer (timed to avoid KRFC migration patterns), plus there was an unprecedented and highly restrictive 75 chinook catch limit per vessel per week for what are usually the most productive fishery months of June, July and August.

However, in 2004 by comparison, the ocean troll salmon season in the same region was open much earlier (from March 15th), open many more days during the summer (a total of 203 days) and had no numerical catch limits, only the usual size limits.

⁵ 2004 is a good choice of a baseline year to compare to 2006, as this was prior to the 2002 adult KRFC Klamath River fish-kill driven returning adult declines which began to show up in reduced Klamath adult returns by 2005, bottomed out in 2006 and were on an upward swing in 2007, according to Pacific Fishery Management Council predictions.

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← Comment 12 cont

Likewise, for what the *Thomson* report calls the “Monterey area,” (Pigeon Point to Point Sur,) there were also far fewer days (only 98 days total) fishing allowed during 2006 as compared to 2004, plus another unprecedented *75 chinook per vessel per calendar week* catch limit was imposed during May, July and August in 2006 that did not exist in 2004.⁶ These were severe restrictions, driven by very low KRFC numbers, that would not have otherwise existed in a normal year (such as 2004). In fact, the ocean commercial season for 2004 for the “Monterey area” (same regulations as Point Arena to U.S.-Mexico Border for that year) included *151 days of open season*, starting May 1st, also with no numerical catch limits of any sort (as compared to 2006), only the usual size limits.

In short, Klamath-driven conservation measures required in 2006 most certainly did limit access to other chinook stocks even within the Monterey and Northern Oregon areas during that year, as compared to the much more normal year of 2004 in which Klamath KRFC constraints played no part. *This fact is not consistent with an assumed “expansion factor” = 1.000 for these two regions.* Such restrictions in those regions are likely going to be the general rule, not the rare exception, in any future KRFC-driven harvest curtailments.

The incorrect assumption of an “expansion factor” of 1.000 for the Northern Oregon and Monterey management regions should be corrected to something in accordance with the same methodology used for deriving the other expansion factors for other region. A change in this expansion factor will definitely affect the economic projections for these two regions as to the economic benefits of larger Klamath River fall chinook runs likely from the Proposed Action.

Error in Designating Where KRFC Ocean Harvests Occur: One source of the *Thomson* report error in equating the “expansion factor” for the Monterey and Northern Oregon areas as only = 1.000, as noted above, is the following misstatement in Thompson, pg. 26:

“About 99 percent of revenues from Chinook harvests (all stocks) that are attributable to the availability of Klamath Chinook *is concentrated in five of the seven management areas* under the no action and action alternatives (Tables IV-1 and IV-2).” (emphasis added)

This appears to be a simple error, and is also not supported by the reports own numbers. In looking a Tables IV-1 and IV-2, for instance, some 14% (not 1%) of the total projected average Klamath chinook landings lie within the combined Monterey or Northern Oregon areas.

NMFS, indeed, has previously said:

“Over 99 percent of KRFC are caught with other salmon stocks, including more abundant Central Valley fall-run Chinook, in commercial and recreational fisheries *in the Klamath*

⁶ For the 2006 ocean salmon season details, see 71 Fed. Reg. 26254-26266 (May 4, 2006). For the 2004 ocean salmon season details, see 69 Fed. Reg. 25026-25036 (May 5, 2004).

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← Comment 12 cont.

impact area from Cape Falcon to Point Sur.” (2006 Salmon Season rules, 71 Fed. Reg. 26257 (May 4, 2006).

The “Klamath impact area” delineated by NMFS in this statement includes all seven of the *Tompson* report management areas, not just the inner five. This is also consistent with Tables IV-1 and IV-2 in the *Thomson* report, whereas the original statement on page 26 (above) is not consistent with the report’s own table, nor with NMFS delineation of the “Klamath impact area” cited above. This *Tompson* report error appears to be a simple confusion leading to the misstatement of the geographical area which constitutes the “Klamath impact area” – an easy error to make.

In other words, NMFS has officially noted that some 99 percent of Klamath River fall chinook are landed in the area encompassing all seven of *Thomson* reports regions, not just within the inner five regions. Thus the basis for the *Thomson* report’s assumptions of an “expansion factor” for the two outer (Monterey and Northern Oregon) regions only of 1.000 is not supported by the data in the report itself, nor by the NMFS geographical delineation of this region.

The fact that all seven regions delineated in the *Thomson* report can suffer harvest restrictions in times of low KRFC stock abundance has, in fact, been recognized elsewhere in the DEIS, including the following statement:

“In years of low Klamath River Chinook salmon abundance, troll restrictions to protect that stock would extend to Monterey and Northern California and be more widespread than the areas identified above [San Francisco, Fort Bragg, KMZ-CA, KMZ-OR and Central Oregon]. (DEIS, pg. 3.15-41)

The assumption that the “expansion factor” for the Monterey and Northern California Regions should only and always be = 1.000 is simply not consistent with that DEIS statement, the partial closures for those regions in 2006 (the last year of major KRFC-driven closures) or the data.

However, because there was some harvest during 2006 (taking 2006 as a typical KRFC-driven closure year) in the Monterey and the Northern Oregon regions, a modified “expansion factor” could be derived by comparisons between a typical normal ocean troll harvest season such as 2004 (as we have done below), and the severe (but not complete) restrictions of 2006 imposed due to KRFC-driven weak stock management constraints. This might require a “weighed” expansion factor for these two specific regions rather than a simple problem of division, but should nonetheless be fairly easily derived by a comparison between the two seasons of 2004 and 2006. Comparison between 2006 and 2005 would not be appropriate as by 2005 some KMZ closure impacts were being felt from the Klamath River 2002 juvenile as well as adult spawner fish kill disasters, both of which cut substantially into 2005’s returning adult escapement numbers.⁷ Likewise comparisons between 2006 and 2007 would not be statistically

⁷ There were actually two separate Klamath in-river “fish kills” in 2002. In addition to the well-known adult spawner fish kill in Sept. 2002 in which an estimated 68,000 adult spawners died (mostly KRFC), there were also

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← Comment 12 cont.

appropriation because of harvest restrictions imposed by the impending collapse of the California Central Valley stocks would have begun to appear by then. This is why we chose 2004 as a baseline comparison year by which to compare to KRFC-driven closures in 2006. 2004 is the most recent “normal” season to compare to 2006 prior to those two season closure impacts.

DEIS Tables 3.15-28 and 3.15-29 (DEIS pg. 3.15-41) should also be made consistent with including the two additional KRFC-influenced harvest areas of Northern Oregon and Monterey as well. This is also true of Tables 3.15-45 (pg. 3.15-56) and 3.15-46 (pg. 3.15-57) which currently have NO entries for either the Monterey region or Northern Oregon.

Converting “Jobs” to Full-time Equivalent (FTEs) and Clarifying Terms in *Tompson* report Table V-2 and V-4: As noted in these comments above, there have been confusions within the DEIS over whether “jobs” referred to in the economic studies accompanying the DEIS are full-time or part-time jobs or both. Sometimes the term “jobs” has been used without distinction or confusingly to refer to both, making these numbers difficult to compare.

It should be made clearer in Tables V-2 and V-4 whether these “jobs” referred to in those tables are “full-time equivalent” (FTEs). If not, converting all job numbers to FTEs is highly recommended.

Also, Table V-4 clearly is intended from the context to refer to ADDITIONAL jobs above and beyond those listed under the NAA in Table V-2. However, Table V-4 is not labeled “Additional Jobs.” Out of context this confusion makes it appear that there will be fewer jobs generated under Alternatives 2 & 3 than under the “no action” alternative. At a minimum, the “Jobs” header in the Table V-4 should be relabeled “Additional Jobs” and not just “Jobs” to prevent this confusion, plus Table V-4 should reflect that in its explanatory header.

BOLSTERING VARIOUS MITIGATION MEASURES

In general, we see a clear need for all the many Mitigation Measures outline in various sections of the DEIS, and support them all. In addition, however, we have the following comments on existing Mitigation Measures, as well as additional proposed Mitigation Measures that we urge also be incorporated into the dam removal mitigation and restoration plan as part of the Detailed (and eventually, the Definite) Plan:

← Comment 13 - Fish

1. Mitigation Measures AR-1 through AR-7

many juvenile KRFC fish killed (likely more than 200,000) in-river also recorded due to exceptionally high disease mortalities (largely from *C. Shasta* and *P. minibicornis*) in the spring of 2002. The loss of the spring 2002 juvenile stocks would have reduced the adult returns to the Klamath river for 2005, plus some early “jack” returns of 2005 would have been adversely affected by the Sept. 2002 adult fish kill as well. This “double whammy” of both juvenile and adult Klamath KRFC is what led to the complete closures of the KMZ and areas far north and south of the KMZ during 2006.

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← Comment 13 cont.

These mitigation measures appear to be very appropriate and will help considerably in minimizing damages to the river and its fisheries from lethal levels of sediment which, although short term impacts, are likely to be 100% fatal to some portions of that year-class of in-river salmonids. These mitigation measures will help assure that “no year-class would suffer a substantial decrease in abundance,” as noted as a mitigation policy at DEIS pg. 3.3-101. These mitigation measures could, however, be improved in a number of ways, as follows:

AR-1: Protection of Mainstem Spawning: This mitigation measure should also be developed further to take into account differences in “races” of each species, such as the difference between spring-run and fall-run chinook, and in several races of steelhead. The goal would be to minimize the forced mixing of these different stocks beyond natural mixing or straying rates, and also reducing hatchery-wild stock mixings to prevent genetic dilution of key survival genomes in wild stocks. Among other measures would be specific protections from the timing of sediments surges so that the beginning, middle and end of each separate run is preserved in their progeny, so the full range of genetic diversity remains expressed in the progeny from the impacted year-class.

AR-2: Protection of Outmigrating Juveniles: Similar considerations as noted in our comments to AR-1 above should be given to adjustments in timing of captures and releases so as to preserve, as much as possible, the same genetic diversity that currently exists, as well as to prevent geographic dislocations that might result in higher future straying rates from the incoming adults from this most affected year-class.

For example, when salmonid smolts are captured to protect them from short-term localized sediment surges, they should be later released approximately in those areas from which they were originally captured. In other words, the goal should be to disrupt their natural lifecycles – including their homing instincts – as little as possible given the emergency circumstances. It would likely be better to release these smolts into their natal areas after a period of time sufficient to allow some sediment clearance than to release them immediately, but in some other watershed or sub-basin than the one in which they evolved. Clearly some rescue action is warranted, and far better than 100% mortalities, but minimizing the disrupting their natural lifecycles and migratory patterns – which they imprint on as they travel downriver as juveniles – should be a high priority when intervention is deemed necessary.

AR-3: Fall Flow Pulses: Unfortunately, we will not definitively know whether spring of 2020 is going to be a wet year or dry (or drought) year when fall 2019 flows are needed for this mitigation measure. We will have only preliminary meteorological predictions to go on, based on probabilities and exceedence levels. This problem is acknowledged in the DEIS at pg. 3.3-198, which notes:

“However, if the water year during dam removal is dry, managers will need to balance the benefits of increased flows during fall with the risk of impacts to the basin if less water is available during the following spring (during smolt outmigration).”

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← Comment 13 cont.

In that case, the DRE and mitigation managers should develop clear “triggers” in terms of current and projected future meteorological conditions, as well as river conditions, to determine whether such fall pulse flows are going to be available, and in what volume, and still leave a very high probability (80% or greater) of having enough additional inflows for the spring pulse flows needed during smolt out-migration (and to meet Coho BiOp requirements). Even so, that 2020 water year may still be a “white knuckle ride” for which we should be prepared with contingency plans and clear decision making criteria.

AR-4: Hatchery Management: Adjusting the timing of hatchery releases to avoid most of the sediment impacts is a reasonable plan, especially given the likelihood of much higher juvenile mortalities otherwise. The alternative – trapping and hauling from the hatchery by truck for release far down the river at points where the sediment surges are greatly diluted – would not be our preference of options, given that this would greatly interfere with the smolts’ natural homing instincts and might significantly increase later adult straying and hatchery-wild intermixing. Some careful thought needs to be given to ways to minimize losses to the natural genetic diversity of these stocks and prevent adverse genetic dilution problems, through changes in timing and other factors under human control

AR-5, 6 & 7: These are likely also beneficial mitigation measures, but deal with minimizing impacts to non-salmonid species (lamprey, suckers and mussels) and are outside our expertise. We have no comments on these measures but support them.

Comment 14 - Sediment Transport

2. Minimizing Impacts of Sediment Surges on Scott and Shasta River Coho

The DEIS projects sediment impact mortalities on ESA-listed coho migrating to and from the Scott and Shasta Rivers of 20-49%, at least in one year-class (DEIS pg. 3.3-110).

“Coho salmon smolts outmigrating from tributaries in the Upper and Mid-Klamath River, Shasta, or Scott populations during early spring (around 46 percent of outmigrating smolts compared to those that outmigrate in late spring) are predicted to experience 20 percent mortality under a most-likely-to-occur scenario, or 49 percent mortality under the worst-case scenario.”

This is a huge hit to these already seriously depressed Scott and Shasta River coho populations, and should be avoided or mitigated if at all possible. These same fish are already subject to all the other many environmental impacts already pushing their populations into steep declines in those key tributaries.

We recommend some additional thought be put into what mitigation measures can be implemented to make sure the coho that do reach the Scott and Shasta before and after the critical fall 2019 and spring 2020 time frame do as well as possible *within those tributaries* as a way to improve their overall survival rates enough to offset these likely mainstem migration sediment mortalities.

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← Comment 14 cont.

The key limiting factor for coho survival in both the Scott and Shasta is water – too little is left for the fish because too much is being withdrawn for local irrigation in many years, sometimes resulting in complete or nearly complete dewatering of each river just during the times coho (and chinook, which also were once abundant in those systems) most need that water. Poor water quality, including elevated temperatures and lowered dissolved oxygen levels, is also related to lowered volumes and generally poor flows. Local groundwater has also been heavily tapped, particularly in the Scott River basin, depriving much of the river of its historic spring-fed cold water inflows.

In addition to mitigation and restoration funds already available under the KHSA, in the KBRA there is also funding specifically designated for Scott and Shasta river restoration (KBRA, Appendix C-2, line items 17-21) that could also be used for these mitigation purposes. Under the KHSA “Interim Measures” No. 2 (KHSA, Appendix C) PacifiCorp has also committed to spend \$510,000 each year for coho protection measures. The money is there if the will is there to use these funds for these dam removal sediment mitigation purposes in the Scott and Shasta.

To get as many Scott and Shasta River coho through the 2019-2020 sediment bottleneck as possible, some of these funds should be used to simply purchase water from Scott and Shasta farmers, on a willing seller basis, by retiring some of that farmland irrigation demand during key portions of 2020 so that we are certain that the remaining coho in the river will do relatively well by having relatively high flows in that critical year, to help offset these sediment-caused losses. The California Department of Fish & Game has done that sort of water right leasing or temporary retirement program before, at least in the Scott River, and there is ample precedent for “water banking” of this sort on an emergency basis.

Comment 15 - Hydrology

3. Decreasing the Risk of Flood Damages Below Iron Gate Dam

These dams were never designed for flood control and can hold back flows for at most about 10 hours, according to the DEIS. Additionally, the DEIS notes (at pg. 3.6-26):

“The magnitude of sediment deposition is relatively small compared to sediment loading from other existing sources along the Klamath River. Additionally, the sedimentation would be short-term following dam removal. Because the sediment deposition would be short-term and small in comparison with the No Action/No Project Alternative, it would not affect stream characteristics in a way that would substantively affect flood inundation or flood risks. Therefore, sediment deposition would have a less than significant effect on flood risk.”

We agree with this assessment for the river as a whole. However, the additional sediment washing downriver is noted in the DEIS as likely to increase flooding risk in the short-term very slightly for as much as 8 miles downriver, after which the effect dissipates as sediment discharges. This additional flood risk, although very low, *is not zero*, and could affect a very small number

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← Comment 15 cont.

of landowners and their structures (estimated at less than 6 residences and their associated garages and other structures at DEIS pg. 3.6-31) near this river reach up to 8 miles downriver.

The projected river water level rise from current conditions as compared to dam removal under either Alternatives 2 or 3 is set forth in a chart in the Detailed Plan at page 159, but does not exceed 1.65 feet even immediately downstream of Iron Gate Dam. Nonetheless, the DEIS correctly assesses this as a significant difference for those critical 8 miles or so downriver, at DEIS 3.6-32:

“The change to the 100-year floodplain inundation area downstream from Iron Gate Dam would increase the risks of flooding structures; therefore, the impact from flood hydrology would be significant. Mitigation Measures H-1 and H-2 would reduce the impact to flood hydrology to less than significant.”

Flood-proofing of structures that might be impacted by this additional flooding risk is described in the Detailed Plan in Mitigation Measure H-2, at pgs. 159-161. This mitigation measure involves moving or elevating a few structures directly downriver of Iron Gate within this 8 mile potentially affected stretch:

“This mitigation measure requires the DRE to work with willing landowners to move or relocate permanent, legally established, permitted, habitable structures in place before dam removal. The DRE will move or elevate structures where feasible that could be affected by changes to the 100-year flood inundation area as a result of the removal of the dams.”

We applaud the efforts of the Detailed Plan development team for putting some thoughtful time and energy into this mitigation measure. In addition to the 18 additional structures that would be in the expanded 100-year flood plan after dam removal, the team also estimated the costs of flood-proofing those structures already within the 100-year floodplain (but for which there might be additional risk of damages exacerbated by changes in the flood plain due to dam removal) as well as an additional 10 structures very near the floodplain that could also be affected by changes in that floodplain.

We believe that ALL these structures should receive flood protection under this mitigation measure. Even though some of these structures (i.e., those already within the 100-year flood plain) might well be flooded in the future with the dams in place in any event, separating out normal impacts from exacerbations would be almost impossible and result in years of litigation. It is a far better approach – *and politically far more palatable* – simply to provide flood-proofing for all these structures, estimated at a high estimate cost of \$6 million with a weighted average of \$4.3 million as the most likely costs for this mitigation measure. The good will of this small but potentially greatly affected local population is worth that investment.

Additional Flood Risk Reductions Through Insurance: Another way to help mitigate these potential flood risks is to spread the risk through insurance. In addition to flood-proofing

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← Comment 15 cont.

these structures, those landowners whose legally permitted residences lie within the entire 100-year flood plan for 8 miles downstream of Iron Gate Dam should simply have flood insurance purchased in their names by the DRE, or paid the equivalent in cash so they can purchase such flood insurance themselves through a private insurance provider of their choice, for a period of the next 20 years following dam removal, with appropriate waivers of all further liabilities in return for this settlement. The total cost of this insurance premium payment would be relatively small, but the peace of mind and good will this would generate among those potentially affected landowners would be very great.

Donation to Siskiyou County to Improve Its Flood Early Warning Systems: Siskiyou County, like all counties these days, is perpetually cash-strapped when it comes to meeting the emergency services needs of its population. While Iron Gate reservoir could, at best, provide only about 10 hours of storage (or less than 5% flood attenuation) for any major floods (see DEIS, pg. 3.6-30), one way to help mitigate the loss of even that small advance warning factor would be to help the County augment and improve its emergency response system generally, as for instance through funding for a new and better “first responder” radio network coverage. An additional mitigation measure that would be meaningful to the residents immediately below Iron Gate Dam who may face some (although small) additional risk of flooding after the removal of Iron Gate Dam would be to donate \$150,000 to Siskiyou County to beef up and improve its emergency response systems generally, so as to be able to respond more quickly and effectively to any potential future flood risks or events.

Comment 16 - Real Estate

4. Minimizing Adverse Property Value Impacts To Copco and Iron Gate Reservoir Area Landowners

The *Dam Removal Real Estate Evaluation Report* (Bender Rosenthal, Inc., 2011) notes that neither the Copco Lake nor Iron Gate Dam areas have historically been strong real estate markets, “and sales have been slow due to remoteness of the location, the lack of good building sites, and affordable utility connections” (Bender Rosenthal, pg. 20). The real estate market throughout Siskiyou County, like that of most of the country, has also significantly declined in recent years, and the assessment data date chosen as a baseline (April, 2008) is within this decline period.

For these reasons, that report noted:

“Due to the timing of the proposed dam removal and the declining market conditions it is difficult to separate the two issues; however, there is no strong evidence that the majority of decline in the real estate values of the neighborhood in the past several years is attributable to the proposed dam removal.” (Bender Rosenthal, pg. 20)

Currently, Copco Lake and Iron Gate also both create warm water, nutrient concentrating conditions for rapid growth of the highly toxic blue-green algae species *Microcystis aeruginosa*, which generates the powerful liver toxin microcystin. Each year the relevant public health Departments of the State of California, including California EPA and the North Coast Water

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Quality Control Board, require public posting of health hazard advisories warning people not to come in contact with these waters. As noted in the DEIS, even under the “No Action/No Project Alternative,” “[v]alues around Copco 1 and Iron Gate Reservoirs could decline in the future if the current trend of postings of health advisories for microcystin algal toxins continues” (see DEIS pg. 3.15-48). Under a “dams out” condition, however, these annual toxic algae blooms are expected to cease, thus reducing this current downward pressure on market values of land around these reservoirs.

That report also noted that of the 1,467 “potentially impacted parcels (PIPs)” surrounding the Copco or Iron Gate reservoir areas, only about 12 percent are improved (i.e., more than just bare land -- see *Bender Rosenthal* (2011) at pg. 7) and many of the PIPs have no reservoir view that could be affected by dam removal, or could be eliminated from the list of affected parcels for one of several other reasons. In the end, the appraisers determined that property values for only 668 parcels (46% of total PIPs) would be potentially impacted by the Proposed Action of dam removal. These were termed “Impacted parcels” or IP’s. We generally agree with the reasoning behind these classifications.

After careful analysis, the *Bender Rosenthal* report concluded that the likely long-term impact on local property values among the IPs at both Copco and Iron Gate reservoir sites was:

Measure of Impact of Dam Removal on Property Values for IPs = -\$2,700,000

Measure of Impact to Siskiyou Cty. Property Tax “Appraised Value” Roles = -\$2,200,000

The DEIS does not include any mechanisms for, and does not discuss, potential mitigation measures to compensate for these losses to owners of IPs. This, naturally, has caused considerable concern by those who own parcels with views of Copco or Iron Gate reservoirs, generating considerable political resistance to the Proposed Action.

Comment 17 - Real Estate

Mitigations for Direct IP Loss of Property Values at Copco and Iron Gate Reservoirs:

Some landowners with parcels around Iron Gate or Copco reservoirs will, according to the *Bender Rosenthal* report, suffer significant loss of property values from loss of what currently are lakeside view sheds. That property value loss is currently estimated at \$2,700,000 in that report – but that is, of course, only an estimate and the total actual property value losses could be more. These are legitimate losses that should be compensated fairly.

To fairly and equitably mitigate for these real and verifiable losses, an amount equal to twice that initial property value loss estimate (i.e., \$5.4 million) should be reserved and set aside by the DRE in a special “Landowner’s Compensation Trust Fund” from which to compensate the IP landowners, as follows:

- (a) Offer them fair compensation in settlement of all such claims in the proportionate amount of losses (in accordance with the *Bender Rosenthal* report estimates or a special appraisal) that the landowner’s particular parcel would be calculated to likely incur. This

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← Comment 17 cont.

immediate settlement would be cost-free to the landowner, and likely taken up by the vast majority of such IP landowners.

- (b) If, however, a landowner offered the immediate settlement amount refuses to settle, or decides to contest that amount, then they should be offered the opportunity for informal and relatively inexpensive (but nonetheless binding) arbitration (perhaps through the American Arbitration Association or other similar neutral arbitration service), but each contestant would then be expected to cover his or her own expenses of such an appeal or contested arbitration.
- (c) If an affected IP landowner refuses both the settlement and informal arbitration, they have the right to sue the DRE in Siskiyou County Superior Court for actual damages, but are then at risk of having to pay for their own relatively expensive expert witness costs and Attorney's fees that are costs of litigation that might well exceed the value of the damages sought. It is hoped that very few landowners would decide on that much riskier route.

For any case that goes to actual litigation, the DRE (and/or PacifiCorp if also joined as a party) would of course preserve their rights to raise any and all defenses, and to fully litigate such cases.⁸ If, however, these cases settled at any point in the above three-step process, such a settlement would include a full and complete waiver of all potential or future such damage claims, in consideration of the settlement amount.

Such an orderly claims settlement process should resolve all meaningful disputes within a couple of years, as well as providing a speedy and relatively inexpensive process by which to do so for most claimants short of litigation. Any later court litigation on the residual remaining unsettled claims would, of course, also be subject to the applicable statute of limitations. Any amounts left in the Landowner Compensation Trust Fund after the running of the applicable statute of limitations would then be returned to the DRE's general funds to be applied to other mitigation measures.

Comment 18 - Real Estate

Additional Emergent Lands Restoration Mitigation Measures for Maintaining High Property Values Surrounding Copco and Iron Gate Reservoirs: In addition, the newly emergent lands currently underwater in Copco and Iron Gate Reservoirs should be converted into an attractive "green belt" and some portions furnished with boat ramps, picnic tables, and bike pathways and similar developments as public park facilities, as part of their reclamation and restoration so as to continue to attract local tourism, and also to help maintain (and perhaps even improve) local property values.

⁸ Landowners who refuse to settle or arbitrate, but instead choose only to litigate, may for instance be subject to the defense that the landowner originally took title with adequate actual or constructive notice (up to 50 years notice in fact) that the 50-year FERC license for Copco 1 dam *might not be renewed*. This could serve as an absolute defense against damages for loss of property values generally. Thus there is a risk from such litigation that the landowner might lose on his or her claim entirely. The fact of this risk of a complete loss in Court should encourage early settlement.

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← Comment 18 cont.

Being near a public park with recreational facilities can make up for much of the loss of local property values because of loss of a lakeside view shed. This relatively slight additional cost to rehabilitate the emergent areas around these former reservoirs may also pay for itself over time by reducing the property value loss damage settlements with affected landowners of IP properties. It is also very good politics for PacifiCorp to leave the place better – and more valuable to local landowners and businesses – than it previously was, and this prospect will doubtless also greatly reduce local political landowner resistance to this change.

This use of emergent lands is consistent with the KHSA, which states at Sect. 7.6.4.A:

“It is also the intent of the Parties that transferred lands shall thereafter be managed for public interest purposes such as fish and wildlife habitat restoration and enhancement, public education, and *public recreational uses*.” (emphasis added)

Mitigation Measure REC-1 (developing replacement recreational facilities and access points along the newly formed river channel between J.C. Boyle and Iron Gate Dam) would go a long way toward maintaining property values for residences now along reservoir-fronts, and which would suffer somewhat from reduced property values when those “lakes” go away. Additionally, such facilities would induce more tourism, which would aid the depressed local rural economies of these isolated areas.

Comment 19 - Real Estate

5. No Need for Mitigation for Siskiyou County Loss of Copco or Iron Gate Reservoir IP Property Tax Revenues

The Appraisers who prepared the *Bender Rosenthal* report specifically did NOT, and were not asked to, determine the likely property tax revenue impacts on Siskiyou County of estimated property value market appraisal losses likely from dam removal. Actual revenue losses to Siskiyou County from any one-time loss of appraised values around Copco and Iron Gate reservoirs may ultimately be very small to nonexistent.

This is because Siskiyou County property tax values are subject to California Proposition 13⁹, which disconnected nearly all property tax rate changes from appraised property values. Failure to account for the impacts of Proposition 13 on Siskiyou County property tax rates is a major error in the DEIS that should be remedied. The key element of Proposition 13 was the following:

“Sec. 1. (a) The maximum amount of any *ad valorem* tax on real property shall not exceed one percent (1%) of the full cash value of such property. The one percent (1%) tax to be collected by the counties and apportioned according to the law to the districts within the counties.”

⁹ Passed by California voters in 1978, now codified in the California Constitution as Article 13A.

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← Comment 19 cont.

The baseline year for assessing property values as “full cash value” was then set at 1975. Annual increases to that calculated “tax value” were thereafter limited to 2% per year. The 1975 base value can only be changed with (a) a change in ownership or (b) completion of new construction.

Today, property tax bills in California bear almost NO relationship to the appraised values of the underlying property, but have much more to do with the date and amount of purchase than current market values. Two identical California properties standing side-by-side can now have radically different annual property tax bills if they were purchased in different years – the wider the gap between purchase years, the bigger the difference. Neither increases nor decreases in current fair market appraised values of real property will affect the “tax value” to any degree, as those tax values are derived from an automatic 2% inflation factor from the last purchase price or the 1975 full cash purchase value, whichever is more recent. Thus neither increases – nor decreases – in fair market values of the underlying properties around Copco and Iron Gate reservoirs will significantly affect the county property tax bills for those parcels under Proposition 13.

True impacts of dam removal on Siskiyou County tax revenues from any decreases in fair market value to IPs due to dam removal is probably zero, given the complete insulation of property tax billing amounts under Proposition 13 from any increases (or decreases) in appraised fair market values. Siskiyou County tax revenue impacts from loss of value of these IP parcels is thus expected to be insignificant. This highly relevant point should be carefully explained in the DEIS in the appropriate sections.

Several sections of the DEIS indicate that there may be tax revenue reductions to Siskiyou County resulting from the loss of property values for lake-side parcels around Iron Gate and Copco Reservoirs (see for instance a reference to this potential impact in DEIS pg. 3.15.-64). However, because of the nearly complete disconnection between property tax assessed rates and fair market value today imposed by Proposition 13, this does not appear to be likely, unless there is an intervening property sale (or for new construction).

In other words, under the calculated tax assessment values pursuant to Proposition 13, for any current residence there would be NO REDUCTION of County property tax revenues from any of these properties, regardless of any changes in their current market values, UNLESS there were first a resale, which would then reset the base rate to the sale price at that time --- and then would mean a net reduction in property taxes only if the *later* sale price were less than the *original* sale price based either: (a) on its appraised value in 1975 or; (b) on its prior date of purchase or when first constructed, if after 1975, i.e., when the Proposition 13 tax basis was last established. Given the many years of intervening increases of property values since 1975, it would have to be a deep sale price reduction indeed to result in any downward change in Siskiyou County tax revenues from these properties if there were many years between such sales. And these decreases would likely be more than offset by increases elsewhere from sales of Copco and Iron Gate dam parcels unaffected by dam removal – any resales would simply reset the tax value date to the current sale price.

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← Comment 19 cont

Failure to account for or discuss the impacts and effects on County property tax revenues of California's Proposition 13 property tax assessment caps is a major error in the DEIS analysis and should be corrected wherever it occurs in the DEIS.

Comment 20 - Real Estate

6. There Will Be No Net Tax Revenue Losses to Siskiyou County from Loss of PacifiCorp Hydropower Facilities

PacifiCorp owns more than 11,000 acres of land in Siskiyou County, most of it called "Parcel A" lands which will be retained by PacifiCorp as investment property and not be affected in any way by dam removal. Only what are called "Parcel B" lands, i.e., those parcels upon which portions of the Hydropower Project facilities actually sit, will be affected by the Proposed Action of dam removal, and it is only those "Parcel B" lands that will be transferred to the DRE as dam removal becomes imminent, and ultimately transferred to their respective States.

With the transfer of these Parcel B properties to the DRE in 2020, and the subsequent transfer of these Parcel B lands to the State of California as required of the DRE upon completion of dam removal (KHSA, Sec. 7.6.4.A), these Parcel B lands will then leave the Siskiyou County property tax rolls.

PacifiCorp paid Siskiyou County property taxes on these "Parcel B" lands in the amount of \$305,000 in 2008 and \$290,000 in 2009 for properties associated with these hydroelectric facilities (DRE 3.15-21) – so these property tax payments are roughly about \$300,000/year. According to County records, Siskiyou County's average annual property tax revenues have been about \$10,178,000 over the 2000 to 2010 time period (DEIS, Table 3.15-19, pg. 3.15-21). Hence the approximately \$300,000/year in property taxes PacifiCorp pays to Siskiyou County from its hydropower facilities (Parcel B) land represents only about 3% of the County's total average annual property tax revenues.¹⁰

Furthermore, all these potential County property tax losses are to be made up dollar-for-dollar through payments by the States of California and Oregon under statute (Cal. Fish & Game Code 1504; ORS 496.340) in the form of "in-lieu fees" which would be "equivalent to the current assessment paid by PacifiCorp for hydroelectric properties" (see DEIS, pp. 3.15-37 & 3.15-65).

While it is noted in DEIS pg. 3.15-65 that payments in lieu of taxes ("PILT") by the States requires annual Legislative appropriations, and is thus less certain than property tax collections, there is no instance on record or known to us in which either of the Legislatures has simply

¹⁰ Note that there are some similar property tax losses from dam removal anticipated for Klamath County as well, but as there is only one small dam in Oregon (J.C. Boyle), all the land around the J.C. Boyle reservoir area is owned by PacifiCorp and most will be retained (and continue to pay property taxes). Also, as Klamath County is to receive various mitigation funds and economic development funds to offset any potential losses of County property tax revenues, via KBRA Sec. 27.3, these Klamath County impacts have already been reasonably well mitigated.

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Comment 20 cont.

refused to honor their PILT commitments. With this one caveat, however, the DEIS notes (DEIS, pg. 3.15-65) that:

“However, if Siskiyou and Klamath Counties receive in-lieu payments of equal value to PacifiCorp property tax payment, there would be no net effect to county revenues under the Proposed Action relative to the No Action/No Project Alternative.”

We believe this is an accurate assessment.

7. Mitigations for Other Siskiyou County Economic Impacts Through Supplemental Development Funds

Comment 21 - Economics

The DEIS correctly notes (see DEIS, pg. 3.15-77-78) that the California Water Bond Act, currently scheduled for vote in November, 2012, contains a provision for up to \$20 million in bond funds to go specifically to Siskiyou County as an “economic development fund” to be used by the County to help offset any adverse economic impacts from dam removal on the County’s economy.

However, that Water Bond Act may not be approved by the voters of California for any of a number of reasons, including the fact that the passage rate of such bond acts generally is less than 30%. It is also highly controversial as a result of many other provisions in the Bond Act that voters might well find unacceptable.

If this \$20 million “economic development fund” is going to be part of the mitigation measures package for Siskiyou County under the Klamath Hydropower Settlement Agreement (KHSA) or Klamath Basin Restoration Agreement (KBRA), then there also needs to be some “backup plan” for how to deliver similar economic development benefits to that County in the likely event that the Water Bond Act does not receive voter approval. If these funds are developed and made available through some other means besides the current and highly controversial Water Bond Act, we agree that these replacement funds, as intended by the KHSA-KBRA Parties, should be used to offset any economic stresses or potential economic losses that Siskiyou County may endure due to ultimate dam removal.

Comment 22 - Economics

8. Mitigations for Temporary Losses to Whitewater Rafting Businesses

According to the analysis at DEIS, pgs. 3.15-60 to 61, several Klamath River whitewater rafting businesses may collectively initially lose as much as \$715,903 in average annual income as a result of the removal of J.C. Boyle Dam from the loss of the one “Class V” whitewater area in the Klamath River, which is called the Hell’s Corner Reach – whitewater rapids created by artificially ramping up and down flows in the river outflows from J. C. Boyle Dam.

On the other hand, numerous economic benefits will be available to businesses which can take advantage of the restoration of what was once a world-class steelhead fishery above the dams, and the increases by as much as seven-fold in recreational red band trout fisheries below

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← Comment 22 cont.

Keno dam (DEIS, pg. 3.15-60). The very small number of current whitewater businesses should be able to readily make the transition to recreational use of a newly free-flowing river, with its consequent recreational fishing and river guide economic benefits, in a short period of time.

We recommend, however, the establishment of a fund of approximately \$1 million from which to compensate the whitewater businesses that use the river for whitewater rafting as of 2019 for their one year's economic losses caused by the clear loss of use of the river through all of 2020, and to aid these river-based businesses in their transition from whitewater rafting revenues to other fishing guide and river recreational fishing business development. Compensation should be proportional to their demonstrated 5-year average prior income derived from the affected whitewater rafting programs which would be shut down after 2019 and dam removal. These numbers can readily be ascertained from these businesses' prior tax returns.

9. Mitigation Measures to Prevent Human Exposure to Sediment-borne Contaminants That May Bioaccumulate in In-river Fish and Shellfish Species

As noted above, a precautionary Mitigation Measure to minimize and prevent any significant human exposure to short-term contaminant impacts through food chain bioaccumulation would simply be 1 to 3 years of public health protection posted warnings (similar to microcystin postings now used around the reservoirs) to the public urging them to simply avoid catching and eating resident fish or shellfish species likely to provide a significant pathway for such bioaccumulating toxins into the human food chain, so long as such a risk is occurring. As the dam-retained sediments (and their potential contaminants) wash through the system completely in about 3 years, such posted warning notices would then become unnecessary.

Added to Final EIS/R Errata

MISCELLANEOUS ERRATA

Comment 23 - Sediment Toxicity

(1) Confusing References: In the Socioeconomics Section (3.15), the Bibliography of Reference (Sec. 3.15.4, beginning page 3.15-100, contains four references cited as "Reclamation 2011a, 2011b, 2011c and 2011d" that have been placed in the "B's" alphabetically, along with a document cited as "Bureau of Reclamation 2011. These should all be reorganized to place them all in alphabetical and consistent order within the Bibliography. They are used in Tables 13.15-55, 56, 57, 58, 59 & 62, which are in turn sourced to these documents, but those source citations should be made consistent with the new and corrected placement of these references alphabetically in the list. There are also specific references to the "Reclamation (2011) source at the top of DEIS pg. 3.15-80, presumably the same source cited as "Bureau or Reclamation 2011" under the "B's." Please clarify these references.

(2) Possible Incorrect Reference: Is the reference "DOI, Reclamation 2011a" in the correct place, or should it be renamed and grouped together with those other "Reclamation" references mentioned in these comments above?

← Comment 24 - Economics

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Comment 25 - Recreation

(3) Correcting an Error in Designating Recreational Facilities Mitigation Measures: At the bottom of DEIS pg. 3.18-19, it mentions Mitigation Measures PHS-1 and PHS-2 as mitigations for loss of certain recreational facilities. This is a designation error – the reference should be to Mitigation Measure REC-1 described in more detail on DEIS pg. 3.18-32. Please make this correction.

Comment 26 - Hydropower

(4) Correcting Misstatements and Inconsistencies on Estimated Total KHP Average Power Production: At DEIS pg. 3.18-23, the statement is made that:

“The Four Facilities have a total average annual electric output of 716,800 MWh (FERC 2007).”

This is a slight overstatement since the FERC 2007 FEIS number cited of 716,800 MWh average annual generation over the last 50 year license¹¹ was actually for the entire Hydroelectric Project, including Fall Creek and the East Side and West Side facilities, as well as the four main dams that are the subject of this DEIS. Removing the average generation of these ancillary facilities from the total annual average is what gives the slightly smaller 686,000 MWh total annual average generation number cited earlier in the text at DEIS pg. 3.10-27:

“The average annual electricity generation from the Klamath Hydroelectric Project is 716,800 megawatt-hours (MWh). This includes generation from the following developments: East Side, West Side, J.C. Boyle Dam, Copco 1 Dam, Copco 2 Dam, Fall Creek Dam and Iron Gate Dam. Since the East Side, West Side, and Fall Creek Dam are not part of the Proposed Action, then the total amount of power that would need to be replaced would be equal to 686,000 MWh.”

Assuming this is the case and this latter 686,000 MWh figure is accurate, this statement at DEIS pg. 3.18-23 should therefore be *corrected* to read as follows to be consistent with earlier numbers on the page cited above (new language in bold, deleted language in redline strikeout):

“The Four Facilities have a total average annual electric output of ~~716,800~~ **686,000** MWh (FERC 2007).”

This correction then makes sense and should be carried to the later statement on that page 3.18-23, as follows, with the same numerical correction:

“Removal of the Four Facilities would result in the loss of 169 MW, or ~~686,000~~ **686,000** MWh from the Northwest Power Pool.”

But this is still a misstatement, however, that confuses “installed capacity” or “name plate” maximum generation capacity of 169 MW with total average power actually delivered over the

¹¹ See FERC 2007, at pg. 1-1, as the “current project facilities,” i.e., including the very small additional generation of Fall Creek, and the East Side and West Side projects.

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Comment 26 cont.

last 50 years, which is of course much less since no such facility can operate at maximum capacity 24/7. The actual number of megawatts delivered over the last 50 year time frame, according to FERC (2007), and subtracting the Fall Creek, East Side and West Side turbines, is correctly stated on the same page as $686,000 \text{ MWh} \div 24 \text{ hrs/day} \div 365.25 \text{ days/year} = 78.06 \text{ MW}$, which can be rounded to 78 MW, but *not* to 169 MW.

This second misstatement on pg. 3.18-23 should thus likewise be corrected, so the completed and corrected sentence would therefore read as follows:

“Removal of the Four Facilities would result in the loss of ~~169~~ 78 MW, or ~~658,000~~ 686,000 MWh from the Northwest Power Pool.”

These corrections will eliminate a source of some confusion in that portion of the text.

Note that these changes above also now make this text *fully consistent* with the number cited in the Executive Summary at DEIS pg. ES-14 (Table ES-1), which is also 78 MW average generation. **Please verify and correct those numbers so we have consistency throughout the DEIS.**

Comment 27- Hydropower

(5) Including Improved PacifiCorp Renewables Portfolio Commitments in Discussions of Power Losses and Potential Replacement Power Opportunities in Chapter 3.18: As cited in ATTACHMENT A to these written comments, in the discussion on power impacts of the Proposed Action on DEIS pgs. 8.13-22 to 24, and in parallel discussion on greenhouse gas impacts of the Proposed Action at DEIS pgs. 3.10-25 to 30, it should also be noted that PacifiCorp is already legally committed, by order of the Public Utilities Commissions of all six states in which it does business, to bringing more than 1,400 MW of brand new, cost-effective renewable (i.e. non-carbon generating) power online by 2015.¹² This was imposed as a condition of its purchase by the current owner – Midamerican Energy Holding Company – in 2006.

This 1,400 MW of new non-carbon renewable power to be brought online by 2015 is more than *18 times* the total power the four Klamath dams generate all together even today, and *more than 24 times* the total of about 58 MW the four dams are collectively projected to be able to produce after any FERC relicensing.

What this fact means is that it will not be difficult for PacifiCorp to replace the relatively small power loss from the dismantling of these four obsolete Klamath dams over the next few years. The fact that PacifiCorp is already committed to bringing 1,400 MW of new renewable power online by 2015 under the purchase agreement by Midamerican Energy Holding Company approved in 2006 simply underscores the DEIS finding that the net power loss from the Proposed Action will be “less than significant.” This 1,400 MW of new, non-carbon generation power will also help to more than offset any net increases in greenhouse gases from developing replacement

¹² For this 1,400 MW renewables requirement see, *Final Order*, Measure 41, in California PUC Docket A05-07-010. There are equivalent rulings in each of the five other states it does business in.

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← Comment 27 - cont.

power for the loss of power from the dismantled dams. This fact should be included in the discussion also at DEIS pgs. 8.10-25 to 30.

####

This concludes our written comments for the record. Thanks for the opportunity to comment as well as thanks for all the hard work that went into the DEIS itself.

Please contact me if you have any questions about any of the above.

Sincerely,
Glen K. Spain, J.D.
NW Regional Director
PCFFA/IFR

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ATTACHMENT A

Statement to Klamath DEIS Hearings – Yreka, CA October 20, 2011

**Glen Spain, Northwest Regional Director
Pacific Coast Federation of Fishermen’s Associations (PCFFA)**

Why Klamath Dam Removal Makes Economic Sense

The 1956 Federal Energy Regulatory Agency (FERC) 50-year license to operate the Klamath Hydropower Project expired in 2006. PacifiCorp, the company that owns the Klamath dams (J.C. Boyles Dam in Oregon, and CopCo Dams 1 & 2 and Iron Gate Dam in California, in river-descending order), can limp along on *temporary* one-year FERC license extensions only while an active application for FERC relicensing is pending. That time is coming to a close and a decision on the fate of these dams must soon be made. No privately owned dam can legally operate without a valid FERC license.

Whatever choice PacifiCorp (also known as “Pacific Power” in California) makes, the company’s costs of that decision will ultimately be charged to its customer/ratepayers. *This is how electrical utilities work.* Their only source of revenues is generally the creation of electrical power they then sell to their customers, collecting enough revenues from their customers to fund their operations. This is all regulated by state Public Utilities Commissions (PUCs) in each state where they operate, as the watchdog agencies that assures that their state’s customers get charged fair, reasonable – *and generally the lowest-cost* – power rates for the services they receive.

There are only two legal options for these Klamath Hydropower Project dams, both of which will cost Pacific Power’s ratepayers money:

- (1) Fix them up and relicense them to modern standards, which turns out will cost *at least* \$460 million, and quite likely more than \$500 million once all (currently unknown) water quality mitigation costs are added in, according to Pacific Power’s own testimony to the PUCs,¹³ or;

¹³ See CPUC Docket No. A10-03-015, *Testimony of Cory Scott*, Exhibit PPL-300 (March 18, 2010), pg. 6; Opening Brief of PacifiCorp (Nov. 17, 2010), pg. 6. The company “conservatively estimates” relicensing costs of at least \$400 million in capital improvements, plus \$60 million in operations costs and maintenance over a 40-year

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(2) Decommission and remove these aging dams entirely – which it can now do under the Klamath Hydropower Settlement Agreement (KHSA) for a “capped” cost to its customers of only \$200 million, with the rest paid by the State of California.¹⁴

MAINTAINING THE DAMS AS THEY ARE TODAY IS SIMPLY NOT A LEGAL OPTION.

The best current estimate for the total costs of decommissioning and full removal of the four dams and all their facilities, so that the Klamath River and its salmon can once move run freely through them, is only about \$290 million, including various environmental mitigation measures.¹⁵ By implementing dam removal through the KHSA Pacific Power thus saves its customers at least another \$90 million as well as reduces its own company and ratepayer risk and uncertainty. This is another reason the KHSA is a good deal for Pacific Power’s customers.

On May 5th, 2011, the California Public Utilities Commission (CPUC) formally confirmed that the KHSA is indeed the most cost effective, least risk and therefore best alternative for Pacific Power’s customers as compared to relicensing.¹⁶ A prior September 16, 2010, ruling by the Oregon PUC came to the same conclusion.¹⁷ And since under the KHSA these customer costs for dam removal are being spread out over more than 9 years, the current average Siskiyou County Pacific Power residential customer’s rate increase for the costs of Klamath dam removal is presently only about \$1.61/month.

The reality is that all four dams combined do not generate all that much power. Although the whole Klamath Hydroelectric Project is technically rated for maximum power generation of about 169 megawatts (MW), these dams cannot run at maximum capacity 24/7, especially during summers when turbine flows are lowest. The entire Project combined actually generated only about 82 MW of power on average over the past 50 years, according to FERC records – and 78

relicensing term, not counting likely large (but still unknown) additional costs for any water quality mitigations that may be required to meet state 401 Certification requirements in Oregon and California.

¹⁴ The rationale for this bi-state equitable cost-sharing scheme is that nearly 600,000 Oregonians are Pacific Power customers already paying into a Klamath Dam Removal Trust Fund monthly, while only about 40,000 Californians are ratepayers – but most economic benefits for restored Klamath salmon fisheries will be in California.

¹⁵ See *Detailed Plan for Dam Removal – Klamath River Dams* (Sept. 15, 2011), Table ES-1, pg. 7, at: http://klamathrestoration.gov/sites/klamathrestoration.gov/files/Klamath_DetailedPlan2011.pdf. Partial removal, which means leaving some of the building structures in place but still removing the dams sufficiently to produce a free-flowing river, can be done even cheaper, estimate at about \$247 million.

¹⁶ California PUC Final Order at: <http://docs.cpuc.ca.gov/published/proceedings/A1003015.htm>.

¹⁷ Oregon PUC Final Order at: <http://apps.puc.state.or.us/orders/2010ords/10-364.pdf>.

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MW combined for just the four dams in question here.¹⁸ By way of comparison, a single modern electrical power plant can continuously generate 1,000 MW or more.

And according to estimates by FERC, even after all the expensive retrofitting to meet modern standards for relicensing, these four dams combined would then only generate about 58 MW of power on average -- *about 26% less than they do today*.¹⁹

Relicensing thus means spending a *great deal* of money for what is actually *very little* power. In fact, FERC estimated in its 2007 Final Environmental Impact Report (FEIS) on relicensing that even if fully relicensed, the required retrofitting would be so expensive for so little return that these four dams would then operate *at more than a \$20 million/year net loss*.²⁰ *This means a 40-year FERC license would cost the company's ratepayers a total of at least \$1.3 billion – about 6.5 times the \$200 million “cap” on dam removal under the KHSA.*

Relicensing is just not an economically sensible option for either the company or its ratepayer-customers. The economic “bottom line” is that it’s just a lot cheaper for customers to remove the dams than to keep them.

And all this is *completely ignoring* likely economic and jobs benefits of a restored world-class salmon run, a more stable irrigation system, better water quality for the river, the gain of up to 4,300 new jobs with nearly 3,200 long-term jobs (and the 1,400 short-term construction jobs nearly all in Siskiyou County) and the many other benefits also highlighted in the DEIS.

The majority of Siskiyou County residents are Pacific Power customers and ratepayers, and so Siskiyou County residents, more than anyone else, should be concerned about minimizing the costs they will have to pay for either option ultimately chosen. Many coastal commercial fishermen as also company ratepayers, particularly in Del Norte County and coastal Oregon, and we certainly don’t want to pay more than these dams are worth either. Keeping them in place would require us to do just that, costing at least \$1.3 billion but with no upper limit on how much it could ultimately cost. For all of Pacific Power’s customers, dam removal under the Klamath Hydropower Settlement Agreement (KHSA) is a really good deal!

¹⁸ The November, 2007 FERC Final EIS (“FERC FEIS”) is available online at: http://elibrarv.ferc.gov/idmws/File_list.asp?document_id=13555784 or found by a FERC docket search at www.ferc.gov, Docket No. P-2082-027 posted November 16, 2007, Document No. 20071116-4001. This number is taken from FERC FEIS, pg. 1-1, as 716,800 MWh, which divided by hours per year (24 hrs./day X 365.25 days/year) = 81.77 MW actual output, rounded to 82 MW – less than 2% of Pacific Power’s total current power production. DEIS numbers are slightly lower (see DEIS Table ES-1 at page ES-14) because of not counting the very small amount of power generated by the Fall Creek and the East Side and West Side intakes and turbines at Link River Dam. East Side and West Side power plants are scheduled to be decommissioned regardless of relicensing. Excluding those three very small facilities gives an average 50-year annual generation record for the four remaining dams (J.C. Boyle, CopCo 1 & 2 and Iron Gate Dams) of only 78 MW.

¹⁹ FERC FEIS, Sec. 4.4, pg. 4-4 of 533,879 MWh = 60.90 MW relicensed output, rounded to 61 MW. Not counting Fall Creek, and the Eastside and Westside turbines, however, this comes to only 58 MW.

²⁰ FERC FEIS (Nov. 2007), Table 4-3 on pg. 4-2.

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The KHSA also guarantees that the City of Yreka's water supply culvert from the Fall Creek inflow will be completely upgraded, to the tune of several million dollars, including new spring intake fish screens the City would otherwise have to pay for. Without the KHSA, however, much of this benefit to the City of Yreka could go away: with FERC relicensing the City would not get fish screen money or culvert upgrades and would have to pay for these out of pocket, and if dam decommissioning ultimately took place without the KHSA, Pacific Power would not have to undertake more than a fraction of these mitigation costs, and those would be subject to likely litigation. So the KHSA is a good deal for the City of Yreka as well.

As to replacement power, Pacific Power is already legally committed to bringing more than 1,400 MW of brand new, cost-effective renewable power online by 2015.²¹ This nearly *18 times more* power than the four Klamath dams generate all together. Adding at least 58 MW of cost-effective and clean (carbon-free) replacement power to its grid after 2020, as it intends to do under the KHSA, would be an almost trivial task by comparison. There are many options for the replacement of this power from comparable carbon-free or renewable sources by 2020.²²

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²¹ See for instance, *Final Order*, Measure 41, in CPUC Docket A05-07-010.

²² A single modern wind turbine, for instance, can generate up to 6 MW of power and it would take only 39 such wind turbines, even at a very conservative estimated 25% efficiency, to *completely replace* the total amount of "green power" (58 MW) these four dams could produce after any hypothetical relicensing. A single modern "wind farm" may contain hundreds of such wind turbines. Also, even very modest conservation measures taken anywhere within Pacific Power's six state power grid could replace this very small amount of power easily and cheaply.

Comment Author Spain, Glen
Agency/Assoc. Pacific Coast Federation of Fishermans Assoc.
Submittal Date December 28, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1228_038-1	<p>Comment Noted.</p> <p>Master Response GEN-2 Some People Approve of Dam Removal, Others Oppose Dam Removal.</p>	No
AO_LT_1228_038-2	Master Response ALT-4 Elimination of Alternative 8-Dam Removal Without KBRA from Detailed Study.	No
AO_LT_1228_038-3	Appendix A has been revised to include information from the independent reviews of Alternatives 10 and 11 that were completed after this document. The independent reviews support the finding that Alternatives 10 and 11 do not meet the NEPA Purpose and Need/CEQA Project Objectives.	Yes
AO_LT_1228_038-4	During removal of upstream facilities (3-6 months) under Alternative 5, the power generation and fish passage facilities at Copco 2 would not operate because of the high sediment content in the water. However, the facility at Copco 2 would not be continually overwhelmed with sediment nor would it have to be dredged out. The dam has large radial gates that would be operated to bypass flood flows and these would also be used flush sediment during high flows. There would be additional coarse and fine sediment entering the basin that could require additional maintenance; however, it would be possible to continue operation of the facility.	No
AO_LT_1228_038-5	<p>Conversion of IMPLAN jobs to Full Time Equivalent (FTEs) would involve the application of national conversion rates (calculated from data provided by unemployment insurance programs) to regional employment figures. However, the employment estimates provided in the Draft EIS/EIR, since they were estimated based on specific geographies, are not necessarily appropriate (or consistent) at the regional level. In addition, commercial fishermen are minimally represented in the unemployment insurance data which are used to compute the conversion rates. Thus, conversion to FTEs would actually introduce an additional potential source of error.</p> <p>The IMPLAN data underlying the estimation of employment impacts in the Draft EIS/EIR are compiled from a variety of sources including the U.S. Bureau of Economic Analysis, the U.S. Bureau of Labor, and the U.S. Census Bureau. IMPLAN uses the Bureau of Labor Statistics (BLS) definition of employment. Employment includes both full time and part time workers (rather than FTE's) and is measured in annual average jobs. The jobs numbers are directly comparable across alternatives and resources. The jobs numbers are also directly comparable to Federal and State employment data.</p>	Yes

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Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1228_038-6	<p>IMPLAN data counts part-time employment the same as full-time employment, for example a part-time worker who works all year is one average annual job. However there is an adjustment for seasonal jobs, for example, two workers who work a half year count as one average annual job.</p> <p>However, industries that rely predominately on part-time labor would have lower earnings per worker which translates in lower labor income which is also measured as part of the regional economic impact analysis.</p> <p>The employment estimates use a consistent definition of jobs throughout the Draft EIS/EIR. The jobs definitions has been added to each of the results tables for the Final EIS/EIR to aid in understanding.</p> <p>The Draft EIS/EIR acknowledges the historic extent of steelhead and their capacity to access and use habitat (Draft EIS/EIR Section 3.3.4.3, p. 3.3-112-113).</p> <p>Under the Proposed Action, removal of dams could result in alterations in habitat availability, flow regime, water quality, temperature variation, and algal toxins which could affect steelhead in the long term. Dam removal would restore connectivity to at least 420 miles of historical habitat in the Upper Klamath Basin and would create additional habitat within the Hydroelectric Reach (Tinniswood 2011). It is anticipated that as a result of the Proposed Action the summer and winter steelhead within the Klamath River watershed would have an increase in abundance, productivity, population spatial structure, and genetic diversity. Based on increased habitat availability and improved habitat quality, the effect of the Proposed Action would be beneficial for summer and winter steelhead in the long term (Draft EIS/EIR Section 3.3.4.3, p. 3.3-119). Long-term quantitative estimates of the steelhead population response are not available, but are qualitatively characterized as ranging from “no detectable response” to “broader spatial distribution and increased numbers of individuals within the Klamath system” depending on other variables such as water quality (Dunne et al, 2011, p. ii).</p> <p>As noted (Draft EIS/EIR Section 3.15.4.3, p. 3.15-59) the lack of quantitative population data makes it impossible to quantify the economic contribution of in-stream steelhead fishing to local economies. As a result, any increase in economic activity attributable to steelhead fishing is not captured in the economic analysis. This has the effect of underestimating the economic contribution of in-stream steelhead fishing should an increase in the steelhead population increase occur.</p>	

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Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1228_038-7	The EIS/EIR describes the effects of climate change on the Proposed Action and alternatives. The text summarizes key components of larger documents that analyze predicted climate change impacts in the Pacific Northwest and the Klamath Basin. P. 3.10-22 of the Draft EIS/EIR specifies that the “primary effect of dam removal is still anticipated to be the return of approximately 160 miles of the Klamath River, from J.C. Boyle Reservoir (RM 224.7) to the Salmon River (RM 66), to a natural thermal regime.” In addition to Section 3.2, Water Quality which the comment author cites, p. 3.10-32 and 3.10-33 of the Draft EIS/EIR discuss the benefits of implementing the Drought Plan and the Climate Change Assessment and Adaptive Management Plan components of the KBRA. As described on these pages, these plans “will assist the region in planning and responding to the climate change impacts identified in this EIS/EIR in the short-term, mid-term, and long-term horizons.” In addition to Section 3.2, Water Quality, discussion of climate change, Section 3.3.4.3 also discusses climate change.	No
AO_LT_1228_038-8	The analysis of the KBRA has been updated to clarify how implementation of the KBRA is expected to benefit groundwater levels in the Klamath Basin within and around the Klamath Project.	Yes
AO_LT_1228_038-9	To clarify the description of sediment quantities presented in the EIS/EIR, the text box on p. 2-XX, titled “Existing and Future Sediment Weight and Volume in the Four Facilities with Projected Erosion Following Dam Removal” has been added to show sediment quantities in both cubic yards and tons. Additionally a note indicating prior estimates of the sediment deposits that were also noted in Section 3.2 of the Draft EIS/EIR has been added to the table. The EIS/EIR analysis relies on volume estimates in both tons and cubic yards (Mass report in US short tons).	Yes
AO_LT_1228_038-10	The sediment evaluation studies conducted for the Secretarial Determination process were not fish consumption advisory studies, so the results are limited in the sense that they provide direct information regarding potential human health risks due to fish consumption under the No Action/No Project Alternative (Alternative 1). The bioaccumulatory pathways in the field study were not controlled (as they are in laboratory studies), and a direct comparison of human health risk due to fish consumption under the No Action/No Project Alternative to risk of fish consumption (of different species) under the Proposed Action is not possible. However, the potential human health impacts under Alternative 1 (No Action/No Project) are discussed as a further line of evidence in Section 3.2.4.3.1.7 Inorganic and Organic Contaminants of the Draft EIS/EIR (p. 3.2-71 to 3.2-76). Together, the evaluations of sediment and fish tissue data, and separate laboratory	No

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Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1228_038-12	<p>bioaccumulation studies, serve as multiple lines of evidence and indicate that a relatively small number of chemicals (i.e., mercury, arsenic, total PCBs, and dioxins) are present in the reservoir sediments at levels that have the potential to cause minor or limited adverse effects to humans through fish consumption in the Hydroelectric Reach. The continued impoundment of water at the Four Facilities under the No Action/No Project Alternative would result in no change from these existing conditions. These results and conclusions have been incorporated into the overall potential impacts shown in Draft EIS/EIR Figure 3.2-2 on p. 3.2-74. Also refer to the document, Screening-Level Evaluation of Contaminants in Sediments from Three Reservoirs and the Estuary of the Klamath River, 2009–2011 (CDM 2011b), for detailed discussions of the data and evaluation used to derive this conclusion. Note that there are currently no TMDLs for contaminants in the Klamath Basin.</p> <p>In addition to this EIS/EIR, a Biological Assessment (BA) was prepared and a BO is in development that evaluate in depth the effects to endangered species. These reports would be used by the Secretary in making his decision.</p> <p>Mitigation measures are only identified if a significant impact is identified. No impacts are required for impacts that are considered less than significant. As shown in Draft EIS/EIR Sections 3.2.4.3.1.7 (No Action/No Project Alternative) and 3.2.4.3.2.7 (Proposed Action), a relatively small number of chemicals are present in reservoir sediments at levels that have the potential to cause minor or limited adverse effects under the alternatives. Thus, the effects are less-than-significant.</p>	Yes
	<p>With regard to comments pertaining to “Baseline Chosen Is Appropriate”:</p> <p>We agree that economic impacts for the in river recreational fisheries are understated, due to inability to quantify effects of the Action alternatives on the steelhead and redband trout fisheries. A qualitative discussion of the latter fisheries is provided on p. 3.15-43 and p. 3.15-59 to 3.15-60 of the Draft EIS/EIR.</p> <p>With regard to comments pertaining to “Incorrect ‘Expansion Factors’ for Monterey and Northern Oregon Regions”:</p> <p>An expansion factor of 1.0 was used in the Draft EIS/EIR to characterize the troll fishery in Monterey and Northern Oregon under 2001-2005 baseline conditions and long-term average conditions projected for Alternatives 2 and 3 (43% increase over baseline). While we agree that the expansion factors for Monterey</p>	

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	<p>and Northern Oregon would be much different from 1.0 during years of very low stock abundance (e.g., 2006), the baseline period and the 43% increase over baseline do not reflect such depressed conditions. Thus the 1.0 expansion factors are appropriate to the circumstances that were analyzed. For clarification, text has been added to Section 3.15.4.2 indicating that the tables pertaining to commercial, in-river and ocean recreational Chinook fisheries in that section reflect average (rather than depressed) stock abundance conditions.</p> <p>With regard to comments pertaining to “Error in Designating Where KRFC Harvests Occur”:</p> <p>With regard to Tables IV-1 and IV-2 of the Commercial Fishing Economics Technical Report, we do not claim that five of the seven management areas account for 99% of Klamath Chinook harvest but rather that they account for 99% of “revenues from Chinook harvest (all stocks) that are attributable to the availability of Klamath Chinook” (p 26). This latter claim is consistent with the data presented in the tables.</p> <p>We agree with NOAA Fisheries Service that “Over 99 percent of KRFC are caught with other salmon stocks, including more abundance Central Valley fall-run Chinook, in commercial and recreational fisheries in the Klamath impact area from Cape Falcon to Point Sur.” The statement in the EIS/EIR that 99% of revenues from Chinook harvest (all stocks) attributable to the availability of Klamath Chinook occurs in five of the seven management areas is not inconsistent with NOAA Fisheries Service’s definition of the Klamath River Fall Chinook (KRFC) impact area. Rather the EIS/EIR statement describes how revenues attributable to the No Action and Proposed alternatives would be distributed within the KRFC impact area identified by NOAA Fisheries Service.</p> <p>We agree with the comment author’s concern regarding the need for more information regarding effects of the alternatives when Chinook is at low levels of abundance. This issue is addressed in the Commercial Fishing Economics Technical Report but needs to be more fully addressed in the EIS/EIR. Such information has been added to Section 3.15.4.2 of the Final EIS/EIR.</p> <p>Given that 99% of revenues from Chinook harvest (all stocks) attributable to the availability of Klamath Chinook would occur in areas other than Monterey and Northern Oregon, the economic impacts of the No Action and Proposed alternatives would be modest at best in the latter two areas. This is why the two areas are excluded from Tables 3.15-28, 3.15-29, 3.15-45 and 3.15-46.</p>	

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	<p>This is explained in the Commercial Fishing Economics Technical Report. Similar explanation has been added to Section 3.15.4.2 of the Final EIS/EIR.</p> <p>With regard to comments pertaining to “Converting ‘Jobs’ to FTEs and Clarifying Terms in Thompson report Table V-2 and V-4”:</p> <p>Section V.A. of the Commercial Fishing Economics Technical Report states that “The employment impacts include full time, part time, and temporary positions.” P. 3.15-27 of the Draft EIS/EIR similarly indicates that “a job can be full-time, part-time or temporary”. However, we agree that this definition should be made clear throughout these documents and not just in the methodology section. Thus an appropriate “jobs” definition has been added to each of the results tables in the Commercial Fishing Economics Technical Report and the Final EIS/EIR.</p> <p>The IMPLAN data underlying the estimation of employment impacts in the EIS/EIR are compiled from a variety of sources including the U.S. Bureau of Economic Analysis, the BLS, and the U.S. Census Bureau. IMPLAN uses the BLS definition of employment. Employment includes both full time and part time workers (rather than FTEs) and is measured in annual average jobs. The jobs numbers are directly comparable across alternatives and resources. The jobs numbers are also directly comparable to Federal and State employment data.</p> <p>IMPLAN data count part-time employment the same as full-time employment; for example a part-time worker who works all year is one average annual job. However there is an adjustment for seasonal jobs; for example, two workers who work a half year count as one average annual job.</p> <p>Industries that are predominately part-time labor would have lower earnings per worker which translates to lower labor income, which is also measured as part of this analysis.</p> <p>Conversion of IMPLAN jobs to FTEs would involve application of national conversion rates (calculated from data provided by unemployment insurance programs) to regional employment figures. Therefore the employment estimates provided in the EIS/EIR, are not necessarily appropriate at the regional level, and commercial fishermen are minimally represented in the unemployment insurance data which are used to compute the conversion rates. Thus conversion to FTEs would introduce another potential source of error to the job estimates.</p>	

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Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1228_038-13	<p data-bbox="488 447 1263 630">The title of Table V-4 of the Commercial Fishing Economics Technical Report indicates that the numbers pertain to economic impacts “under Alternative 2 relative to Alternative 1”. To make this point clearer, the title of the table has been edited to indicate that the difference between Alternatives 1 and 2 represents additional jobs.</p> <p data-bbox="488 657 1114 690">Concern #1: AR-1: Protection of Mainstem Spawning</p> <p data-bbox="488 722 1263 1024">The issues raised by the comment author are valid, and useful for the implementation of AR-1. As described in the Draft EIS/EIR Section 3.3.4.3 (p. 3.3-196) a detailed plan describing capture techniques, release locations, and monitoring methods for the implementation of AR-1 would be developed by the DRE prior to 2019. This plan would provide for the further consideration of differences in “races” of each species to minimize the mixing of different stocks, and to consider hatchery stocks. This plan would also consider specific protections from the timing of sediment surges.</p> <p data-bbox="488 1056 1146 1089">Concern #2: AR-2: Protection of Outmigrating Juveniles</p> <p data-bbox="488 1121 1263 1906">The issues raised by the comment author are valid, and useful for the implementation of AR-2. As described in the Draft EIS/EIR Section 3.3.4.3 (p. 3.3-197), trapping on all of these streams is proposed to help preserve the genetic integrity and varied life history tactics that are represented by this group of streams that have a high diversity with respect to size, channel types, water temperature regimes, geographic distribution, and other attributes. In addition a detailed plan describing trapping techniques, release locations, and monitoring methods would be developed by the DRE prior to 2019. This plan would consider adjustments in timing of captures and releases so as to preserve, as much as possible, the same genetic diversity that currently exists, as well as to prevent geographic dislocations that might result in higher future straying rates from the incoming adults from this most affected year-class. As described in the Draft EIS/EIR Section 3.3.4.3 (p. 3.3-197), The procedures of trapping, handling, trucking, and releasing outmigrating salmonids could result in harm or mortality to some individuals, and releasing fish at downstream locations could reduce natal cues and increase stray rates. Therefore fish would be captured and transported only if conditions within the mainstem are as poor as predicted. Due to the uncertainties with suspended sediment modeling, water quality monitoring during spring 2020 would be used to trigger the initiation and cessation of the capture program and inform suitable release locations. Consistent with the concerns raised in this comment, the Draft EIS/EIR Section 3.3.4.3 (p. 3.3-197) describes that, alternatively,</p>	

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	<p>in a portion of tributaries juveniles could be held in temporary facilities within tributaries and released when SSC in the mainstem were non-stressful. This would prevent any decrease in the natal cue, as well as any potential associated effects of fish transport.</p> <p>Concern #3: AR-3: Fall Flow Pulses</p> <p>The issues raised by the comment author are valid, and useful for the implementation of AR-3. As described in the Draft EIS/EIR Section 3.3.4.3 (p. 3.3-198) a detailed plan describing target flows and monitoring methods would be developed by the DRE prior to 2019. This plan would consider the development of clear “triggers” in terms of current and projected future meteorological conditions, as well as river conditions, to determine whether such fall pulse flows are going to be available, and in what volume, and still leave a very high probability (80% or greater) of having enough additional inflows for the spring pulse flows needed during smolt out-migration (and to meet coho BiOp requirements).</p> <p>Concern #4: AR-4: Hatchery Management</p> <p>As described in the Draft EIS/EIR Section 3.3.4.3 (p. 3.3-199), the central focus of this mitigation measures is to recommend that hatchery managers could adjust the timing of hatchery releases during spring 2020. As noted in this comment, an alternative is proposed to allow the sub-yearling and yearling smolts to imprint at the hatchery and then truck them to release locations downstream where SSC effects may be muted by tributary accretion flow. Imprinting on the hatchery prior to release is proposed to reduce the potential for straying, a concern noted in the comment. However, the issue raised is legitimate, and would be considered in the detailed plan describing adjustments to hatchery management to be developed by the DRE prior to 2019 [Draft EIS/EIR Section 3.3.4.3 (p. 3.3-199)].</p>	
AO_LT_1228_038-14	<p>The issues raised by the comment author are valid, and useful for the implementation of AR-2. As described in Draft EIS/EIR Section 3.3.4.3 (p. 3.3-197), trapping on all of these streams is proposed to help preserve the genetic integrity and varied life history tactics that are represented by this group of streams that have a high diversity with respect to size, channel types, water temperature regimes, geographic distribution, and other attributes. In addition a detailed plan describing trapping techniques, release locations, and monitoring methods would be developed by the DRE prior to 2019. This plan would consider adjustments in timing of captures and releases so as to preserve, as much as possible, the same genetic diversity that currently exists, as well as to prevent geographic dislocations that might result in higher future straying</p>	No

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Comment Code	Comment Response	Change in EIS/EIR
	<p>rates from the incoming adults from this most affected year-class. As described in Draft EIS/EIR Section 3.3.4.3 (p. 3.3-197), the procedures of trapping, handling, trucking, and releasing out migrating salmonids could result in harm or mortality to some individuals, and releasing fish at downstream locations could reduce natal cues and increase stray rates. Therefore fish would be captured and transported only if conditions within the mainstem are as poor as predicted. Due to the uncertainties with suspended sediment modeling, water quality monitoring during spring 2020 would be used to trigger the initiation and cessation of the capture program and inform suitable release locations. Consistent with the concerns raised in this comment, the Draft EIS/EIR Section 3.3.4.3 (p. 3.3-197) describes that, alternatively, in a portion of tributaries juveniles could be held in temporary facilities within tributaries and released when SSC in the mainstem were non-stressful. This would prevent any decrease in the natal cue, as well as any potential associated effects of fish transport.</p>	
AO_LT_1228_038-15	<p>Master Response HYDG-1 Flood Protection.</p> <p>Additional analysis of the specific structures requiring mitigation due to increased water surface elevations would be completed as a part of future engineering studies that would follow an Affirmative Secretarial Determination. As noted by the comment author Mitigation Measures H-1 and H-2 were determined to reduce the impact to hydrology to less than significant. However the additional mitigation measures identified by the comment author could be considered as a a of any future environmental compliance review required following an Affirmative Secretarial Determination.</p>	No
AO_LT_1228_038-16	<p>The commenter has correctly characterized the information presented in the Dam Removal Real Estate Evaluation Report</p> <p>Master Response RE-3 Landowners Compensation.</p> <p>Master Response RE-4 Takings.</p>	No
AO_LT_1228_038-17	<p>Master Response RE-3A Landowner Compensation.</p> <p>The specific process outlined for compensation of landowners is outside the scope of the EIS/EIR.</p>	No
AO_LT_1228_038-18	<p>As noted, mitigation measure REC-1 would develop recreation opportunities along the newly created river channel.</p> <p>Master Response RE-6B, C, and E Disposition of Parcel B Lands.</p>	No
AO_LT_1228_038-19	<p>While it is correct that Proposition 13 limits a property tax rate increase on real property, it does not prohibit a decrease on the</p>	No

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	taxable rate of real property. Proposition 8 was passed in 1978 and it allows for a temporary reduction in the assessed value of real property if the real property declines in value. Proposition 8 is codified by section 51(a)(2) of the California Revenue and Taxation Code. If a real property's market value decreases below the property's base year value (the value at the time of purchase or the assessed value in 1975) it can result in a lower tax assessment through the county tax assessor.	
AO_LT_1228_038-20	Master Response GEN-1 Comment Included as Part of Record.	No
AO_LT_1228_038-21	Master Response GEN-1 Comment Included as Part of Record.	No
AO_LT_1228_038-22	NEPA requires an EIS to disclose the impacts associated with each alternative to foster the decision-making process, which is what the EIS/EIR has done. NEPA also requires that mitigation measures must be also discussed in an EIS, but it is at the discretion of the Lead Agency as to what measures are adopted and implemented.	No
AO_LT_1228_038-23	As presented in the Draft EIS/EIR Section 3.2.4.3.2.7 (p. 3.2-118 to 3.2-125), the potential for effects on aquatic species and humans due to exposure to sediment-associated inorganic and organic contaminants in the lower Klamath River would be less-than-significant. Therefore, no mitigation measure is required.	No
AP_LT_1228_038-24	Use of "Reclamation" as an acronym for the Bureau of Reclamation is first explained in the Executive Summary under Section ES.2.1. It is also shown in the reference list for Section 3.15 by listing the first Bureau of Reclamation reference with the full name "Bureau of Reclamation" followed by (Reclamation). Each reference listed after this only uses the acronym "Reclamation" to identify the reference. No change will be made to these citations.	
AO_LT_1228_038-25	The reference to Mitigation Measures PHS-1 and PHS-2 in the part of Section 3.18 noted by the comment author is correct. No change to the text is necessary. The impact analysis is describing potential public health and safety effects during construction and demolition of recreational facilities. PHS-1 calls for the preparation and implementation of a public safety management plan that would apply to all phases of construction and demolition. PHS-2 is a fire safety management plan to reduce the risk of fire as a result of construction/ demolition	No

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Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1228_038-26	<p>activities. Mitigation Measure REC-1 provides for the mitigation for recreational facilities that would be removed during dam removal. The intent of REC-1 is to provide recreational resources and infrastructure which would support similar levels albeit different types of use. Thus, mitigation measures PHS-1 and PHS-2 are the correct mitigation references for this potential impact.</p> <p>The discussion is focused on the Public Health and Safety mitigations for construction activities related to removing the existing recreation facilities, not mitigating for their loss. Mitigation Measures PHS-1 and -2 are the correct mitigations measures for the impact under discussion.</p> <p>4) As discussed on Draft EIS/EIR p. 3.18-13 of the Public Health and Safety section, the Four Facilities under consideration for removal have a nameplate generation capacity of 163MW, and an annual average generation of 686,000 MW. Other numbers throughout the Draft EIS/EIR use this 686,000 MW number for the analysis of different impacts. The discussions on p. 3.18-23 and 3.18-27 have been clarified to match the initial discussion on p. 3.18-13 and table 3.18-4.</p>	Yes
AO_LT_1228_038-27	Section 3.18, Public Health & Safety, has been revised to include this information.	Yes

AO_LT_1024_005

SCANNED



Rogue Group Sierra Club,
84 4th Street, Ashland, OR 97520

October 20, 2011

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Ms. Elizabeth Vasquez
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Dear Ms. Vasquez,

Please make the Review and Comments submitted by the Rogue Group Sierra Club a part of the Public Record for Klamath Facilities Removal Public Draft Environmental Impact Statement/Environmental Impact Report-State Clearinghouse #2010062060.

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Secretary Ken Salazar
Department of the Interior
1849 C Street, N.W.
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Review and Comments on Draft+
Klamath Facilities Removal
EIS/EIR

October 20, 2011

John M. Sully, MS
For
Rogue Group, Oregon Chapter Sierra Club

PUBLIC NOTICE U.S. Department of the Interior Informational Meeting on Klamath River Dam Removal Studies : The Secretary's determination will be based on a **thorough scientific review of the potential costs and benefits of dam removal, as well as an analysis of the potential environmental impacts of dam removal under the National Environmental Policy Act (NEPA).**

"The EIS/EIR is being prepared in compliance with NEPA and CEQA and will inform a determination by the Secretary of the Interior (Secretary) on whether dam removal will advance salmonid restoration and is in the public interest, including but not limited to, consideration of potential impacts on affected local communities and tribes."

NEPA Purpose and Need

Here is a condensed version of the purpose and need as stated in the EIS:
"...to advance the restoration of the salmonid fisheries in the Klamath Basin consistent with the KHSA... The purpose is to achieve a free flowing river condition and full volitional fish passage..."

Introduction

Comment 1 - Approves Dam Removal

The Rogue Group of the Oregon Chapter of the Sierra Club supports the removal of the four dams on the Klamath River as discussed in the Draft Klamath Facilities Removal EIS/EIR. We do not support the linkage of the KHSA and the KBRA, nor do we support the KBRA for reasons discussed below.

Comment 2 - NEPA

I. The intent of dam removal is to restore, advance, and extend wild native salmonid runs to the entire Klamath Basin.

The PacifiCorp operating license for the four hydropower generating dams on the Klamath expired in 2006. In anticipation of this, PacifiCorp applied to FERC for renewal in 2004.

FERC began the NEPA process for renewal in 2005 and released the FEIS with a recommendation to remove the 4 dams in 2007.

In recognition of this, the KHSA stated correctly, the dam removal process is subject to NEPA and CEQA.

← Comment 2 cont. - NEPA

II. The Draft Klamath Facilities Removal EIS/EIR appears to be preoccupied with the KBRA. The KBRA was not prepared in compliance with NEPA and CEQA.

In fact, portions of the KBRA, not subject to legislative approval, are being implemented at this time, contrary to NEPA processes. As an example, water delivered to Lower Klamath and Tule Lake Wildlife Refuges was drastically reduced in 2010 from an average above 32,000 acre feet or more to 0 from January 1, 2010 to October 2010 (c.f. NWR news letter). This is contrary to the USFWS BiOp of 32,000 acre feet in drought years.

BOR concern for the National Wildlife Refuges is demonstrated in the following announcement (September 29, 2010):

Opening Weekend Waterfowl Hunting Drawing for Controlled Hunts on Tule Lake & Lower Klamath Refuges, California

Due to the current water crisis in the Klamath Basin, the number of permits drawn for opening weekend has been drastically reduced. At this time over 95% of Lower Klamath Refuge is DRY. All wetland units on Lower Klamath are motorless until further notice. The water situation on the Tule Lake Refuge is less than normal, however, sumps 1A & 1B are expected to be at or close to normal levels for Opening Weekend. Please refer to the Hunter Hotline and the Habitat Map for detailed information. If you have further questions please contact the Refuge at 530/ 667-2231 Thank You.

A newspaper interview with Dave Mauser, wildlife biologist for the refuges further demonstrates BOR's lack of concern for the Wildlife Refuges and is an illustration of implementation of portions of the KBRA contained in Chapter 4, "Water Management", before legislation has been introduced to Congress:

‘It’s a tough situation. There’s not enough water to go around’

By SARA HOTTMAN, Herald and News September 5, 2010

Dave Mauser, wildlife biologist for the Klamath Basin National Wildlife Refuges complex, is watching the Lower Klamath refuge dry up, but there's little he can do to get water for the nearly one million wetland birds that are beginning to migrate there.

"I've sent in a request to the Bureau of Reclamation for water delivery this fall to Lower Klamath. I'm not real optimistic," he said. "But you have to ask."

Fall birds will migrate until the beginning of November. With no water, the birds will have to go someplace else.

"California has lost over 90 percent of its historic wetlands. We're running out of places for birds to go," Mauser said.

The refuges are last in line for water from Upper Klamath Lake. Endangered species and tribal trust obligations come first, then farmers, and then what's left over goes to the refuges. This year, Basin farmers only received about 40 percent of the water they needed, so the refuges have gone without. "

The actions of BOR in distribution of water seem to consider first On Project Users and only if there is "Surplus Water" (KBRA phrase) other water users.



DAVE MAUSER, wildlife biologist,
Klamath Basin National Wildlife Refuges

← Comment 2 cont. - NEPA

III. The KBRA is not a salmonid restoration document. It is not a restoration document at all. It is only remotely related to dam removal. It is a water management document. The purpose of the KBRA is to guarantee as much water as possible be made available by the BOR to the "On Project" Irrigators. This is clearly stated in Chapter 4 "Water Management" of the Draft KBRA and in the Appendix of the final KBRA.

As an example, The KBRA states in drought years deliveries to the NFWS will be no more than 25,000 acre feet. Any further amounts of water delivered to the refuges would be deducted from the 25,000 acre feet to keep the water deliveries at that level. This is contrary to the USFWS BI OP that a minimum of 32,000 acre feet must be delivered in drought years to the Lower Klamath Lake Refuges. This is not "Restoration".

The President of the Klamath Basin Water Users Association (a resident of the Rogue Valley) wrote, in an Op Ed in the Medford Tribune-10/20/2011- there would be no impact from the KBRA on Rogue Valley Irrigators. But the most significant part of the piece is his emphasis on the benefits to agriculture. He never once brought up restoration of fisheries or conservation in the Op Ed.

Chapter (Section) 4 "Water Management" is **clearly contrary** to statements made in the NEPA Purpose and Need and CEQA Project Objectives stated in the Draft Klamath Facilities Removal EIS/EIR:

NEPA Purpose and Need "...to advance the restoration of the salmonid fisheries in the Klamath Basin consistent with the KHSA...The purpose is to achieve a free flowing river condition and full volitional fish passage..."

← Comment 2 cont. - NEPA

IV. (a) The KBRA does not comply with NEPA/CEQ (Council on Environmental Quality) regulations (Sec. 1500.2 Policy, Sec. 1500.6 Agency authority, Sec. 1501.7 Scoping).

The KBRA has not been subjected to a thorough scientific review (or scientific review has been ignored) of the potential costs and benefits or an analysis of the potential environmental impacts of the actions emphasized in the agreement.

An example of this is the problem of the In Stream Flow Study (Hardy Flow) vs. the Natural Flow study of BOR/Klamath Water Users Association. The latter appears to have been adopted by BOR for managing river flows instead of completing and utilizing the Hardy Flow Study as recommended by the Committee on Hydrology, National Research Council, from "Ecology, and Fishes of the Klamath River" published by the National Research Council.

The Natural Flow Study recommends lower flows for the river than does the In Stream Flow Study. The Natural Flow Study does not guarantee sufficient flows for survival of the listed Coho Salmon. This again demonstrates the KBRA is not a "Restoration" project and lacks a thorough scientific review of costs and benefits as required by NEPA.

The opinions expressed in "Klamath River Expert Panel FINAL REPORT, Scientific Assessment of Two Dam Removal Alternatives on

Chinook Salmon, June 13, 2011 also demonstrates the lack of interest in fisheries restoration by BOR and other lead agencies responsible for the KBRA.

The KBRA does not comply with CEQA. As an example Chapter II of the Draft Klamath Facilities Removal EIS/EIR contains a flow chart, Figure 2-1, "Alternative Development and Screening Process" that outlines processes required in CEQA. None of processes were used in developing the KBRA.

(b) The following list of Federal Agencies is evidence that Federal Agencies **are** lead agencies in the preparation of the KBRA, hence, under NEPA/CEQ the regulations **must be observed and followed**. CEQ regulations do not make any exceptions, only procedures that follow CEQ guidelines are acceptable (**Sec. 1500.2 Policy, Sec. 1500.6 Agency authority, Sec. 1501.7 Scoping**).

"Parties

The following Parties enter into this KBRA

United States

U.S. Department of Agriculture Forest Service
U.S. Department of Commerce's National Marine Fisheries Service
U.S. Department of Interior including Bureau of Indian Affairs,
Bureau of Land Management, Bureau of Reclamation, and Fish
Wildlife Service."

"1.2 General Recitals

1.2.2 Klamath Reclamation Agreement

The parties enter into this agreement to resolve long standing disputes regarding the amounts, timing and conditions of diversion and delivery of water for irrigation, National Wildlife Refuges and related uses within the Klamath Reclamation Project and by non-federal entities in the Upper Klamath Basin; regarding flows and lake levels that support Fish Species and wildlife. *The resolution achieved here is intended to protect the sustainability of the agriculture uses and communities (emphasis added) along with the public and trust resources.*" (Maybe an after thought?)

(c) Every page of the draft of the KBRA has the following statement at the bottom:

"Confidential and Privileged Settlement Communication".

This does not indicate transparency, public involvement, scoping, or any intent to comply with NEPA or CEQA.

(d) Those signing the KBRA were required to subscribe to the following:

"3.1.3 Defense of Agreement.

Subject to 2.2., each Party shall support and defend this Agreement in each applicable venue or forum, including administrative or judicial action in which it participates and which concerns the validity of any regulatory Approval or Authorizing Legislation."

The above statements are deliberate efforts to exclude public discussion. The statements do not indicate openness in considering points of view the lead agencies disagreed with, nor even a willingness to consider opposing points of view.

(e) Several groups that disagreed with the lead agencies were prohibited from attending further sessions and were literally locked out of the meetings.

Many of the conservation organizations that participated in the development of the KBRA withdrew and refused to sign the final document.

Even though the KBRA was circulated for review before it was approved by the governors of California and Oregon, there was no avenue for the public to comment on any part of the Agreement. **There was no public involvement.**

(f) Finally, PacifiCorp was not a participant in the KBRA and had no say in linking the KBRA and AIP (KHSA). PacifiCorp did not sign the KBRA.

The point of the above discussion is to conclusively demonstrate the lead agencies deliberately ignored and are continuing to ignore NEPA and CEQA regulations.

Any consideration of the KBRA in this document is not warranted.

Those portions of the KBRA linking it to Dam Removal **should not** be considered in this EIS/EIR. Nor should this EIS/EIR attempt to justify

the decisions set forth in the KBRA because those decisions are not in the public interest. The KBRA was not prepared in accordance with the Environmental Policy Act as Amended.

It appears the repeated discussion of the linkage between KBRA and KHSA in the Draft Klamath Facilities Removal EIS/EIR, DOI is attempting to demonstrate the lead agencies, in creating the KBRA, were not ignoring NEPA and CEQA regulations. If this is the case, the Lead Agencies are dismissing the prime intent of the KHSA:

"TO RESTORE, ADVANCE, AND EXTEND WILD NATIVE SALMONID RUNS TO THE ENTIRE KLAMATH BASIN".

The demands for subsidies for the On Project Users and release of financial obligations of On Project Users owed to BOR are entirely unjustified and put an increased burden on taxpayers. Economic conditions are and will continue to be such that the KBRA has a slim, or no chance, of being enacted by Congress in the near future. Hence, the Agreement is unlikely to play any part in dam removal. None of this is considered in the EIS/EIR.

In linking the KBRA and the KHSA DOI is ignoring its responsibility to the principal of Public Trust and the best interests of the Public.

V. "The most important thing to understand about the EIS/EIR, the decision of Interior Secretary Salazar it is meant to inform and the federal legislation needed to implement the Interior Department's proposed Klamath Dam and Water Settlements, is that it is not about whether or not 4 dams will be removed. That decision has already been made. Four dams owned by PacifiCorp – Iron Gate, Copco 1, Copco 2 and J.C.Boyle – will come down and a fifth dam - Keno - will be transferred to the Bureau of Reclamation because required fisheries and water quality mitigation requirements render them uneconomical. If PacifiCorp's Klamath Hydroelectric Project were relicensed, the company would lose an estimated \$20 million each year."

Comment 2 cont. -
NEPA



"For PacifiCorp's electric customers and shareholders the obvious decision is to decommission the project and remove the dams. When the political noise is stripped away the dams will come down for economic reasons. The only real questions which remain are:

- "Who will pay for removing PacifiCorp's aging dams and powerhouses? and

- What other decisions and provisions will catch a ride on the popular dam removal train?" Quoted from Felice Pace's KlamBlog.

The following statement is taken from the final KHSA:

"In the event of a negative determination or if the Hydroelectric Settlement Terminates, PacifCorp would return to the FERC relicensing process."

The dams will come out. FERC will pick up decommissioning even if the Secretary determines dam removal is not in the best public interest!

"In the event of a negative determination or if the Hydroelectric Settlement terminates, PacifCorp would return to the FERC relicensing process", (emphasis added) quoted from the KHSA.

The Secretary **does not** have an obligation to consider the KBRA in this DEIS/EIR. The Secretary should choose, **as the preferred Alternative (alt. 8)**, deferring the decision to FERC and possibly shortening the dam removal process.

Comment 2 cont. - NEPA

John M. Sully, MS

John M. Sully, MS
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Comment Author Sully, John
Agency/Assoc. Rogue Group Sierra Club
Submittal Date October 24, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1024_005-1	<p>The Secretary of the Interior acknowledges that there are many people who support dam removal and there are many who maintain that the dams should stay in place. There are a range of reasonable alternatives presented in the Draft EIS/EIR; 18 alternatives are presented in the Draft EIS/EIR, five of which are examined in detail using the best available science. There are positive and negative aspects for each of these alternatives. The potential effect of each alternative is discussed in the EIS/EIR and will be fully considered by the Secretary, along with public input and peer reviewed science before making a final determination.</p>	No
AO_LT_1024_005-2	<p>Master Response N/CP-13 KBRA is Analyzed as a Connected Action.</p> <p>The Klamath agreements are examples of negotiations designed to resolve longstanding legal battles over the use of water resources in the Klamath Basin. There are provisions in law which allow parties to negotiate privately to resolve litigation and to keep the contents of discussions confidential. This is what occurred in the negotiations over PacifiCorp's Klamath Hydroelectric Project, as well as the related Klamath Basin Restoration Agreement. PacifiCorp, tribes, environmental, fishing and agriculture interests are using these meetings to negotiate agreements that avoid litigation. The federal government often times has a vested interest in resolving the litigation as well.</p> <p>Master Response GEN-7 Unsubstantial Information.</p> <p>Master Response ALT-4 Elimination of Alternative 8 - Dam Removal Without KBRA from Detailed Study.</p> <p>Master Response ALT-7 Elimination of KBRA and KHSR Including Alternatives 16 - Dredge Upper Klamath Lake and 18- Partition of Upper Klamath Lake from Detailed Study.</p>	No



December 30, 2011

Ms. Elizabeth Vasquez
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Mr. Gordon Leppig
California Department of Fish & Game
619 Second Street
Eureka, CA 95501

Re: Written comments on DEIS/DEIR on Klamath Facilities Removal

Dear Ms. Vasquez and Mr. Leppig:

Please add the following comments onto the administrative record, and ensure that they receive full consideration and response in the final EIS/EIR document regarding Klamath dam removal.

This set of comments is submitted on behalf of Klamath Riverkeeper (KRK), a non-profit organization headquartered in the Middle Klamath watershed and supported by thousands of citizens in Oregon, California and throughout the United States. The mission of KRK is to protect and restore water quality and fisheries throughout the Klamath watershed, bringing vitality and sustainable abundance back to the river and all its people.

Comment 1 - Approves of Dam Removal

The DEIS/DEIR (Hereafter "DEIS") on Klamath facilities removal has analyzed numerous impacts from dam removal, many of which are beneficial rather than adverse. This indicates the rare case where the proposed action would deliver a net economic, cultural and conservation gain, rather than a loss. Indeed, quantifications of those benefits numerically in terms of jobs, salmon, habitat, cultural revival and water quality improvements suggest that the benefits of dam removal significantly outweigh any adverse impacts of the proposed action. On that basis, federal and state agencies should advance Alternative 2 for implementation no later than the year 2020.

In these comments, KRK poses other topics for consideration, offers sources to strengthen the analysis in the final EIS and provides facts that can be used to overcome or counter illogical and insupportable objections to Klamath dam removal.

Alternatives Analyzed

Klamath Riverkeeper written comments on Klamath Facilities Removal DEIS

December 29, 2011

← Comment 2 - Alternatives

To be thorough and defensible, the final EIS/EIR should further analyze Alternative 8, removal of four dams without implementing the KBRA (Table 2-2 in the DEIS). KRK proposes that Alternative 2, with implementation of the KBRA as a connected action, will emerge from that analysis as the environmentally, socially and economically superior alternative.

Water Quality

← Comment 3 - Water Quality

Section 2 of Chapter 3 in the DEIS needs to disclose the exact numeric pollution load reductions assigned to various responsible parties in the mainstem Klamath TMDLs, including load reductions assigned to agricultural dischargers and PacifiCorp.

Further, the final EIS/EIR needs to analyze the economic, environmental and environmental justice consequences of non-compliance with the TMDLs, especially in the event that the Klamath dams receive new licenses or TMDL compliance in Oregon is delayed.

Additionally, the final EIS/EIR should analyze the estimated cost range to PacifiCorp for compliance with the California and Oregon TMDLs without dam removal. The cost of compliance with these TMDLs in a dam relicensing scenario (the No Action Alternative) should then be compared to the estimated cost of compliance with the same TMDLs under Alternative 2.

KRK anticipates that such an analysis would demonstrate that, due to significant water quality benefits to be derived from dam removal, Alternative 2 is the more economically sensible and expedient path to TMDL compliance.

← Comment 4 - Costs

Aquatic Resources

← Comment 5 - Fish

Although Spring Chinook salmon are not listed under the ESA as coho salmon are, they are a species of special concern to Klamath River communities, particularly because of their value as a fish that lengthens the fishing season, provides needed nutritional and health benefits such as Omega 3 in local diets, and indicates generally a more biodiverse and healthy ecosystem.

More importantly, Spring Chinook salmon populations have been in steep decline, almost to the point of extinction. This jeopardy for "springers" lead several conservation groups to petition the U.S. Fish and Wildlife Service for listing status for the species recently.

While the DEIS mentions spring Chinook in multiple parts of the document, the benefits we anticipate that the spring run would derive from dam removal were not adequately explored in the DEIS, and may have been under-estimated in Section 3.3 of the DEIS.

On page 3.3-101 of the DEIS, the analysis of impacts to Spring Chinook from the proposed Alternative 2 states: "While noting uncertainties based on existing data, the panel concluded that the prospects for the Proposed Action to provide a substantial positive effect for spring Chinook salmon is more remote than for fall-run Chinook salmon. The primary concern of the panel was that low abundance and productivity (return per spawner) of spring Chinook

Klamath Riverkeeper written comments on Klamath Facilities Removal DEIS

December 29, 2011

← Comment 5 cont

salmon would limit recolonization of habitats upstream of Iron Gate Dam."

Although abundance and productivity are certainly seriously reduced from historic levels, adult spring Chinook counts in the past two years in the Salmon River have been on the rebound, suggesting not only the resilience of the species but also that abundance and productivity could also recover quickly under the right conditions.

This would seem to suggest that spring Chinook could also benefit substantially from Alternative 2 in the short term. Further, the final EIS/EIR should analyze low abundance and productivity in relation to relative advantages in their life histories and habitats (ie: utilizing tributaries more than the polluted mainstem for spawning and rearing), as well as their relative tolerance for increased sediment loads during migration.

We assert that since spring Chinook salmon historically inhabited even the far upper reaches of the Klamath Basin because of its spring-fed hydrology and the cold-water habitat that provides them, and because of their relative resilience, "springers" are likely to benefit more substantially than the DEIS calculates.

In turn, the health of the whole Klamath River ecosystem is likely to benefit substantially from increased biodiversity, genetic diversity in fish runs and healthier, more sustainable salmon-dependent human communities.

The final EIS/EIR should also more extensively analyze the impacts of the proposed action and other alternatives to green sturgeon, freshwater mussels and eulachon. Particularly, it would be interesting to see more analysis on the chances of improved native freshwater mussel health due to a substantial reduction in toxic algae growth and discharge from behind the dams. Further, an analysis of what role native freshwater mussels may play in helping to filter sediments associated with dam removal would be appreciated in the final EIS/EIR.

Environmental Consequences to Groundwater ← Comment 6 - Groundwater

KRK is pleased to see that pages 3.7-17 and 3.7-18 in the DEIS analyze the unprecedented groundwater pumping restrictions included in Section 15.2.4 of the KBRA, and the benefits those restrictions could translate into in terms of healthier in-river flows and flow-dependent fisheries. We would like to see this analysis extended to examine particularly the benefits of potential flow increases from KBRA groundwater protections for fall Chinook salmon whose populations can clearly suffer when flows are too low and temperatures then become too high, as happened in the September 2002 adult fish kill.

Without addressing groundwater usage in the Upper Basin, we will fail to achieve full restoration potential for salmon and local communities who depend on sustainable flows and fisheries, even in a post-dam removal era in the Klamath. And without the KBRA, our chances of regulating groundwater use are substantially slimmer due to political pushback, complex legal frameworks and the notable lag between groundwater science and policy.

Klamath Riverkeeper written comments on Klamath Facilities Removal DEIS

December 29, 2011

Comment 6 cont.

One of the unique benefits of the solutions offered by the KBRA, especially in groundwater management, is that the basin can be managed more as a whole system. The KBRA helps to overcome some of the challenges that come with multi-state management, and it provides creative ways of remediating environmental problems downstream communities have inherited from upstream communities.

Socioeconomics

Comment 7 - Real Estate

Property owners adjacent to the reservoirs and river near the Klamath dams claim that their property values have already dropped due to the prospect of Klamath dam removal. However, it is essential to disclose in any analysis of these claims that there is no evidence that directly connects proposals to remove the Klamath dams and purported decreases in nearby properties.

Any analysis of such claims must also examine whether toxic algae blooms and resulting health advisory postings could have had a similar effect on property values. Similarly, consideration of such claims must also examine whether a broader economic recession and associated drops in housing prices could also be responsible for the decrease in property values.

The EIS also rightly considers the potential for increases in property values that would most likely result from cleaner water and more abundant, healthy fish populations expected due to dam removal on the Klamath.

Additionally, if impacts to property values around the reservoirs are analyzed in the EIS, impacts to property values further downstream must also be analyzed. Here as well, benefits to fisheries, water quality, recreation and local economies must be taken into account as property values for downstream land is analyzed.

We propose that when this exercise is completed, the potential benefits to property values throughout the watershed from improved conditions due to dam removal will outweigh purported drops in property value due to dam removal. Indeed, there is evidence where other dam removals have occurred to suggest that while property values can dip in the short-term in the wake of dam removal projects, they rise again in the long-term and can even exceed pre-removal values because of consequences such as cleaner water, healthier and more robust fish populations and improved scenic qualities of the landscape.

On a related note, please more carefully and specifically analyze the economic benefits of dam removal for communities downstream. While there are obviously quantifiable employment, fisheries, habitat and water quality benefits anticipated to result from Klamath dam removal, there are also likely to be more robust economic engines both upstream and downstream of the dams where life revolves around salmon and the river. Eco-tourism is likely to play a role, which should result in more recreational fishing, fishing guide businesses, raft guide businesses, patrons at local stores, restaurants, bars and local lodging establishments.

Comment 8 - Economics

Klamath Riverkeeper written comments on Klamath Facilities Removal DEIS

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← Comment 8 cont.

And besides increased visitors to the watershed seeking to experience a wild river and witness or wrestle with its fish runs, recovering fisheries would likely lead to stronger restoration economies and social fabrics. In turn, stronger restoration economies throughout the Klamath Basin could lead to a self-sustaining community, thriving rural schools and younger generations that learn the value of both sustainable agriculture and fisheries that are produced locally.

Comment 9 - Economics ↘

The KBRA and KHSA give us the opportunity to achieve better ecological and socio-economic balance throughout the basin, and to develop a stronger sense of stewardship for our resources, human and the rest of nature, as well as good will towards neighboring communities.

In the final EIS/EIR, please also analyze the net worth of a restoration economy in the long-term, vs. the net worth of a degrading and extractive economy. The analysis on this topic must disclose the socioeconomic impacts on communities throughout the Klamath Basin of industries that damage, use up and/or export natural resources that constitute the wealth of our region.

A rough initial calculation by farming and fishing advocates shows that our backbone economies of the Klamath add up to equal at least \$750 million annually, and that doesn't even include revenues from the restoration economy, tourism, sport fishing or the value of subsistence fishing by tribes (which is exceedingly difficult to quantify, but must also be considered and weighed.)

If quantification of the economic value of these industries/practices is too difficult, at a minimum, the economic value of restoration jobs created under the KBRA and KHSA, as well as sport fishing increases and tribal harvest increases must be qualitatively acknowledged.

What's more, it's important that the final EIS/EIR qualitatively address the fact that the job creation estimates contained in the DEIS are very conservative ones. For instance, on page 3.15-93 of the DEIS, the estimate that the removal of four Klamath dams would cause a 9% increase in the in-river recreational fishery and three new jobs seems too low.

According to California State University at Chico economics professor David Gallo (who authored a study on the economic benefits of the Klamath settlement agreements which was published in October, 2010), most literature on fishery impacts bases projections on increases in catch rate and resulting angler effort.

This literature tends to suggest that a doubling of catch rates (catch per hour of effort) would increase visitation (recreational fishery use) by approximately 50%. Applying this rough formula to the figures in the DEIS, it would seem that we should expect an 18% increase in catch rate in the Klamath after removal of four dams is complete. Is that consistent with the projection that fall Chinook populations could increase by as much as 81 %? Please address this question in the final EIS/EIR.

Klamath Riverkeeper written comments on Klamath Facilities Removal DEIS

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Environmental Justice

It's refreshing to read an environmental impact analysis that does such a thorough and accurate job of disclosing and addressing the environmental justice impacts of a range of alternatives.

It is appropriate to acknowledge that tribal communities were never consulted about how they would be impacted when these dams were constructed. Thus, these tribal communities (and others that depend on a healthy river and fishery) have clearly suffered disproportionate exposure to environmental consequences from past decisions regarding these dams. KRK contends that this is an especially important fact that helps put in perspective the complaints of those who would prefer to keep the dams, showing many of their remarks to be ignorant and racist rhetoric.

For instance, the notion expressed by some that dam removal will prevent family farms from feeding the nation or the world is shortsighted and misleading.

First, one of the main goals of restoring salmon runs and other fisheries obstructed by the Klamath dams is to enable Americans who want to eat local, wild salmon to do so without the guilt of consuming an endangered species.

Those Native people whose families have fished the Klamath to feed themselves and their communities for thousands of years have at least as much of a right to subsist as a third or fourth generation farmer from Yreka or Klamath Falls. Especially in light of the fact that many farming families gained footholds for subsistence in the region at the expense of Native peoples, cultures and salmon runs.

Secondly, since no irrigation water comes from the four dams in question and all of the power can and will be replaced (hopefully with renewable energy sources), the argument that removal of four dams will impact Scott and Shasta landowners more so than others is misleading. If anything, they have less of a stake in the dam removal than many others.

The sense of entitlement to lower power rates than most Americans is understandable given local history, but not socially or environmentally just. If anything, one could say that the farmers who received 1918 power rates all these years have benefitted from a tremendous government subsidy.

Further, that subsidy has come at the expense of our natural resources, local Tribes and fishing economies. These externalities need to be accounted for, and the KBRA and KHSRA offer the perfect opportunity to do so.

Tribal Rights

← Comment 10 - ITAs

While KRK is an ardent supporter of tribal sovereignty, and typically avoids advocating where tribes can better represent their own interests, it is in our interest to see a sufficient analysis

Klamath Riverkeeper written comments on Klamath Facilities Removal DEIS

← Comment 10 cont.

December 29, 2011

of the Hoopa critique that the KBRA "terminates" or otherwise damages tribal rights or federal trust responsibilities to tribes.

Towards the most defensible possible final EIS/EIR and Secretarial Determination on Klamath dam removal, we request that Hoopa's assertion be analyzed and responded to in detail in Section 3.12 and or 3.8 of the final EIS/EIR.

Conclusion

Thank you for the hard work, research and perceptive approach used in preparing and formulating the DEIS, and for considering and responding to these comments in the final EIS/EIR. Please contact me if you have any questions about the content of these comments, or wish to follow up further.

Sincerely,



Erica Terence, Conservation Director/Executive Director
Klamath Riverkeeper

Comment Author Terence, Erica
Agency/Assoc. Klamath Riverkeeper
Submittal Date December 30, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1230_057-1	<p>Comment Noted.</p> <p>Master Response GEN-2 Some People Approve of Dam Removal, Others Oppose Dam Removal.</p>	No
AO_LT_1230_057-2	<p>Master Response ALT-4 Elimination of Alternative 8 - Dam Removal Without KBRA from Detailed Study.</p>	No
AO_LT_1230_057-3	<p>Master Response WQ-22 TMDLs and the No Action/No Project Alternative (and Alternative 4).</p> <p>Master Response WQ-4C and D. Hydroelectric Project Impacts to Water Quality & Anticipated KHSA/KBRA Improvements.</p> <p>A discussion of economic, environmental, and environmental justice implications of compliance or noncompliance with the TMDLs is outside the scope of this project analysis.</p>	No
AO_LT_1230_057-4	<p>TMDL implementation is included in every alternative analyzed in the EIS/EIR including the No Action/No Project Alternative. Analyzing the costs of implementing these TMDLs is beyond the scope of this EIS/EIR.</p> <p>Master Response COST-2 Cost of FERC Licensing.</p>	No
AO_LT_1230_057-5	<p>The comment author incorrectly states the U.S. Fish and Wildlife Service recently petitioned, pursuant to the ESA, to list Chinook salmon in the Upper Klamath and Trinity River (UKTR) ESU. In reality, the petition requested the National Marine Fisheries Service to list the UKTR ESU.</p> <p>In response to this petition, the National Marine Fisheries Service formed a Biological Review Team to review the biological status of the species to determine if listing under the ESA is warranted. The results of the review indicate that recent spawner abundance estimates of both fall- run and spring-run Chinook salmon returning to spawn in natural areas are generally low compared to historical estimates of abundance; however, the majority of populations have not declined in spawner abundance over the past 30 years (i.e., from the late 1970s and early 1980s to 2010) except for the Scott and Shasta rivers where there have been modest declines (Williams et al 2011). In addition, Williams et al. (2011) found that hatchery returns did not track escapement to natural spawning areas and they concluded that there has been little change in the abundance levels, trends in abundance, or population growth rates since the review conducted by Myers et al. (1998). The Biological Review Team also noted that the recent abundance levels of some populations are low, especially in the</p>	Yes

Comment Author Terence, Erica
Agency/Assoc. Klamath Riverkeeper
Submittal Date December 30, 2011

Comment Code	Comment Response	Change in EIS/EIR
	<p>context of historical abundance estimates. This was most evident with respect to two of the three spring-run population units that were evaluated (Salmon River and South Fork Trinity River). Although current levels of abundance are generally low compared with historical estimates of abundance, the current abundance levels do not constitute a major risk in terms of ESU extinction.</p> <p>Spring Chinook Background: As noted in the Darft EIS/EIR on p. 3.3-7, historically, the spring-run Chinook salmon may have been as abundant as the fall run (Moyle 2002). Large numbers of Chinook salmon once spawned in the basin above Klamath Lake in the Williamson, Sprague, and Wood rivers (Snyder 1931, as cited in National Research Council 2004). Large runs of spring Chinook salmon also returned to the Shasta, Scott, and Salmon rivers.</p> <p>In Section 3.3 the following text has been added:</p> <p>Cause of the Decline:</p> <ul style="list-style-type: none"> · Huntington (Huntington 2006) reasoned that spring-run Chinook likely accounted for the majority of the Upper Klamath Basin's actual salmon production under pristine conditions, but were apparently in substantial decline by the early 1900s. The cause of the decline of the Klamath River spring-run Chinook salmon prior to Copco 1 Dam has been attributed to dams, overfishing, irrigation, and largely to commercial hydraulic mining operations (Coots 1962; Snyder 1931). These large scale mining operations occurred primarily in the late 1800's, and along with overfishing, left spring Chinook little chance to recover prior to dam construction in early 1900's (Draft EIS/EIR p. 3.3-7). · Dam construction eliminated much of the historical spring-run spawning and rearing habitat and was partly responsible for the extirpation of at least seven spring-run populations from the Klamath-Trinity River system (Myers et al. 1997). The construction of Dwinnell Dam on the Shasta River in 1926 was soon followed by the disappearance of the spring Chinook salmon run in that tributary (Moyle et al. 1995 in National Research Council 2004) (Draft EIS/EIR p. 3.3-7). · Under this Alternative, spring-run Chinook salmon are likely to remaining at significantly suppressed levels over the years of analysis (50 years) (added to end of 2nd paragraph under spring Chinook in the Draft EIS/EIR on p. 3.3-63, Alternative 1). <p>As noted in the Draft EIS/EIR on p. 3.3-63 and 3.3-64, the</p>	

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consequences of this ongoing loss of habitat to the population could include reduced resilience to recover from catastrophic disturbances of natural or anthropogenic origin, such as wildfire or chemical spills. Because areas upstream of the barrier include coldwater refugia, opportunities for the population to adapt to changing climate are reduced, whether these changes are a result of short- or long-term cycles or trends. Overall, spring Chinook salmon mostly use the mainstem Klamath River as a migratory corridor during adult migration, and downstream smolt migration.

Access to Additional Habitat: The Draft EIS/EIR (Section 3.3.4.3) states access to additional habitat would provide a long-term benefit to spring-run Chinook salmon populations.

Alternatives 2 and 3 (p. 3.3-101 of the Draft EIS/EIR) have been revised to integrate the following:

- A) Successful passage would provide access to important thermal refugia, most notably in the J.C. Boyle Bypassed Reach and in tributaries upstream of Upper Klamath Lake (Federal Energy Regulatory Commission 2007). Dam removal would make habitat accessible to both spring-run and fall-run Chinook salmon above IGD (Federal Energy Regulatory Commission 2007). Removing the dams would allow access to at least 49 tributaries upstream of Iron Gate Dam that would provide hundreds of miles of habitat for Chinook salmon (DOI 2007), including groundwater-fed areas resistant to water temperature increases caused by changes in climate (Hamilton et al. 2011). Some of these areas, such as the lower Williamson River, have habitat that would provide substantial holding areas for spring Chinook (Hamilton et al. 2010). Other holding areas with suitable temperatures above the Project include Big Springs in the J.C. Boyle Bypassed Reach (DOI Bureau of Land Management 2003), groundwater influenced areas on the west side of UKL (Gannett et al. 2007), and the Wood River (Gannett et al. 2007). Providing an unimpeded migration corridor, the Proposed Action would provide the greatest possible benefit related to fish passage, hence, the highest survival (Buchanan et al. 2011a) and reproductive success. It is anticipated that as a result of the Proposed Action the spring-run Chinook salmon population within the Klamath River watershed would have an increase in abundance, productivity, population spatial structure, and genetic diversity.

- B) The EIS/EIR (Section 3.3.4.3.) presents information from the Chinook Salmon Expert Panel Report (Goodman et al. 2011). The report noted uncertainties based on existing data and concluded the prospects for the Proposed Action to provide a substantial positive effect for spring Chinook salmon is more

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	<p>remote than for fall-run Chinook salmon. The primary concern of the panel was that low abundance and productivity (return per spawner) of spring Chinook salmon would limit recolonization of habitats upstream of Iron Gate Dam. However, this concern would be addressed in that the KBRA includes a reintroduction component to establish populations in the new habitats. Above UKL, KBRA implementation would reintroduce Chinook salmon in Phase 1 (KBRA section 11.3.1.A) – no sooner than one year after the KBRA Effective Date. The adaptive management approach to reintroduction will include spring Chinook as well as fall Chinook (Oregon Department of Fish and Wildlife 2008). Even without supplementation, it is likely that Chinook salmon recolonization would occur as it did following barrier removal at Landsburg Dam in Washington (Kiffney et al. 2008). In addition, KBRA actions would be implemented that are anticipated to improve productivity of existing and potentially newly accessible habitats.</p> <ul style="list-style-type: none"> <li data-bbox="532 989 1289 1310">· C) Historically, adult spring-run Chinook salmon migrated upstream of the current location of IGD, perhaps as early as February and March (Klamath Republican articles in Fortune et al. 1966) and likely held over in large holding pools in the mainstem, in tributaries fed by cool water, and in headwater habitat above UKL (California Department of Fish and Game 1990; Moyle 2002; Snyder 1931). One benefit of such early migration would be the avoidance of periods of poor water quality. The restored water temperature regime may change upstream migration timing of adult spring-run Chinook salmon because of the shift in water temperatures below IGD (Bartholow et al. 2005). <li data-bbox="532 1346 1289 1486">· D) With large scale hydraulic mining operations now outlawed, spring-run Chinook salmon would no longer be subject to one of their most significant threats in the Klamath River as discussed above. Current improved fisheries management minimizes overharvest. <li data-bbox="532 1522 1289 1808">· E) While access to the Upper Klamath Basin provides considerable promise of increasing spring-run abundance, Huntington (2006) cautioned that the existing potential for Chinook salmon production within the basin above UKL is clearly much lower than his estimate of historical potential. His approach, however, did not fully account for the historical (and unknown) production potential of UKL itself, which could have been considerable. A recent experimental reintroduction into UKL suggests that habitat here would continue to support Chinook salmon (Maule et al. 2009). <li data-bbox="532 1871 1289 1898">· F) To strengthen resiliency in salmon populations, habitat 	

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opportunities need to be expanded to allow maximum expression of life-history variation. Restoration of migration to habitat above Iron Gate Dam, in particular upper Klamath tributaries with important groundwater resources, will be conducive to variation of life-histories, including spring Chinook, and population resilience (Hamilton et al. 2011).

Alternative 4 (p. 3.3-157) and Alternative 5 (p. 3.3-181) has been revised to integrate A, C, D, E, and F above either by reference or the addition of the text.

As noted in the Draft EIS/EIR in Section 3.3-15, spring Chinook salmon are highly desirable and would provide quality benefits to the subsistence fishery and lengthen the duration of harvest. Restoration of spring Chinook is of particular importance for Indian Tribes, as it could lead to revival of the traditional First Salmon Ceremony.

Green Sturgeon: The Draft EIS/EIR in Section 3.3.4.3 states Southern Green Sturgeon may enter the Klamath River estuary to forage during the summer months. They would not be present when the most severe effects of dam removal are occurring, and are not expected to be affected by the Proposed Action. The remainder of this section describes the potential effects of the Proposed Action on the Northern Green Sturgeon DPS. Northern Green Sturgeon do not occur upstream of Ishi Pishi Falls and would not be affected by Proposed Action effects that do not extend downstream past these falls. The Proposed Action would release dam-stored sediment downstream to the lower Klamath River in the short term, and restore a flow regime that more closely mimics natural conditions in the lower Klamath River and would improve water quality and reduce instances of algal toxins. These long-term effects would benefit green sturgeon using the lower Klamath River reach. The Proposed Action is not expected to substantially change or affect estuarine habitat.

Green sturgeon in the Klamath Basin have the following traits likely to enhance the species' resilience to impacts of the Proposed Action:

- Most of the population (subadult and adult) would be in the ocean during the year of the Proposed Action (2020) and would be unaffected (Appendix E).
- The approximately 30 percent of the population that spawn and rear in the Trinity River would be unaffected.
- Much of the spawning and rearing of green sturgeon occurs

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	<p>downstream of the Trinity River, where sediment concentrations would be similar to existing conditions and the No Action/No Project Alternative.</p> <ul style="list-style-type: none"> · Green sturgeon are long-lived (>40 years) and are able to spawn multiple times (~8 times) (Klimley et al. 2007), so effects on two year classes may have little influence on the population as a whole. <p>The EIS/EIR acknowledges the relative lack of information for freshwater mussels (EIS/EIR Section 3.3.4.3) and eulachon. For freshwater mussels, dam removal would increase connectivity between Upper Klamath Basin and the Hydroelectric Reach and would create additional riverine habitat within the Hydroelectric Reach. Based on increased habitat availability and habitat quality in the long term, the effect of the Proposed Action would be beneficial for mussels in the long term (EIS/EIR Section 3.3.4.3). For eulachon, dam removal would result in reductions in habitat quality during reservoir drawdowns that would be detrimental to Primary Constituent Elements of eulachon critical habitat, the Proposed Action would have a significant effect on eulachon critical habitat in the short term. Based on benefits to the PCEs, the Proposed Action would have a beneficial effect on critical habitat for eulachon in the long term (EIS/EIR Section 3.3.4.3).</p> <p>For all species analyzed, when the short-term deleterious effects occurring during reservoir drawdown in 2020 are weighed against the long-term benefits to the Klamath River, the systemic restoration espoused in the Proposed Action improves biological productivity and the quality of waters, streams, wetlands, estuaries, and lakes (EIS/EIR Section 3.3.4.3).</p>	
AO_LT_1230_057-6	<p>The analysis of the KBRA has been updated to clarify how implementation of the KBRA is expected to benefit groundwater levels in the Klamath Basin.</p>	Yes
	<p>Discussion of the related potential impacts of the KBRA on fisheries is presented in Section 3.3, Aquatic Resources.</p>	
AO_LT_1230_057-7	<p>The Dam Removal Real Estate Evaluation Report was completed by Bender-Rosenthal, Inc. The primary author met all of the requirements of the Appraisal Institute for Professional Appraisers and Bender-Rosenthal complied with the Uniform Standards for Professional Appraisal Practice in its study methodology. The report was not intended as an analysis of specific impacts to any given parcel or property but rather was intended as a look, in the aggregate, of the potential impact of the real estate land values in the communities surrounding Copco and Iron Gate reservoirs. It is</p>	No

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AO_LT_1230_057-8	<p>not a valuation of any specific property or properties in the communities. Appraisal theory attributes premiums to the overall price of a property such as reservoir frontage or views to the lot and not the improvements. Since the change in property value is being attributed to the value of the lot following the loss of the reservoirs the value of the improvements was not considered.</p> <p>The results of this analysis are presented in Section 3.15, Socioeconomics. The potential for increases in property values downstream of the reservoirs following dam removal due to improved water quality is also presented in Section 3.15, Socioeconomics.</p>	No
AO_LT_1230_057-9	<p>Estimated economic impacts relative to the No Action/No Project Alternative, including those related to recreation, which is generally related to tourism, are discussed in Section 3.15. Losses in reservoir and whitewater recreation are expected to be offset by improvements in sport fishing (both ocean and in river) and refuge recreation. These changes are anticipated to occur in specific regions both downstream and upstream of the dams and to have a positive net effect on the economy in those regions. (Section 3.15.3 describes the region of analysis used for each recreational activity.).</p> <p>As indicated in Section 3.20,4.3, long-term improvements in fish, wildlife and scenic viewing opportunities are expected in the Project Reach and in areas currently designated as Wild and Scenic Rivers upstream and downstream of the Project Reach.</p> <p>The Draft EIS/EIR focuses on specific No Action and Action alternatives. A broader discussion of the value of restoration versus extraction is beyond the scope of this document.</p> <p>Regional economic impacts associated with the No Action and Action alternatives are quantified to the extent possible in Section 3.15 and summarized in Tables 3.15-65 and 3.15-66. Impacts that could not be quantified are addressed qualitatively. For instance, while economic impacts of the KBRA Tribal Program are quantified in Table 3.15-66, impacts on tribal fisheries could not be quantified and are instead qualitatively discussed on p. 3.15-45 to 3.15-48, 3.15-62 to 3.15-63, 3.15-81, 3.15-83 and 3.15-87.</p> <p>We agree that the regional economic impacts of in-river sport fishing are understated, due to inability to quantify the impacts of the steelhead and redband trout fisheries. A qualitative discussion of the latter fisheries is provided on p. 3.15-43, 3.15-59 to 3.15-60, 3.15-81, p. 15-83 and 3.15-87.</p>	No

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AO_LT_1230_057-10	<p>While the harvest-to-effort conversion factor used for the in-river recreational salmon fishery may differ from conversion factors used elsewhere, it was deemed appropriate for the Draft EIS/EIR, as it is based on harvest and effort data specific to the Klamath River.</p> <p>The modest increase in employment and income impacts shown for the in river recreational Chinook fishery is due to several factors: (1) The long-term average 9% increase in river recreational harvest is based on a Chinook production model that caps the in-river Chinook harvest at 25,000 fish, with any surplus above this amount going to escapement. This cap was deemed reasonable, as it accommodates harvests that considerably exceed the highest in-river recreational harvests experienced in the past two decades and is consistent with historical data indicating the inability of the in-river sport fishery to fully utilize its harvest allocation in higher abundance years. (2) The analysis assumes that the in-river recreational fishery receives 7.5% of the total available Chinook harvest; this is consistent with recent fishery management practices. (3) The increase in access to Chinook harvest by in-river fisheries does not expand access to other salmon stocks as it does in the mixed stock ocean fisheries.</p> <p>Master Response TTA-1 Federal Trust Responsibility and the KBRA.</p>	No



AO_LT_1019_002

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October 18, 2011

Public Hearing on Klamath Dam Removal Draft EIS/EIR

Public Comment

Good evening, my name is Gary Wright. Our family farms and ranches on about acres in the Tulelake area. I am currently the President of the Klamath Water Users Association. KWUA's members include the majority of irrigation and other districts here in the Klamath Project.

Clearly a lot of work and effort has gone into the draft EIS and we appreciate the challenges of putting it together. The information should be as complete accurate as possible. We do have some concerns with some of the information or how it is presented, and will provide more detailed written comments prior to the deadline. For the purposes of this meeting, I have a few comments to make for the record here tonight that are more general in nature.

The draft EIS deals with the potential for removal of the dams PacifiCorp owns. But for Klamath Project irrigators and our Districts, the process leading to the draft EIS and that ultimate decision is not just about PacifiCorp's dams.

KWUA has been in existence for nearly 60 years; it has represented irrigators through good times and the bad times.

We have had, and continue to have, no goals more important than a secure and dependable supply of water to our farms and ranches and maintaining a viable local agricultural economy. We also know and respect that there are other legitimate interests in this basin, and we have worked extremely hard to reconcile these important interests in order to obtain stability and a better future for all.

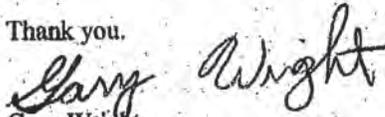
A few years ago the Klamath Water Users board of directors adopted some guiding principles that directly relate to our efforts and the public discussion of the settlement agreements; I would like to read a few of them for the record:

- We support the long term viability of irrigated agriculture inside and outside the Klamath Reclamation Project
- We support securing the most water to irrigate the most acres possible in the Klamath Basin
- We support an end to needless litigation with tribes, fishermen and others
- We support Oregon Water Law and the Prior Appropriations Doctrine with respect to regulation of water
- We support an individual's ability to choose if and how they participate in any resource related programs or initiatives
- We support a market driven approach to address water shortages

- We support the private property rights of individuals and private companies such as Pacific Power
- We support protecting rate-payers and capping costs related to PacifiCorp operations
- We support protection of landowners from regulatory uncertainty that might result from the introduction of new species in the Upper Basin
- We support development of new water storage projects
- We support economic assistance and mitigation of tax losses to counties that may be negatively affected by government actions
- We support the local economic development of tribal and agricultural communities
- We support water and power conservation and efficiency measures
- We support hydro-power generation and development as a general matter
- We support restoration efforts that result in measurable improvement to listed species
- We support practical alternatives to the way things are managed, or not managed, today in the Basin

None of these principles are inconsistent with the with the Klamath Settlement Agreements

Thank you.



Gary Wright
President

Klamath Water Users Association

Comment 1 - Approves Dam Removal

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Agency/Assoc. Klamath Water Users Assoc.
Submittal Date October 19, 2011

Comment Code	Comment Response	Change in EIS/EIR
AO_LT_1019_002-1	The principles referred to are not listed; therefore, a response cannot be provided.	No