UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

December 29, 2011

Ms. Elizabeth Vasquez
Natural Resources Specialist
U.S. Bureau of Reclamation
2800 Cottage Way
Sacramento, CA. 95825

Subject: Draft Environmental Impact Statement /Environmental Impact Report (EIS/EIR) for Klamath Facilities Removal, Klamath County, Oregon and Siskiyou County, California.

Dear Ms. Vasquez:

The U.S. Environmental Protection Agency (EPA) has reviewed the above Draft EIS (DEIS) for Klamath Facilities Removal on the Klamath River. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), our NEPA review authority under Section 309 of the Clean Air Act, and our participation as a Cooperating Agency. Our detailed comments are enclosed.

EPA has a long history of active involvement in Klamath River water management issues pursuant to our Clean Water Act (CWA), Clean Air Act, and NEPA authorities, as well as our tribal trust responsibilities and work with Endangered Species Act (ESA) issues. We are currently working with the States of California and Oregon to implement Total Maximum Daily Loads (TMDLs) to address impaired water quality for the Klamath River and its tributaries, including the Lost River sub-watershed. We continue to work with Klamath Basin Indian Tribes to address water quality issues on the Klamath River and its tributaries, including the Trinity River. We provided written comments on the proposed Federal Energy Regulatory Commission (FERC) Klamath Hydroelectric Project (FERC No. 2082) Relicensing (2006 and 2007) and Reclamation's Trinity River Mainstem Fishery Restoration Program (2000 and 2004).

The waters within the project area do not currently meet the States of California or Oregon water quality standards for temperature, dissolved oxygen, pH, and ammonia toxicity. Project facilities cause or contribute to these adverse water quality conditions. The States of Oregon and California have listed their portions of the Klamath River in the project area on their respective lists of impaired waters (Clean Water Act Section 303(d)) based on these water quality standards exceedences. Both states have adopted TMDLs to address these water quality impairments that identify load reductions necessary to attain water quality standards. We note that PacifiCorp's proposed Water Quality Plan to achieve its TMDL load reductions relies entirely on dam removal. Furthermore, the development and implementation of a comprehensive water quality management program, integrated with fish passage and disease management programs, remains an outstanding issue for dams-in-place alternatives.

EPA strongly supports removal of the four dams on the mainstem of the Klamath River. Removal of these dams would significantly improve water quality, fisheries habitat, Tribal trust assets, and human health and the environment. Improvements would occur more rapidly compared to not removing the four dams. For example, large blooms of blue-green algae occur in Copco 1 and Iron Gate Reservoirs, prompting postings of public health advisories around the reservoirs and along the length of the Klamath River during summer months. Removal of these reservoirs would significantly decrease or eliminate the long-term spacial extent, temporal duration, and concentration of toxic blue-green algae blooms.

We have concerns regarding potential impacts to wetlands and the short-term effects on fisheries and water quality from dam deconstruction; however, we believe that those concerns can be addressed through the implementation of mitigation measures (see enclosed Detailed Comments). Thus, based on our review of the DEIS, we have rated Alternative 2: Full Facilities Removal (Proposed Action) and Alternative 3: Partial Facilities Removal as "Environmental Concerns" (EC) (See the enclosed "Summary of Rating Definitions").[1] We have rated Alternative 1: No Action, Alternative 4: Fish Passage, and Alternative 5: Fish Passage at JC Boyle and Copco 2 with Removal of Copco 1 and Iron Gate Dams as "Environmental Objections" (EO) because they would likely result in continued violation of water quality standards, and would fail to address significant fishery and water quality problems created or exacerbated by the Klamath River dams.

We have rated the adequacy of the DEIS as "Category 2-Insufficient Information." To ensure the Secretary has sufficient information to make his decision, we recommend the Final EIS (FEIS) include a more robust discussion and evaluation of potential wetland losses and mitigation, and of the expected quantity of sediment released through dam removal. In addition, we recommend the FEIS include a more comparable level of evaluation for each alternative providing similar levels of data and analysis. For clarity, the FEIS should include a short description of next steps such as the NEPA compliance process for related specific KBRA actions. Additional editorial recommendations are in the enclosed Substantive Editorial Comments. Less substantive editorial comments were provided to you on November 23, 2011, in our capacity as a Cooperating Agency.

Comprehensive monitoring and aggressive mitigation measures will be critical to minimize and manage unavoidable short-term impacts of dam deconstruction and released sediments. We recommend the FEIS include a detailed monitoring and mitigation plan that describes the proposed monitoring and mitigation actions, when the actions would be implemented, the responsible parties, funding, and mitigation success criteria. We also recommend implementation of validation monitoring to verify DEIS assumptions and predictions regarding short-term (less than 2 years) project effects and the rate of recovery from project impacts.

There are numerous federal projects and studies currently occurring in the Klamath Basin. We recommend the FEIS discuss the potential relationship and interaction among these activities and how the proposed action could affect these other Klamath Basin activities. Of specific concern is the project's contribution to achievement of Klamath Basin TMDL requirements, Tribal water quality standards, and mandates to restore the Trinity River fishery.

[1] The DEIS does not identify a preferred alternative; therefore, in accordance with EPA's *Policy and Procedures for the review of Federal Actions Impacting the Environment*, we must rate each of the alternatives listed in the DEIS.

We appreciate the opportunity to comment on this DEIS. Please send two copies of the FEIS and one CD to the address above (mail code: CED-2) at the same time it is officially filed with our Washington, D.C. office. We also request that you send one copy of the FEIS and one CD to US EPA Region 10, Environmental Review and Sediment Management Unit, 805 SW Broadway, Suite 500, Portland, OR 97205. If you have any questions, please contact me at (415) 972-3843, or Laura Fujii, the lead reviewer for this project. Laura can be reached at (415) 972-3852 or fujii.laura@epa.gov.

Sincerely,

/s/

Enrique Manzanilla, Director
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating Definitions
EPA Detailed Comments
Substantive Editorial Comments

cc: Gordon Leppig, California Department of Fish and Game
Dennis Lynch, U.S. Geological Survey
Clayton Creager, North Coast Regional Water Quality Control Board
Darrin Thome, U.S. Fish and Wildlife Service, Klamath Falls Office
Steven Edmondson, National Oceanic and Atmospheric Administration
Kelley Reid, U.S. Corps of Engineers, Eureka Office
Dale Morris, Bureau of Indian Affairs
Chris Nota, U.S. Forest Service
Renee Snyder, Bureau of Land Management
Steve Kirk, Oregon Department of Environmental Quality
Matt Rodriguez, California EPA
Tim Hemstreet, PacifiCorp
Chairperson, Klamath Tribe
Chairperson, Yurok Tribe
Chairperson, Hoopa Valley Tribe
Chairperson, Resighini Rancheria
Chairperson, Karuk Tribe
Chairperson, Quartz Valley Tribe

U.S. EPA DETAILED COMMENTS ON KLAMATH FACILITIES REMOVAL ON THE KLAMATH RIVER, KLAMATH COUNTY, OREGON AND SISKIYOU COUNTY, CALIFORNIA, DECEMBER 29, 2011

Introduction

The Department of the Interior, through the Bureau of Reclamation (Reclamation), and the California Department of Fish and Game (CDFG) have evaluated whether to remove four dams on the Klamath River pursuant to the Klamath Hydroelectric Settlement Agreement (KHSA). In accordance with the KHSA, the Secretary shall determine whether facilities removal will advance restoration of the salmonid fisheries of the Klamath Basin and is in the public interest, which includes but is not limited to consideration of potential impacts on affected local communities and Indian Tribes. The Klamath Basin Restoration Agreement (KBRA), linked to implementation of the KHSA, would expand ongoing habitat and fish population programs and establish new habitat restoration, fisheries, water allocation, and monitoring programs. The potential impacts of connected actions, including actions under the KBRA, are analyzed at a programmatic level in the DEIS.

Dams-In Alternatives

Total Maximum Daily Loads (TMDLs) to address impaired water quality for the Klamath River and its tributaries, including the Lost River sub-watershed, confirm the severity of water quality impairments. The waters within the project area do not currently meet the States of California or Oregon water quality standards for temperature, dissolved oxygen, pH, and ammonia toxicity. Project facilities cause or contribute to these adverse water quality conditions. EPA objects to alternatives that would leave dams in place because they would result in continued violation of water quality standards, and would fail to address significant fishery and water quality problems created or exacerbated by the Klamath River dams. We note that PacifiCorp's proposed Water Quality Plan to achieve its TMDL load reductions relies entirely on dam removal.

EPA comments on the Final EIS (FEIS) for the FERC relicensing of the Klamath Hydroelectric Project identified concerns with the continued effects of the dams on temperature, dissolved oxygen, ammonia and cyanobacteria water quality issues. Our comments expressed concern with the ability of the hydroelectric project to meet water quality standards and called for "development of a comprehensive water quality management plan." The development and implementation of a comprehensive water quality management program, integrated with fish passage and disease management programs, remains an outstanding issue for the current dams-in-place alternatives.

In accordance with the Klamath Hydroelectric Settlement Agreement (KHSA), the Secretary of the Interior shall determine whether facilities removal will advance restoration of the salmonid fisheries of the Klamath Basin and is in the public interest, which includes but is not limited to consideration of potential impacts on affected local communities and Indian Tribes. Thus, the DEIS evaluation focuses on potential impacts of the Proposed Action in Alternative 2: Full Facilities Removal. Our detailed comments below provide recommendations to enhance full disclosure and to further reduce potential impacts of the dams-out alternatives.

Wetland Impacts and Mitigation

Wetland losses are not clearly disclosed

The Draft EIS (DEIS) lists wetlands among the habitat types "most likely to be most affected by the project alternatives" and states that "there could be unavoidable impacts on 245 acres of wetland habitat at the J.C. Boyle, Copco 1, Copco 2, and Iron Gate Reservoirs (Table 3.5-2)" (p. 3.5-77). This would constitute a significant impact. The basis for this estimated loss of wetlands is not clearly described. For example, the reservoir wetlands, listed in Table 3.5-2 (p. 3.5-9), total 244.3 acres; however, the table also lists an additional 122 acres of wetlands between Iron Gate and J.C. Boyle Reservoirs. It is unclear whether these additional acres would be affected by the action alternatives, or whether they are part of the "temporary" impacts to 272 acres of wetlands discussed on pps. 3.5-54 and 55. Where temporary impacts would occur, and the basis for the 272 acres estimate, are not disclosed; nor is there a break down of estimated wetland losses by function or habitat type. It is also unclear whether any of these acreage values are based on a US Army Corps of Engineers (Corps)-verified jurisdictional delineation.

In addition, the DEIS states that passive wetland reestablishment may occur in some places, whereby wetlands "could expand down to the river channel at reconnected tributaries" (pg 3.5-43). However, the potential for passive wetland reestablishment is not discussed in detail, even though the DEIS appears to assume passive reestablishment of wetlands could reduce the permanent wetland loss associated with reservoir drawdown.

Recommendations:

EPA concurs that it is acceptable to defer detailed wetland delineations and development of specific mitigation measures until later in the Section 404 Clean Water Act (CWA) permitting process. We recommend that the Final EIS (FEIS) disclose the expected degree of both permanent (drawdown-related) and temporary (construction-related) wetland losses, as well as the basis for the wetland loss estimates. If estimates are not based on a Corps-verified jurisdictional delineation, the FEIS should note that these estimates are preliminary and will be revisited in more detail during the Section 404 permitting phase using standard Corps protocols.

Ecosystem functions provided by the specific wetland areas that could be lost should be discussed. The FEIS should depict the probable areas of wetland loss on maps. If post-removal wetland gains via passive reestablishment cannot be clearly determined, the FEIS should base its effects evaluation on the potential for complete wetland loss, while noting that actual impacts may be less.

Mitigation for wetland losses is not adequately addressed

The DEIS is inconsistent in its discussion of mitigation for wetland impacts. For example, specific Best Management Practices (BMPs) and other measures are described to reduce temporary construction-related impacts to "less than significant levels," while mitigation for permanent wetland losses is not as clearly addressed. In at least one location, the need for a Section 404 permit and mitigation for permanent wetland losses appears to be considered optional: *"**If** it is determined that under the Clean Water Act a Section 404 Permit is required, a Compensatory Wetland Mitigation Plan will be developed…"* (emphasis added). As a Cooperating Agency and in our scoping comments submitted under our NEPA Review capacity, EPA stated that a CWA Section 404 permit would be needed for this project. The Section 404 CWA permit will need to address both the dam removal and the wetland impacts. Unavoidable impacts to wetlands must be fully mitigated pursuant to Section 404 requirements.

Note that mitigation should compensate for both permanent losses, and residual temporal losses following application of construction BMPs.

Recommendations:
The potential degree of wetland impacts and the commitment to fully mitigate impacts and the loss of wetlands in a manner consistent with the national EPA-USACE Mitigation Rule (40 CFR part 230, Subpart J) should be clearly stated in the FEIS.

The FEIS should describe the availability of current or proposed mitigation opportunities in the project area. Mitigation Measure TER-5 emphasizes purchasing credits at an appropriate off-site conservation bank; however, there are no approved mitigation banks in the vicinity and EPA is not aware of applicable proposed wetland mitigation banks. Given the lack of existing mitigation bank opportunities, the time associated with approval of new mitigation banks, and the unlikelihood that sufficient mitigation credits would be available to offset project wetland impacts, the FEIS should focus on permittee-responsible mitigation (i.e., mitigation developed specifically for this project), not on purchase of credits from off-site conservation banks.

Mitigation Measure TER-5 should also be revised to more accurately reflect the existing EPA-USACE Mitigation Rule.

Sediment Releases and Mitigation

Use consistent sediment quantities that will be released from the reservoirs
The quantity of sediment to be released from the reservoirs is reported in different units (e.g., tons vs. cubic yards) and volumes in different parts of the DEIS, making it very difficult for the reader to accurately determine the amount and effect of the released sediment (e.g., p. 3.2-94, Subchapter 3.2). The volume of sediment that will be released, initially or over time, is not known with precision. Thus, EPA believes it is more appropriate for the DEIS to describe the potentially released sediment volume as a range.

Recommendations:
The FEIS should continue to acknowledge the uncertainty in estimates of the volume of sediment that will be released from the reservoirs. The various detailed evaluations in different chapters and appendices should, wherever possible, be based on the same estimated sediment volume (whether most likely, worst case, etc.) and use the same units (or note the conversion used where different units are used).

Use total sediment loads for the effects analysis
The DEIS is misleading when it compares the magnitude of potential sediment releases from dam deconstruction with existing and historic (with-reservoir) sediment loads in the river. The DEIS appears to compare the "new" estimated volume of sediment that will be released by deconstruction against historic averages and flood loads, as opposed to adding the "new" sediment load to that of the average or historic loads (e.g., Figure 3.2-14, pg 3.2-95). It is the total ("new" released sediment plus existing sediment loads) that should be evaluated.

Recommendations:

The impacts evaluation needs to be based on the predicted *total* sediment load, which will be the volume of deposited sediment in the reservoirs that will be mobilized, *plus* the "natural" sediment load already carried (as estimated by the historic loads with the dams in place).The FEIS should determine the predicted total sediment loads that will be carried by the river and discharged to the nearshore marine environment based on the reservoir deconstruction sediment releases plus background sediment loads (existing and historic). Based on this total sediment load determination, we recommend a re-evaluation of the potential environmental effects and the level of significance of these effects.

Acknowledge Design Measures to Reduce Project Impacts

In several locations, the DEIS describes potential impacts associated with the proposed project, including releasing sediments from the reservoirs, and states that no mitigation is proposed for these impacts. However, the action alternatives include a number of operational and design features that will substantially reduce the impacts of the proposed project. In particular, the reservoir drawdown method, rates, and timing of water releases (that will flush sediments) have been carefully designed to minimize these anticipated impacts.

Recommendations:

The FEIS should acknowledge project operational measures that are specifically designed to minimize the effects of the proposed project, such as from sediment releases from the reservoirs. We recommend the FEIS include a more detailed discussion of measures that were considered and incorporated to further reduce effects, and reference this discussion particularly where mitigation measures are not proposed to address potential effects (e.g., Chapter 3.2 Water Quality), and in the Cumulative Effects analysis (e.g., Section 4.4.1.3 Mitigation Measures, p. 4-53).

Periphyton Effects

The significance determination for Alternative 2 identifies a significant impact due to long-term periphyton growth in the Klamath Hydroelectric Project (KHP) reach (p. 3.4-15 and Table 3.4.1, p. 3.4-24). However, increased hydrologic flow variability is expected to result in scour, counteracting the effect of nutrients released from Upper Klamath Lake and Keno Reach which will no longer be retained by reservoirs. These factors are not well described or evaluated for this reach or downstream reaches. In addition, the sections of the periphyton discussion incorrectly summarize the findings of the Nutrient Numeric Endpoint (NNE) evaluation and hydrodynamic water quality model results for the Total Maximum Daily Loads (TMDLs).

Recommendations:

We recommend the FEIS describe in more depth the potential factors (e.g., scour, nutrient inputs, substrate) that could influence periphyton growth and reevaluate the level of significance of this effect for the KHP reach. If the significance determination is changed, it should be reflected for each affected reach in Table 3.4.1.

Page 3.4-15, Alternative 2, Hydroelectric Reach, Long-Term Effects, Periphyton, first and second paragraphs, as well as pages. 3.4-9 to 10, Section 3.4.4.1, paragraph 2 should be revised to accurately summarize the findings of the Nutrient Numeric Endpoint (NNE) evaluation and hydrodynamic water quality model results for the TMDLs.

Project Validation Monitoring

Provide a detailed mitigation and monitoring plan

Mitigation measures described in the DEIS include monitoring, performance standards and corrective measures if mitigation is not successful. However, it is not clear whether there will be monitoring to verify DEIS assumptions regarding the level of impacts, conclusions that effects will be less-than-significant, or predicted river recovery rates. Comprehensive monitoring and aggressive mitigation measures will be key in reducing unavoidable short-term impacts of dam deconstruction and sediment release.

Recommendations:

We recommend the FEIS include a detailed monitoring and mitigation plan that describes the proposed monitoring and mitigation actions, when the action would be implemented, the responsible party, known effectiveness of the mitigation measure, funding, and success criteria. We recommend monitoring to verify DEIS assumptions and predictions regarding project effects and the rate of recovery from deconstruction impacts.

Tribal Trust Assets

Address Tribal concerns

While fully supporting dam removal, some Indian Tribes within the Klamath Basin have expressed significant concerns with potential adverse effects to tribal trust assets, water rights, water quality, and other tribal interests. Tribes have also voiced concerns regarding the linkage between the Klamath Hydroelectric Settlement Agreement (KHSA) and KBRA.

Recommendations:

The FEIS would benefit from a more detailed discussion of the interplay between the Klamath restoration effort and the Trinity River Restoration Program. We read Section 2.2.12 of the KBRA as an intent to assure that the implementation of the KRBA (and, indirectly, the KHSA) will not adversely affect the implementation of the Trinity River Restoration Program and vice versa. The Department of Interior (DOI) should explain how it intends to concurrently carry out these two restoration mandates on two interconnected rivers that share many of the same hydrologic and fishery resources. In particular, DOI should explain whether it will commit to provide any additional resources (water or financial), if needed, to remedy conflicts that may arise between the two restoration efforts.

More accurately describe and evaluate tribal impacts

The Tribal Trust Section 3.1.2 distinguishes “trust resources” (“legally vested”) from “other resources traditionally used by tribes” and states that it documents the effects of the Klamath Hydroelectric Project on these resources, tribal culture, and tribal values (p. 3.12-1). It is unclear whether the focus of the description and evaluation is to objectively highlight project impacts, rephrase impacts tribes raised during a single consultation meeting, or both. Furthermore, the tribe-by-tribe evaluations do not

distinguish impacts to "trust resources" from impacts to "resources traditionally used by tribes." This appears to be the case in the Quartz Valley and Resighini evaluations which claim the project has no impacts on resources traditionally used by these tribes (pps. 3.12-16 and 3.12-44). The proposed project definitely affects these tribes, much in the same way it affects the Karuk and other tribes in the Klamath Basin.

Recommendations:

We recommend re-writing this section to clarify whether it is intended to document government-to-government discussions. Describe impacts to tribes and their tribal trust assets, even if those impacts were not raised in meetings with the tribes; or if a combination of these two approaches is intended. The FEIS should provide separate evaluations of impacts on "trust" and "traditionally used" resources. The focus of the evaluation should be to clearly and objectively highlight impacts of the action alternatives on both "tribal trust resources" and "resources traditionally used by tribes."

Revise the FEIS to recognize the potential impacts to resources traditionally used by each different tribe within the Klamath Basin. For example, although the Quartz Valley tribe may not have a reserved Klamath River fishery, it is incorrect to state or imply that the Klamath River salmon fishery was not a resource traditionally used by this tribe (p. 3.12-16). We recommend 3.12 Tribal Trust be reviewed and corrected to clearly and accurately describe and evaluate the resources traditionally used by each tribe within the Klamath Basin.

Remove language that infers trust relationships are based on trust resources

The DEIS implies that trust resources, as they are defined in this document, are necessary to form the basis of a trust relationship (pps. 3.12-19 and 3.12-43). This is not accurate. The federal government has a trust relationship with federally-recognized tribes which extends beyond trust resources and is based on, or otherwise arises from, treaties, statutes, executive orders and the historical relationship between the United States and Indian tribes.

Recommendation:

Language that infers trust relationships are solely based on existence of trust resources should be eliminated.

Description of KBRA Actions

Describe the NEPA Compliance process for the KBRA On-Project Water Management Plan

EPA recognizes that many elements of the KBRA are unknown and not reasonably foreseeable at this time. We agree that a programmatic analysis of the KBRA is appropriate for the current EIS. We note, however, that appropriate NEPA compliance must be completed for the KBRA in the future. Of particular interest to the EPA is future analysis of the KBRA On-Project Water Management Plan (On-Project Plan) which proposes diversion limitations and water management provisions for Reclamation's Klamath Irrigation Project. This plan is a key component in the future management of Klamath Basin water diversions, refuge water allocations, and groundwater resources which, in turn, will be critical in achieving habitat, water quality, and groundwater protection goals described in this Klamath Facilities Removal DEIS.

For example, the DEIS states repeatedly that until the On-Project Plan is fully implemented, it might not be possible for water to be managed consistent with the diversion limitations in all years (pps. 2-39; 2-51). The limitation of diversions is key to achieving habitat and water quality goals. Furthermore, the DEIS conclusion that water diversions would be managed to benefit water quality (p. 3.2-131) and aquatic resources (p. 3.3-143), is based upon the assumed success of the On-Project Plan (Sections 15.2 and 15.2.4). As the Plan is developed, it will be critical to subject the Plan's elements to rigorous environmental review in order to ensure that these goals are achieved.

Recommendations:

We recommend the FEIS describe the environmental compliance and review process for the On-Project Plan. If feasible, describe actions and studies that will be taken to ensure a robust description and evaluation of the On-Project Plan effects on aquatic resources, water quality and ground and surface water supplies of the Klamath Basin.

Provide description of authorizing legislation

The DEIS states Federal agencies are not parties to KBRA until after the enactment of authorizing legislation. Furthermore, implementation of most KHSA interim period activities are dependent on appropriate authorizing legislation through Congress, including additional funding to enhance ongoing programs (Chapter 2).

Recommendations:

Given the importance of authorizing legislation for KBRA and KHSA, the FEIS should provide a short description of the status and plans for KHSA and the KBRA authorizing legislation. We also recommend a short description of next steps, contingency plans, and possible outcomes if authorizing legislation or funding levels are not achieved as described in the DEIS, KHSA, or KBRA.