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**Parker Thaler
State Water Resources Control Board
Division of Water Rights – Water Quality Certification Program P.O. Box 2000
Sacramento, CA 95812-2000**

RE: Notice of Preparation of an Environmental Impact Report for the Klamath Hydroelectric Project Relicensing (Dated November 30, 2015)

Dear Mr. Thaler:

I am writing to the State Water Resources Control Board (SWRCB) to express my thoughts and recommendations regarding the SWRCB notice to the public that the SWRCB will begin preparation of an Environmental Impact Report (EIR) for the Klamath Hydroelectric Project Relicensing. The Klamath Hydroelectric Project (Project) is operated by the privately owned PacifiCorp. As indicated in the November 30, 2015 public notice, the SWRCB and PacifiCorp have entered into a Memorandum of Understanding (MOU) to prepare an EIR for California Environmental Quality Act (CEQA) purposes. PacifiCorp and the SWRCB have selected AECOM Technical Services, Inc. as the consultant to prepare the CEQA-mandated EIR for the Klamath Project 401 Water Quality Certification. As the Project results in discharges to state waters, the SWRCB will be required to certify that the Klamath Project can and will meet California water quality standards and implementation plans, of most concern being impairments for dissolved oxygen, nutrients, and microcystin.

Recent Project History, Dam Removal, and Implementation of Actions to Improve Water Quality

As the SWRCB is aware, a Federal Energy Regulatory Commission (FERC) license for the Klamath Project expired in 2006, while some interested parties and agencies explored dam removal as an option for the Klamath Project. PacifiCorp operates the Klamath Project hydroelectric facilities under FERC Project Number 2082. PacifiCorp filed for a new FERC license, but processing of their license application was put into abeyance while dam removal and river restoration were explored. FERC has been issuing annual licenses to PacifiCorp while settlement actions were explored, and while PacifiCorp implemented actions to improve water quality and conditions for federally listed SONCC coho salmon residing in the Klamath River basin. Because FERC put the licensing process in annual abeyance while dam removal was explored, the SWRCB was also put in the position of holding 401 certification in abeyance as well.

As of the date of this letter, Federal legislation authorizing and funding dam removal has not occurred, and it appears some Parties of the settlement agreements are abandoning hope that federal legislation required for dam removal will ever occur. Because the settlement mandating

dam removal appears to no longer be a viable option, I believe the SWRCB now must assume that the FERC long-term relicensing process for the Project will quickly resume as various environmental and tribal trust laws may dictate. With these recent developments, I believe the SWRCB must consider FERC's last decision regarding further licensing on the Klamath Project as outlined in FERC's Final Environmental Impact Statement (FEIS) produced in 2007. (see <http://www.ferc.gov/industries/hydropower/enviro/eis/2007/11-16-07.asp>)

In the FEIS, FERC's Commission concluded that the Staff Alternative was the best alternative for the Klamath Hydroelectric Project and was prepared to issue a new license consistent with the environmental measures specified in the Staff Alternative with some modifications. Below is a summary of some of the more biologically salient items in the Staff Alternative as presented in the FEIS:

Staff Alternative

1. The Staff Alternative incorporates most of PacifiCorp's proposed environmental measures, but in some instances, with modifications. Key modifications include:
2. Implementation of turbine venting as an initial dissolved oxygen enhancement measure, rather than hypolimnetic oxygenation, and further evaluation of other measures to enhance water quality with identification of time frames during which specific actions identified during the evaluation would be implemented.
3. Implementation of an integrated fish passage and disease management program, including the installation of a downstream passage and fish collection facility at J.C. Boyle dam, **modifying adult collection facilities at Iron Gate dam to facilitate trapping and hauling of adult anadromous fish**, evaluation of survival of outmigrating wild smolts at project reservoirs, spillways, and powerhouses, an experimental drawdown of Copco and Iron Gate reservoirs to assess effects on smolt outmigration and water quality, water quality monitoring in project reservoirs and to the mouth of the Klamath River, including major tributaries, to assess project contributions to factors that may cause fish diseases in the lower river, and evaluation of the most feasible and effective means to pass fish to and from project waters and minimize the risks associated with fish diseases that are project related.
4. Implementation of an adaptive sediment augmentation program in the J.C. Boyle bypassed reach and downstream of Iron Gate dam based on habitat mapping.
5. Implementation of a maximum downramping rate of 2 inches per hour during the first peaking cycle after extended periods of run-of-river operation, which would gradually be increased during each subsequent day until PacifiCorp's proposed ramping rates are achieved.
6. Increasing the minimum flow in the Copco No. 2 bypassed reach to 70 cfs.
7. Increased funding responsibilities for Iron Gate Hatchery operation and maintenance, tagging operations, and full funding of Fall Creek rearing facility operations.
8. Implementation of a hatchery and genetics management plan.

The Staff Alternative includes 25 environmental measures in addition to those proposed by PacifiCorp.

To date, PacifiCorp has already been implementing some of these measures such as gravel augmentation below Iron Gate Dam, and partnering in the development of a hatchery and genetics management plan for the Iron Gate hatchery as well as providing funding for its implementation.

State of California Responsibilities for the Klamath Project and Proposed CEQA Planning Process

As outlined in the SWRCB public notice, the SWRCB must determine that the Klamath Project will be able to meet water quality standards and implementation plans, and other relevant state law. The SWRCB must also determine that the Project adequately protects beneficial uses of the Klamath River, principally being habitat for rare and endangered species, as well as public recreation. As appears to me, PacifiCorp has now decided to move forward with the SWRCB and seek further movement on getting water quality certification for the Klamath Project.

The SWRCB indicates requirements the State may develop for the certification would be likely be incorporated into a new FERC license for the Project. Of significant interest from the SWRCB public notice is the following CEQA objectives for Project water quality certification:

- Modify the KHP, as needed, to comply with California water quality standards, and in conformance with mandatory conditions established as part of the FERC license process.
- Continue to generate power from a renewable resource to serve KHP customers to the extent compatible with water quality standards and mandatory conditions established as part of the FERC Relicensing Process.

The public scoping notice states that the SWRCB received an August 15, 2014, updated certification application from PacifiCorp. The SWRCB indicates new information, along with other available information will be used to inform the CEQA document and water quality certification for the KHP. The SWRCB is now seeking public input via scoping, as required by CEQA, on this latest and greatest planning attempt for the Project and ailing Klamath River.

Recommendations for Development of an EIR for 401 Water Quality Certification for the Klamath Hydroelectric Project:

Public Disclosure and Process Transparency

1. Make it entirely clear to members of the public whether the State has narrowed alternatives by one of the stated CEQA objectives which is the continued generation of hydroelectric power from the Project “to the extent compatible with water quality

standards.” This would fall into alignment with the FERC Staff Alternative indicating trap and haul as the preferred method to ensure fish passage. I attended the January 26, 2016 public meeting held in Orleans, California, where staff of the SWRCB indicated dam removal was still a viable condition the SWRCB may order in a water quality certification for the Project. However, I believe the above objective, as written, is confusing and I request the objective be rewritten to better reflect dam removal is not precluded by the objective.

2. Disclose to the public how the SWRCB views PacifiCorp’s role in the poor water quality conditions found in California’s portion of the Klamath River, and how the SWRCB will allocate responsibility for poor water quality to PacifiCorp. This becomes the classical “but for” test with an essential biological and public policy question being, “what would the water quality conditions be in the Klamath River, **but for** the hydroelectric project?” Answering this question with sound science, and developing mitigation strategies that fairly assign responsibility for poor water quality in a certification should ultimately lead the SWRCB to a defensible position regarding what PacifiCorp is, and is not, responsible for in achieving water quality improvements in the Klamath River. I believe there is no scientific doubt that the existence of the Klamath Project exacerbates water quality problems in the Klamath River which do have origins in the Upper Klamath River, both from natural and anthropogenic sources of pollutants.
3. Clearly explain in all EIR alternatives the timelines expected for implementation and completion of an alternative, and what assumptions go into the projected timelines.
4. Clearly explain in the EIR what procedures the SWRCB will use should projected benefits anticipated to occur with water quality certification not materialize, and the timelines for making these determinations.

Project Alternatives

I recommend the following be considered for all Project Alternatives that will be developed in a draft EIR:

- With each EIR Alternative, identify what portion of poor water quality in the Klamath River, PacifiCorp is being asked to be accountable for, and how the developed Alternative will ensure that PacifiCorp is working hard to minimize and mitigate for their contributions.
- Explain how the concept of Adaptive Management will be applied for each alternative considered. A sound adaptive management strategy will help to address significant uncertainties associated with the Project. For example, how would an Adaptive Management Plan respond to changes to water quantity provided to the Project from upstream curtailments (e.g. Bureau of Reclamation water management in the Upper Basin or climate change-related reduced flows)? Adaptive Management would allow for contingency planning should expected conditions in the basin change beyond what was anticipated in the relicensing process.
- How will the public be informed of recent data and findings associated with the Project? This should be clearly articulated in the EIR so the public knows where to look for data and how it will be used in long-term implementing actions.

- How will each EIR Alternative address anticipated climate change over a long period of time? For example, how will measurements of long-term trends in snowpack levels in the upper basin be incorporated by the SWRCB into long-term strategies dealing with pulse flows, water temperature, sediment transport, etc....
- How will each EIR Alternative ensure that adequate environmental conditions will persist in the Klamath River basin to ensure that tribes within the basin are provided with healthy and consistent returns of adult salmonids to meet Tribal commercial, subsistence, and cultural needs.
- For each EIR Alternative explain how existing monitoring will be used. For example, PacifiCorp is implementing turbine venting changes to improve dissolved oxygen levels below Iron Gate Dam and is implementing gravel augmentation efforts. How will information collected from these recent efforts be incorporated into Alternatives developed for the EIR? Are they working to achieve the desired targets? Should they be carried forward as is, or with modifications?

Recommendations for Specific Alternatives

1. Explore an Alternative that contains as a major component the movement of salmonids out of disease-prone areas as it is critical to the long-term survival of salmonids in the basin that juvenile-to-smolt survival rates increase. Such movement could be done via physical trapping and moving of juveniles to areas without disease-forming conditions, or via flushing flows. Perhaps there is an alternative that could provide flushing flows that does not rely on releases from the Bureau of Reclamation (e.g. PacifiCorp owned winter storage facilities). This becomes particularly important in years of drought, when disease conditions are most likely to have the greatest impact on Klamath River salmonid populations.
2. Explore an Alternative that has PacifiCorp contributing to significant funding for water quality and quantity improvement projects in the Upper Klamath Basin. PacifiCorp has already shown a willingness to provide significant funding to improve water quality conditions below Iron Gate Dam, and I see no reason why the company could not do the same in the Upper Basin. If the source of the pollutant “tap” can be better controlled above Project facilities, perhaps water quality will be improved downstream of Project facilities.
3. Explore an Alternative that has PacifiCorp continuing to fund programs that result in water withdrawal curtailment in late summer and early fall when water is needed most in the basin to increase juvenile-to-smolt survival rates. Although PacifiCorp has committed to doing this in California, I see no reason why PacifiCorp could not pursue this strategy in Oregon for the sole purpose of getting more water into the Klamath River where it enters California, when it is most needed.
4. Explore an Alternative that requires PacifiCorp to contribute meaningful funding for restorative projects below Iron Gate Dam to improve conditions for salmonids. PacifiCorp has already developed a good program, teaming with the National Fish and Wildlife Foundation (NFWF), to deliver funding for restoration projects in an efficient manner and I see no reason why this funding program should not be continued.

5. For fish passage I recommend the SWRCB explore a variety of passage options in the EIR. There are different ways of getting fish from one location to another, such as trapping and hauling as outlined in the FERC EIS. Additionally, one can build very expensive concrete fish ladders. Each one of these mechanisms for passage will have its own unique set of potential risks and potential benefits, not only for fish but humans as well. Also, there are new techniques being tried elsewhere that may work in the Klamath Project to achieve fish passage. How will the SWRCB consider new advancements in fish passage for the Klamath Project? For each mechanism of achieving fish passage, I recommend the EIR describe how each mechanism would be conducted, when it would be conducted, the risks to salmonids associated with the mechanism of passage, and what the expected benefit to salmonid populations would be over time.
6. For all fish passage alternatives, I recommend the development of a robust monitoring program that is designed to feed into an adaptive management program. Feeding real information into a program that is allowed to adaptively manage (i.e. respond to new information or changed conditions) will help to ensure that the program can achieve improvements to salmonid health and abundance in the Klamath River watershed.
7. Finally, if dam removal is not a condition of certification, but fish passage is, I recommend the concept of experimental populations be explored for coho salmon in the Klamath River basin as is being done by Bureau of Reclamation (BOR) and National Marine Fisheries Service at the BOR Shasta Dam facility. I believe that designating populations that will be moved above Iron Gate Dam as “experimental” for some period of time, will result in increased public support for moving fish above the dams to areas where habitat is suitable for spawning, incubation, and juvenile rearing. Until enough time has passed to evaluate whether passage above Project dams results in true improvements to Klamath River salmonid populations, I believe it is in everyone’s interests to consider the moved fish as an experimental population. Consideration of reclassification of the population could be done at a later date in time, when appropriate to do so.

In summary, I am pleased to see the SWRCB taking the step to prepare an EIR for water quality certification for the Project. It is time to proceed on with exploring how the Project can or cannot be relicensed and how the State of California will take steps improve water quality in the Klamath River in a meaningful way. Thank you for consideration of these scoping comments and if you have any questions I may be reached at (707) 362-6248.

Sincerely,



Lisa Roberts