January 27, 2016

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

Dear Mr. Parker Thaler:

**Subject: Klamath Hydroelectric Project Relicensing Notice of Preparation for an Environmental Impact Report**

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the Klamath Hydroelectric Project (KHP) relicensing. The Klamath River is listed as impaired under Clean Water Act (CWA) section 303(d) because it does not meet water quality standards for some pollutant/stressors including temperature, organic enrichment/low Dissolved Oxygen (DO), and nutrients. The reach of the Klamath River that includes portions of the KHP, specifically Copco and Iron Gate Reservoirs is also listed for the blue-green algae toxin microcystin impairment. In addition, the mainstem Klamath River from Copco 1 to the confluence with the Trinity River is listed for microcystin.

**Klamath River Total Maximum Daily Loads**

On December 28, 2010, the U.S. Environmental Protection Agency approved amendments to the Water Quality Control Plan for the North Coast Region (Basin Plan) to establish: (1) site-specific water quality objectives (SSOs) for DO in the Klamath River; (2) an action plan for the Klamath River Total Maximum Daily Loads (TMDLs) addressing temperature, DO, nutrient, and microcystin impairments in the Klamath River; and (3) an implementation plan for the Klamath and Lost River Basins. The TMDLs address the impairments of: temperature, low DO, nutrient and organic matter, and microcystin. They are designed to ensure that water quality standards will be achieved, and that beneficial uses in the Klamath River will be restored and protected. The beneficial uses that are impaired include: cold freshwater habitat (COLD); rare, threatened, and endangered species (RARE); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early

development of fish (SPWN); commercial and sport fishing (COMM); Native American cultural use (CUL); subsistence fishing (FISH); and contact and noncontact water recreation (REC1 and REC2).

The TMDL assigns three load allocations to the KHP in California:

- Copco and Iron Gate Reservoirs stratify during the summer months creating a situation where there is no location within the reservoirs where both DO and temperature conditions are suitable to support the COLD beneficial use. The allocation to address this condition requires supplemental DO be inserted to create a compliance lens where temperature conditions are suitable for cold water fish during the critical summer period. The allocation also provides an alternative where reservoir management measures can be used to provide the desired conditions.

- The KHP reservoirs create conditions (quiescent waters) that reduce the nutrient assimilative capacity of the Klamath River in the affected reaches. The results of the reduced assimilative capacity are nuisance blooms of green and blue-green algae impairing beneficial uses within the facilities. Nuisance blooms of blue-green algae within Copco and Iron Gate Reservoirs are also transported downstream and are the source of impairments within the Klamath River from Iron Gate through the estuary. In particular, *Microcystis* and the microcystin toxin which originate within the reservoirs (Otten et al. 2015), impair the Native American cultural use (CUL) among others. KHP has been assigned nutrient reduction allocations upstream of the facilities for total phosphorous and total nitrogen to offset the impact of reduced assimilative capacity and to restore water quality conditions within the facilities. This allocation also includes the provision for the use of alternative reservoir management measures to achieve TMDL targets for chlorophylla and microcystin.

- The KHP reservoirs impact the natural temperature regime of the Klamath River in a manner that is detrimental to beneficial uses related to COLD and SPWN. Specifically the water released from the reservoir is warmer than natural during the early fall, which can delay the onset of spawning. The KHP reservoirs have been assigned temperature allocations equal to the temperature increase expected to naturally occur in the river reach occupied by the reservoirs.

The designated beneficial uses associated with the cold freshwater salmonid fishery and Native American cultural use and subsistence fishing are interrelated and are the designated beneficial uses most sensitive to the water quality impairments of the Klamath River.

**Water Quality Certification**

In the absence of the KHSA, enforcement of TMDL allocations is through the State Water Board CWA Section 401 water quality certification (401 Certification) process since the Regional Board is preempted from issuing waste discharge requirements to the KHP. In

issuing a 401 Certification the State Water Board must consider the protection of beneficial uses and water quality standards in the Basin Plan. (Wat. Code § 1243,5; 1258, see generally *id* § 174).

The Regional Water Board appreciates the opportunity to collaborate on the development of the 401 Certification, particularly portions of the application for 401 Certification that may be relevant to adverse water quality impacts from the proposed activity and TMDL implementation (Cal. Code Regs., tit. 23, § 3855 (b)2(B).

**North Coast Policy in Support of Restoration**

To the extent that project alternatives contemplate dam removal or large infrastructure improvements, be advised that in May 2015 the State Water Board approved the Basin Plan Amendment to include the Policy in Support of Restoration in the North Coast Region (Policy). Restoration projects are intended for the purpose of correcting a water quality problem or condition which is causing, or threatens to cause, a detrimental effect on an aquatic ecosystem and beneficial uses. Large-scale restoration projects may cause significant discharges of waste into waters of the state and may require a longer time period to achieve water quality standards. The Policy is intended to provide guidance on the implementation of ecological restoration projects which may result in temporary water quality impacts, but in the long-term improve water quality conditions and provide greater support of beneficial uses than currently exists.

If you have any questions or comments, please contact Clayton Creager at (707) 576-2666 or by email at Clayton.Creager@waterboards.ca.gov

Sincerely,

Matthias St.John 2016.01.27 17:58:09 -08'00'

Water Boards

Matthias St. John
Executive Officer

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**Reference:**

Timothy Otten, Joseph R. Crosswell, Sam Mackey, Theo W. Dreher. 2015. Application of molecular tools for microbial source tracking and public health risk assessment of a *Microcystis* bloom traversing 300 km of the Klamath River. Harmful Algae 46 (2015) 71-81. Journal homepage: www.elsevir.com/locate/hal.

cc: Scott Morgan, State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812
Re: SCH No. 2014032076