

From: [Doug Heiken](#)
To: [Wr401program](#)
Subject: Klamath Dam Removal draft EIR - comments
Date: Friday, February 22, 2019 3:24:44 PM
Attachments: [Klamath Dams Removal 401 cert EIR cmt, 2-22-2019, CA WRCB.docx](#)

Please find attached, comments from Oregon Wild on the Klamath Dam Removal draft EIR.

Oregon Wild strongly supports the *Proposed Project*, involving removal of Iron Gate, Copco No. 1, Copco No. 2, and J.C. Boyle dams and associated facilities. The *Proposed Project* will best meet *project objectives* and provide the greatest ecological gains in this important ecosystem. We do not want concerns about short-term impacts to get in the way of this great dam removal project that will be highly-beneficial in the short- and long-term. In the attached letter we offer a few suggestions to improve the Proposed Project.

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22 February 2019

TO: Ms. Michelle Siebal, State Water Resources Control Board, Division of Water Rights – Water Quality Certification Program

VIA: WR401Program@waterboards.ca.gov

Subject: Draft Environmental Impact Report for 401 Certification of the Lower Klamath Project License Surrender, FERC Project No. 14803 — comments

Dear Water Resources Control Board:

Please accept the following comments from Oregon Wild concerning the [Draft Environmental Impact Report](#) for 401 Certification of the Lower Klamath Project License Surrender, FERC Project No. 14803,

https://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/docs/lower_klamath_ferc14803_deir/oa.pdf. Oregon Wild represents 20,000 members and supporters who share our mission to protect and restore Oregon's wildlands, wildlife, and water as an enduring legacy. Our goal is to protect areas that remain intact while striving to restore areas that have been degraded. Oregon Wild has worked for more than three decades to protect and restore the ecological integrity of the Klamath River, the entire Klamath Watershed, and the fish and wildlife that call it home. Our members and supporters have a great affection and connection to this area.

Oregon Wild strongly supports the *Proposed Project*, involving removal of Iron Gate, Copco No. 1, Copco No. 2, and J.C. Boyle dams and associated facilities, with a Definite Plan described in EIR Appendix B. The *Proposed Project* will best meet *project objectives* and provide the greatest ecological gains in this important ecosystem. We do not want concerns about short-term impacts to get in the way of this great dam removal project that will be highly-beneficial in the short- and long-term. We offer a few suggestions to improve the Proposed Project below.

Oregon Wild supports the Water Board's proposed 401 certification of the Klamath Project Dam Removal and License Surrender because it will lead to significant long-term improvements in the water quality of the Klamath River, especially temperature, dissolved oxygen, pH, and algal toxins. Of course, there are some short-term adverse water quality impacts associated with dam removal, such as the temporary pulse of stored sediments as they mobilize and move through the system. The dam removal effort must be accomplished with great care to minimize and mitigate these water quality impacts, but because the existing situation is causing a variety of significant

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adverse water quality problems, the long-term net effect of dam removal on water quality is strongly positive.

The EIR (pp ES-9 to ES-11) provide a nice summary of the beneficial effects of dam removal, which clearly outweigh any adverse effects. This list could be expanded to include: vegetation succession within the reservoir footprint, and all the ecological complexity and self-organization that goes along with succession, such as primary production/consumption, biomass accumulation, large tree habitat, wildlife cover/nesting/feeding, stream shade, dead wood habitat recruitment, carbon storage, and various disturbances that interact with the features listed, etc.

The listed “terrestrial” benefits of dam removal include “benthic macroinvertebrates.” Is this a typo? Maybe the intention was to list benefit to terrestrial invertebrates, which include: mollusks, fungi, lichen, mosses, insects, arthropods, etc.

The existing dams alter river flow and contribute to water quality problems, including toxic algal blooms, low dissolved oxygen, and higher water temperatures. The dams also contribute to fish disease in the lower reaches of the Klamath River. The license surrender and dam removal will revert the Klamath River to more natural seasonal flow conditions resulting in improved water quality, temperature regime, nutrient cycling, chemistry, and sediment storage/mobility. Free-flowing riverine conditions and improved water quality will benefit aquatic habitat and anadromous fish populations by increasing access to historical habitat, restoring mainstem and tributary habitat, and improving biological and physical factors that heavily influence fish populations (e.g., flow conditions, sediment and bedload transport, water quality, fish disease, toxic algal blooms, and water temperature).

We urge the Water Boards to adopt conditions that will minimize water quality impacts, reduce the spread of weeds, and conserve unique species like pond turtles, suckers, salmonids, amphibians, and lamprey, while allowing this important dam removal effort to proceed in an efficient and timely manner.

It is reasonable to expect significant short-term erosion and movement of sediment stored behind the dams to be removed. This will likely cause some short-term impacts on Klamath River ecology. Most of these effects will occur during the first year after dam removal, followed by another pulse during the next 5-10 year high-flow event, which should substantially resolve sediment concerns by moving most of the fine sediments out of the system and naturally sorting and distributing the larger material.

Freshwater mussels are long-lived and an important part of the river ecosystem. We are concerned about sediments smothering downstream mussel beds after dam removal. Can this be mitigated by collecting some mussels from representative downstream areas that are expected to

be buried in significant sediments, then replanting them in the same locations are things have sorted out? This might be a worthwhile project for tribal partners.

The project controls significant acreage of uplands surrounding the project, as well as the footprint of the reservoirs themselves. We urge the agencies to require sound ecological stewardship of those lands so they are not subjected to grazing, logging, mining, or motorized recreation, to the detriment of Klamath River water quality. The EIR says that these lands would be transferred to the States of Oregon and California and/or third-parties, for “public interest purposes.” This is too broad. There should be an explicit *ecological conservation* mandate permanently attached to these lands.

Weed-free native-only seed mixes should be used for seeding after the reservoir is drawn down. Using sterile wheat may not be a good idea because it may cause a boom in the local small animal population that consumes the wheat AND decimates the native seedbed.

We urge the agencies to require planting of native willows and other appropriate trees and shrubs in the reservoir footprint along the newly established river channels and tributaries. This will provide several benefits: (i) provide shade to mitigate temperature problems, (ii) suppress weeds, and (iii) stabilize the loose sediments along the river banks.

The plan is to salvage ESA-listed Lost River suckers and Short-Nose suckers that use the reservoirs, but this effort is expected to salvage only 10% of the population. We urge the agencies to require genetic testing, and if the fish are not unduly hybridized, then a more aggressive fish salvage effort should be undertaken. The locations for releasing these salvaged fish must be carefully thought out in advance.

The EIR says that livestock grazing may be used as a veg control in the uplands. This is not a good idea, because livestock cause several undesired effects, including: spending disproportionate time in sensitive areas such as riparian areas, grazing non-randomly with greater adverse effects on some desired native species and little to no effect on many undesired species (e.g., thistle).

Dead and down wood plays a critical role in maintaining aquatic and terrestrial ecological structure, function, and process. See Rose, C.L., Marcot, B.G., Mellen, T.K., Ohmann, J.L., Waddell, K.L., Lindely, D.L., and B. Schrieber. 2001. Decaying Wood in Pacific Northwest Forests: Concepts and Tools for Habitat Management, Chapter 24 in Wildlife-Habitat Relationships in Oregon and Washington (Johnson, D. H. and T. A. O’Neil. OSU Press. 2001) <http://web.archive.org/web/20060708035905/http://www.nwhi.org/inc/data/GISdata/docs/chapter24.pdf>. It is reasonable to expect a significant shortage of dead wood within the former reservoir footprint. This wood deficit should be mitigated by importing large wood to kick-start the

process of natural wood functions and wood recruitment. Placing lots of large wood in the reservoir footprint will help meet water quality goals by capturing and storing sediment and nutrients. Wood should be placed both in and near the river and tributaries, as well as in uplands. Extra wood near tributary junctions is recommended. Wood for restoration should be obtained from appropriate sites, such as thinning of (young) plantations, (young) juniper removal projects, roadside hazard trees, or nearby reservoir salvage efforts.

We also urge the agencies to adopt monitoring and adaptive management requirements specifically designed for learning and application to other similar projects. Dam removal is still a fairly new endeavor with uncertainty about environmental impacts and the spatial and temporal fate of stored sediment. Let's learn from this dam removal effort, so that future dam removal efforts can be even better.

Each substantive issue discussed in these comments should be (i) incorporated into the purpose and need for the project, (ii) incorporated into an EIR alternative, (iii) carefully analyzed as part of the effects analysis, and (iv) considered for mitigation.

Sincerely,

A handwritten signature in cursive script that reads "Doug Heiken".

Doug Heiken

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