

**Amy Cordalis Response to Congressman Huffman’s Question from the
U.S. House of Representatives, WOW Subcommittee Oversight Hearing
On**

Klamath River Basin Conditions and Opportunities

March 22, 2022

Thank you, Congressman Huffman, for the opportunity to testify at the WOW Subcommittee Oversight Hearing on the Klamath Basin and for the follow up question, stated below. Below is my response.

The Yurok Tribe has invested decades of work toward dam removal and the restoration of the Klamath River. What final steps need to be taken to make sure these dams are removed without delay? Can you elaborate on the benefits of dam removal for the Klamath Basin, both for your Tribe, as well as communities upstream?

A. FERC and the Army Corps Must Move Quickly to Avoid Further Delay on Dam Removal

The Yurok Tribe and our partners to the Klamath Hydroelectric Settlement Agreement (“KHSa”) have been working tirelessly on Klamath Dam removal for more than twenty years. The final steps needed to begin dam removal are: (1) for the Federal Energy Regulatory Commission (“FERC”) to conclude its National Environmental Policy Act (“NEPA”) analysis and take action on the License Surrender Order; (2) for the U.S. Army Corps of Engineers (“Army Corps”) to issue the Clean Water Act Section 404 permit; and (3) for the North Coast Regional Water Quality Control Board (“NCRWQCB”) to issue the Clean Water Act Section 402 permit.

FERC recently released a comprehensive Draft Environmental Impact Statement (“DEIS”) recommending dam removal based on the conclusion that removal of the four Klamath dams would provide significant environmental, economic, and cultural benefits.¹ The public comment period for the DEIS will close on April 18, 2022. Following the public comment period, we hope that FERC will move quickly to respond to comments and finalize the EIS as soon as possible. After the Final EIS is released, FERC will take final action on a License Surrender Order. The Army Corps and the NCRWQCB will rely on the Final EIS to issue the Section 404 and Section 202 permits. With these regulatory approvals, dam removal will finally begin.

¹ FERC, Draft Environmental Impact Statement for Hydropower License Surrender and Decommissioning Lower Klamath Project (FERC Project No. 14803-001, Klamath Hydroelectric Project, and FERC Project No. 2082-063, Oregon and California) i, xli (Feb. 25, 2022), https://klamathrenewal.org/wp-content/uploads/2022/02/20220225-3040_P-14803-001-2082-063-Lower-Klamath-Surrender-DEIS.pdf. (recommending the proposed action (dam removal) because “the environmental protection, mitigation, and enhancement measures proposed by KRRC, along with [FERC] staff’s additional recommendations, would adequately protect environmental resources, restore project lands to a good condition, minimize adverse effects on environmental resources, [and] maximize benefits to the Chinook salmon fishery that is of vital importance to the Tribes . . .”).

This issue has been definitively studied many times over. FERC’s NEPA review is the *fourth* NEPA analysis that has addressed Klamath River dam removal. Numerous peer review studies have already found that dam removal will result in a range of environmental, economic, and cultural benefits for the Klamath Basin. The time to issue the final permits for dam removal is now.

B. Dam Removal Benefits the Entire Klamath Basin

As we observed in other dam removal projects like the Elwah, Condit, Edwards, and Marmot dam removal projects, the Klamath dam removal will greatly improve overall ecosystem health. This will make the Basin more climate resilient—in particular, drought resilient—resulting in increased ecosystem productivity to support life and the economy, tribal fisheries, agriculture, and endangered species. FERC’s DEIS recognizes the significant environmental, economic, and cultural benefits of dam removal. Dam removal will improve water quality and address Basin-wide harmful conditions, including lack of fish passage, high summer and fall water temperatures, blue-green algae blooms, fish disease incidence, and impaired sediment supply and transport.

1. Ecological Basin Wide Benefits of Dam Removal

As the Klamath River Renewal Corporation (dam removal entity), PacifiCorp and the States of Oregon and California noted in their request for License Surrender to FERC, dam removal will further the following goals:

1. Advance the long-term restoration of the natural fish populations in the Klamath River Basin, with particular emphasis on restoring the salmonid fisheries used for commerce, recreation, subsistence, and Tribal cultural purposes.
2. Improve the long-term water quality conditions associated with the Lower Klamath Project, including water quality impairments due to the bacterium *Microcystis aeruginosa* and associated toxins, water temperature, and levels of biostimulatory nutrients.
3. Ameliorate conditions underlying high disease rates among Klamath River salmonids.
4. Restore anadromous fish passage to viable habitat currently made inaccessible by the Lower Klamath Project dams.
5. Make cold water in Upper Basin springs available for salmon to help secure the future survival of fish species in the face of climate change.

Considering these benefits, FERC notes, “restoration of a free-flowing Klamath River would open habitat upstream of Iron Gate Dam to recolonization by Chinook and Coho salmon. Along with increases in available habitat, the proposed action would improve water temperature,

dissolved oxygen, and water quality in the main stem of the Klamath River.” DEIS at 3-185. “Dam removal provides “permanent, significant, and beneficial effects” to the Klamath fishery. *Id.*

Dam removal will allow anadromous salmonoids and other species to return to the Upper Basin and will restore access to at least 400 river miles of historical spawning habitat for Chinook salmon, Coho salmon, Pacific Lamprey, and steelhead. Access to these habitats will not only increase the abundance of salmon and other species, but it will increase genetic and geographic diversity, which will increase the resiliency of all Klamath River salmon stocks. It results in a more natural hydrograph and water temperature regime, as the “large thermal mass of the reservoirs behind the dams would no longer delay water temperature warming in the spring and cooling in the fall.” *Id.* at 3-15. This will allow anadromous fish access to cool-water refugia, such as the JC Boyle springs, Wood and Williamson River, and Spring Creek and Spencer Creek, and is important to improving conditions for fish spawning, rearing, and migrating in the mainstem Klamath.

Dam removal will help correct increased water temperatures in the fall, which will reduce egg mortality and prespawn salmon mortality. It will reduce or eliminate toxic microcystus algae blooms that poison the river every summer and have led to repeated “no contact” postings up and down the river. This has significantly impaired ceremonial and religious use of the river by Yurok and other Tribes.

Further, “dam removal is expected to reduce prevalence of disease in Klamath River salmon populations” and thus increase salmon survival and productivity. DEIS at 3-185. Anadromous salmonoids in the Klamath River Basin have experienced unprecedented levels of *C. Shasta* infections, which is of particular concern because infections usually lead to mortality. In 2021, as many as 97 percent of salmon captured in a screw trap in the Klamath River by Yurok Tribal fishery biologists were infected with *C. shasta*, including many that were dead when collected. California Department of Fish and Wildlife estimated that drought conditions and disease outbreak would have killed an estimated 90 percent of the young fish if hatchery fish were released from Iron Gate Hatchery last spring. *Id.* Dam removal reduces the likelihood of fish disease by restoring natural sediment and ecological processes. Riverbed mobility has been severely impaired by the interruption of sediment supply due to the presence of the dams. Lack of riverbed mobility has been consistently identified as a key factor in the high *C. Shasta* mortalities observed in the past two decades. Opening the Klamath River by removing the dams creates a more dynamic and mobile riverbed, as sediment would no longer be trapped in the reservoirs behind the dams and the stream bed below the dams would no longer be starved of sediment, both of which are important to providing substrate for spawning fish and preventing *C. Shasta*.

All of these improvements help solve current problems in the Klamath Basin. One of the most significant challenges in the Basin is that both the Lake and River fisheries are on the verge of extinction. In an effort to save these fisheries, water use is highly regulated and contentious. Making matters worse, the Klamath Basin is experiencing a “mega drought,” which has reduced the available water supply to unprecedented low levels. Managers in the Basin have very limited tools to protect the fish, which, when used, often lead to reduction of water available for

agriculture. Although dam removal will not resolve this completely, it enhances overall Klamath Basin ecosystem health, including fishery health, which will increase fish production and harvest opportunities. This will yield tremendous benefits to Klamath Basin communities and will strengthen communities up and down the Pacific Coast, including offshore commercial fishermen, that have been affected by salmon fishery closures due to low Klamath River stocks.

As we used to say in the Basin not long ago, “what is good for fish, is good for farmers.” That statement remains true and applies to dam removal: strengthening the Basin’s fisheries will lead to a more productive ecosystem that can support a wide variety of uses, including sustainable agriculture.

2. Dam Removal Will Generate an Estimated \$14-82 Million over 50 years

Dam removal also provides significant economic benefits. In Klamath, Siskiyou, Humboldt and Del Norte Counties, dam removal will generate an increase of approximately 3,917 jobs (on average, 261 jobs annually), \$186.8 million in labor income, and \$380 million in output. DEIS at 3-504. The Department of the Interior and the National Marine Fisheries Service have found net positive economic benefits of dam removal and river restoration ranging from \$14 to 82 million over 50 years. DEIS at 3-517. Dam removal is clearly good for the economy as well as fish.

3. Dam Removal Advances Statutory Goals and Treaty Obligations

Klamath dam removal will advance the goals of the Endangered Species Act (“ESA”) and the Wild and Scenic Rivers Act. Dam removal will also help to fulfill the United States’ treaty obligations and trust responsibilities to Tribes in the Basin.

Congressional intent expressed in the ESA and the Wild and Scenic Rivers Act supports restoration of the Klamath Basin ecosystem by protecting endangered or threatened species and the habitat they need to survive. In the Klamath Basin there are several threatened and endangered species, including Coho Salmon, Green Sturgeon, Eulachon, Suckers, Bull Trout, two species of Bumble Bees, Little Brown Bat, Monarch Butterfly, Northern Spotted Owl, Spotted Frog, Pond Turtles, and Southern Resident Killer Whales (which rely on Klamath salmon as a primary food source). Dam removal provides ecosystem wide benefits that will improve the habitat these species rely upon for survival. As noted above, dam removal improves water quality, lowers water temperatures, and enhances riverbed conditions by restoring a free-flowing river. Dam removal will result in habitat improvements that cannot be achieved through implementation of the ESA on its own.

The beauty of Klamath Dam removal is that these ecological benefits also support important treaty and federally reserved rights of the Tribes in the Basin. The Klamath Tribes’ treaty rights include the right to fish and to hunt and gather. The Yurok Tribe has federally reserved fishing, hunting, and gathering rights on the lower 45 miles of the Klamath River. Although these rights are the supreme law of the land and are some of the oldest legal obligations in the Basin, the federal government and many communities in the Klamath Basin have ignored and trampled on these rights over the last 170 years.

This approach has led to the extirpation of salmon in the Upper Klamath Basin, abrogating the Klamath Tribes' treaty rights. It has resulted in the complete frustration of the Yurok Tribe's ability to develop a sustainable commercial fishery and, what's worse, the Tribe has been unable to maintain a subsistence fishery. The Yurok Tribe has never had the opportunity to develop its fishing economy because the fishery was never strong enough. Today, the Yurok reservation remains in economic ruin because the Basin's resources have been used to support hydropower as well as farming in the Upper Basin.

Dam removal provides an opportunity to redress the historical wrongs, environmental injustices, and flat-out racism that have plagued the Basin. Ensuring this project's completion is an essential part of healing the Basin, both ecologically and spiritually, and ensuring that Basin communities have an equitable stake in the future. The United States is responsible for complex and wide-ranging commitments to communities in the Basin. Removing the Klamath dams is a necessary step to fulfilling those commitments.

CONCLUSION

Klamath River dam removal will provide numerous benefits to communities throughout the Basin and up and down the Pacific Coast, but only if the project is completed without further delay. Dam removal is essential to uniting the Basin as one, as it was historically. The Klamath Basin spans what is now Oregon and California. Historically, this landscape did not have political boundaries, and was not divided into Indians versus Farmers or Sucker versus Coho. The Upper Basin lakes and wetlands worked together with the river as one ecosystem supporting an abundance of species, plants, and humans. For more than a century, the Basin has been divided in two by an Iron Gate Dam. It is time to open that gate and reunite the Basin.