Pacific Fishery Management Council

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Marc Gorelnik, Chair | Merrick J. Burden, Executive Director

DRAFT

April X, 2022

The Honorable Kimberly D. Bose
Secretary, Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

RE: FERC Docket numbers P-2082-063 and P-14803-001

Dear Ms. Bose,

The Pacific Fishery Management Council (Council) is writing to provide comments on the Federal Energy Regulatory Commission's (FERC) February 26, 2022, *Draft Environmental Impact Statement for Hydropower License Surrender and Decommissioning for the Lower Klamath Project and Klamath Hydroelectric Project* (DEIS). The Klamath River Renewal Corporation (KRRC) proposes to decommission and remove most project facilities. KRRC also proposes to implement 16 management plans that specify the sequence of procedures that would be used to draw down the four reservoirs; remove the dams and associated facilities; restore lands currently occupied by the dams, reservoirs, and other facilities; improve access for salmon to historical and existing habitat; and minimize adverse effects on environmental resources. KRRC filed 14 revised management plans, reflecting the results of ongoing consultation with various agencies, on December 14, 2021. The FERC staff's DEIS recommendation is for approval of the license surrender as proposed, with additional staff recommendations.

After decades of engagement on this issue over declining Klamath salmon stocks and near-collapse of Klamath fisheries, the Council is extremely encouraged and expresses strong support for decommissioning and removal of the four lower Klamath dams. The Council agrees with the FERC staff preferred alternative which incorporates recommendations by KRCC with additional mitigation measures proposed by FERC staff. In addition, the preferred alternative includes mandatory measures from the Water Quality Conditions issued by the California Water Board and Oregon Department of Environmental Quality (Oregon DEQ) and the Biological Opinions issued by National Marine Fisheries Service (NMFS) and United States Fish and Wildlife Service (USFWS) with several additional recommendations.

The Council is one of eight regional Federal fishery management councils established by the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (MSA) and develops management actions for Federal fisheries of Washington, Oregon, California and Idaho. The MSA requires fishery management councils to describe, identify, conserve and enhance essential fish

habitat (EFH) for managed species that are under a fishery management plan (FMP). The Council's Pacific Coast Salmon FMP (PFMC, 2014) identifies and describes EFH for Chinook salmon, coho salmon and Puget Sound pink salmon. The MSA further requires the Council to comment on any Federal action that may affect the habitat of its managed salmon and is the basis for our comments on this Federal action.

Since at least 2006 when the current 50-year FERC license for these hydropower dams expired, the Council has encouraged FERC to decommission these aging facilities towards restoring a natural flow regime to the Klamath River and providing access to crucial upper Klamath basin salmon spawning and rearing habitat now blocked by dams. Klamath dam removal was agreed to in the original Klamath Hydropower Settlement Agreement (KHSA) made by the company that owns and operates the dams (PacifiCorp), the states of California and Oregon, multiple state and federal agencies, Tribes and nongovernmental organizations (including commercial fishing organizations), in 2010.

Restoring the anadromous salmon runs of the Klamath is of vital importance to west coast ocean commercial as well as recreational salmon fisheries which the Council manages. The Klamath River once produced the third-most prolific salmon runs of all river systems in the lower 48 states. Klamath fish not only have inestimable value to the Klamath Basin Tribes, but these fish were also a major economic engine for northern California and much of the Oregon coast ocean salmon fisheries, prior to their severe declines over the past several decades.

Today, Klamath River salmon runs are at only a small fraction of their historical average abundance, and with the dams still in place they continue to decline. Two of these runs are listed under either the Federal or California Endangered Species Acts, or both. Even for the more abundant fall-run Chinook salmon, poor flows and degraded in-river water quality have led to a failure to meet minimum salmon population abundance targets in multiple years, triggering widespread "weak stock management" constraints to ocean salmon fisheries in several recent years, contributing to several recent declared Federal fishery disasters.

This upcoming 2022 ocean salmon season will again be highly constrained, by very weak Klamath-origin fall-run Chinook natural spawner returns, with ocean Chinook salmon harvests once again closed or severely restricted within the Klamath Management Zone (KMZ) areas of both northern California and southern Oregon, to the great economic detriment of many coastal, salmon-dependent communities.

The primary reason for these declines is the destructive presence of the four aging lower Klamath dams. These dams were built starting in 1918 without salmon fish passage – something that would be illegal under current law, but which was grandfathered into past FERC licenses. The dams create poor water quality and starve the lower river of spawning and rearing gravel beds. Additionally, they create warm-water reservoirs that nourish massive toxic algae blooms and encourage the spread of *myxosporean* parasite epizootics, which now infect a majority of juvenile

salmon in the river in many years[1]. The dams also block at least 420 stream-miles of once fully occupied salmon spawning and rearing stream habitat.

The FERC DEIS finds that removal of the Lower Klamath Project dams would increase salmon habitat availability, restore a more natural flow regime, restore more natural seasonal water temperature variation, better protect water quality, and reduce the likelihood of fish disease, all of which would have significant long-term benefits for fall-run Chinook salmon, spring-run Chinook salmon and Endangered Species Act (ESA)-listed Southern Oregon/Northern California Coast Coho Salmon (SONCC) coho salmon.

This benefit would also include adding at least an additional 76 stream-miles of SONCC coho habitat for this California State and Federal ESA-listed fish. All SONCC coho fisheries have been closed and their retention illegal in California since the mid-1990's (years before they were ESA-listed in 1997), but even the possibility of accidental catch of these sometime intermingling ESA-listed coho in fall-Chinook fisheries operates as a stringent limiting factor on Chinook harvests. The more these coho decline, the more these kinds of bycatch restrictions will limit other fisheries.

Since Klamath-origin salmon in the ocean are migratory, we believe that the benefits of Klamath dam removal and the restoration of Klamath-origin salmon will extend to all economic and cultural users of these fish and fisheries, including Tribes, recreational anglers, and members of fishing communities along the entire West Coast.

Klamath River salmon population declines can be remediated to a large degree if FERC approves the KRRC's Lower Klamath Project hydropower decommissioning and surrender application currently before it. The KHSA and subsequent applications to FERC for Klamath dam license transfer and decommissioning have all had the support of a broad set of stakeholders *and* the dam owner, and warrants support from FERC. The Council appreciates the opportunity to provide comments on the DEIS and asks that FERC take swift action to approve the KRRC plan for Hydropower License Surrender and Decommissioning for the Lower Klamath Project and Klamath Hydroelectric Project.

The Council acknowledges and commends the impressive partnership, coordination and determination of the many entities representing state, Federal, tribal, conservation and stakeholder interests that have worked tirelessly for decades toward the common goal of restoring the Klamath River to a healthy and productive state.

Attached to this letter please find additional specific comments on the DEIS, along with copies of previous Council letters to FERC and BOR supporting Klamath dam removal, for your reference and for the Administrative Record. Thank you for the opportunity to comment.

[1] See: Voss, A., True, K., & Foott, J. (2018). Myxosporean Parasite (*Ceratonova shasta* and *Parvicapsula minibicornis*) Prevalence of Infection in Klamath River Basin Juvenile Chinook Salmon, March - August 2018. U.S. Fish & Wildlife Service California – Nevada Fish Health Center, Anderson, CA. http://www.fws.gov/canvfhc/reports.html

Sincerely,

Marc Gorelnik
Chairman

GHS:xxx

Enclosure: Attachment A: Additional Specific Council Comments on the DEIS

PFMC letter to FERC re: Klamath Dam Removal (June 21, 2017)
PFMC letter to BOR re: Klamath Dam Removal (December 13, 2011)
PFMC letter to FERC re: Klamath Dam Removal (December 8, 2006)
PFMC letter to FERC re: Klamath Dam Removal (April 24, 2006)

Cc: Council Members
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Attachment A

The Council provides the following specific comments on the Klamath Dam Removal Project's Draft Environmental Impact Statement (DEIS) issued February 25, 2022.

Collecting Pre-drawdown Baseline Data

In the KRRC's Water Quality Management Plans as outlined in the DEIS, we note the importance of monitoring pre-removal conditions as baseline data from which to guide as well as determine the effectiveness of later salmon reintroduction efforts. Several water quality monitoring programs included in the Plan are intended to begin at least one year before the actual reservoir drawdown, which at this time is projected to begin in January 2024. [DEIS 2-12 and 2-13 (Table 2.1-3)].

Minimizing Sediment Impacts Through Drawdown Timing and Management

The Council notes the habitat protections and benefits of KRRC's reservoir drawdown and diversion plan, which is also intended to minimize the duration of salmon exposure to excessive suspended sediment concentrations ("SSCs") downstream by truncating the timing of the peak SSCs plume to the rainy season "window" of January 1 to March 15th (i.e., the period of highest river flows but also of least harm to migratory salmon). The reservoir drawdown process would be carefully managed over approximately 6 months at a target rate of two to five feet of elevation per day, as inflows allow, as an important measure to control and minimize erosion of sediments downstream. [DEIS 3-8; 3-37].

The Council supports the controlled drawdown measures that would minimize the duration of SSCs exposures and minimize impacts across multiple life-stages. While there are some predicted losses of salmon eggs in the mainstem from excess siltation (estimated at about 8 percent of all anticipated fall-run Chinook redds that season), many fall-run Chinook (which typically only come in to spawn in August through October), and nearly all SONCC Coho and spring-run Chinook, spawn in the tributaries where they will not be exposed to SSCs from drawdown except very briefly when in migration corridors. [DEIS 3-208]

Juvenile Salmonid Rescue and Relocation

The Council supports the proposed programs for juvenile salmonid relocation (especially SONCC Coho) into areas where they would be at lower risk, in accordance with advice of the Aquatic Technical Work Group, as necessary to mitigate the impacts of high SSCs. [DEIS 2-18; 3-205]

Side-Channel (Particularly Coho) Habitat Reconstruction

The Council supports the project's emphasis on restoring high quality fish habitat through restoration of tributary stream complexity by the placement of large woody debris in emergent side channels (which will help encourage the re-establishment of beaver populations to further improve fish habitat), along with stream stabilization mitigation construction "consistent with the *SONCC Coho Recovery Plan*." [DEIS 2-23 to 2-24]. The KRRC has also developed a *Tributary-Mainstem Connectivity Plan,* which includes monitoring fish access to newly unblocked tributary

habitat in eight different major tributary streams now above Iron Gate Dam, and KRRC would remove any blockages in consultation with the source agencies.

Bank Stabilization and Revegetation

The Council also supports the revegetation plan described in the KRRC's Reservoir Area Management Plan to stabilize the riverbanks and prevent future erosion of emergent reservoir lands [DEIS 2-25 to 2-31]. Stabilizing newly emerged riverbanks is an important pre-requisite to successful salmonid reintroduction.

Assuaging Sediment Load Fish Impact Concerns

The DEIS accurately explains that the normal bedload sediment carrying capacity for the Klamath River is very large, and that any additional sediment loads from dam removal would not cause sediment loads to exceed the normal range of river carrying capacity. This is an important consideration in planning for dam removal because the release of sediments stored behind the dams has always presented potential threats to incoming spawning salmon.

The DEIS also accurately explains that even with additional in-river sediment loads resulting from dam removal, the total sediment load would still remain *well within the normal range of variability* to which Klamath salmon are adapted. [DEIS 3-17; Figure 3.1-3 (3-28)]. The DEIS notes also that: "*Additional erosion and mobilization of fine sediments could occur while the riverbed in the reservoir stabilizes in the following year [after drawdown] but would likely be indistinguishable from the background sediment regime*." [DEIS 3-13]

The DEIS further acknowledges that the Klamath River from Iron Gate Dam downstream has been sediment-starved in the shadow of the dams since their construction, thus impoverishing the existing spawning and rearing gravel base for as much as 50 miles downriver [DEIS 3-15]. Restoring the natural geomorphology that recruits spawning gravel will thus be greatly beneficial to salmon spawning and rearing success after dam removal.

Improved Water Temperature Regimes for Fish

The DEIS provides extensive review on the effects of project dam removal on water temperatures for fish, and identifies many benefits that far outweigh any minor and temporary negative effects of dam removal on salmon [DEIS 3-88 to 3-93]. The Council strongly agrees with and fully supports the conclusions of the DEIS on the benefits to salmon and salmon habitat, specifically the following:

"[*T]he effects of the proposed action would be permanent, significant, and beneficial by shifting to a more natural temperature regime with earlier warming in the spring and cooling in the late summer and early fall in the hydroelectric reach and the Lower Klamath River down to the Trinity River confluence*." [DEIS 3-93]

"*Under the proposed action, dam removal would restore a more normative water temperature regime in the Lower Klamath River, as the large mass of the project's reservoirs would no longer delay water temperature warming in the spring and cooling in the fall*." [DEIS 3-199]

"*Overall, implementation of the proposed action would allow anadromous salmonids access to cool-water habitats available upstream of the Iron Gate Dam site, including groundwater-fed areas that are resistant to water temperature increases caused by climate change*." [DEIS 3-200]

"*Overall, when compared to existing conditions, the proposed action would improve the water temperature regime for anadromous fish spawning, rearing, and migrating in the mainstem Klamath River and provide access to additional cool-water refugia, providing a permanent, significant benefit to anadromous fish*." [DEIS 3-201]

The Council supports the recovery of the once numerous cold-water and spring-fed thermal refugia that previously existed in the Klamath River (many of them now engulfed by warm-water reservoirs) and believes this is important to assure future salmon survival in the Klamath River. This is especially relevant in the face of accelerating climate change-driven water temperature increases, all of which have been exacerbated by the warm-water, heat-sink reservoirs that currently exist.

Improved Nutrients, Dissolved Oxygen (DO) Levels and pH

The DEIS notes that there would likely be short-term disruptions in nutrient levels and chemical parameters during the year of drawdown, but that the long-term effects of dam removal would normalize these parameters and would eliminate seasonal toxic algae blooms and large fluctuations of DO and pH. [DEIS 3-98; 3-99 to 3-110]]

Reduction of Severe Juvenile Salmonid Losses Due to Ceratanova shasta Infections

One of the most urgent problems facing salmon in the Klamath is the increasing frequency and severity of fish disease outbreaks caused by the juvenile salmonid disease, *Ceratanova shasta (C. shasta)*. The Council believes that mitigating the recurring *C. shasta* infections and losses of out-migrating juvenile salmon is a major benefit of dam removal. The *C. shasta* intermediate host polychaete worm mats are largely destroyed in a natural river system where natural sediment dynamics disrupts their habitat and growth. [See discussion at DEIS 3-195 to 3-196; 3-202 to 3-204]

Impacts of Klamath Dam Removal on Essential Fish Habitat (EFH)

The DEIS discusses the impacts of the proposed action [dam removals] on Essential Fish Habitat (EFH) [DEIS 3-230 to 3-231] and concludes that the proposed action would have only a minor, temporary adverse effect on Pacific Coast groundfish EFH and coastal pelagic EFH from elevated SSCs, an effect which is likely to become diluted and dissipate rapidly once it reaches the ocean. Elevated SSCs and changes in other water quality parameters as noted above may also have some temporary adverse effect on in-stream salmon EFH. The NMFS EFH consultation for the project's Biological Opinion found, however, that despite short-term, adverse effects, the proposed action

would enhance the quality of EFH over the long term, and that the proposed action already contains adequate measures to avoid or minimize short-term, adverse effects. The Council supports these conclusions.