

Columbia Riverkeeper • Washington Environmental Council • Institute
for Fisheries Resources • Pacific Coast Federation of Fishermen's
Associations • Northwest Sportfishing Industry Association •
Save Our wild Salmon Coalition • Sierra Club

February 15, 2022

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Submitted Via Online Comment Portal & Email

RE: Comments on 401 Certifications for Chief Joseph and Grand Coulee dams.

Washington Department of Ecology:

Washington has an historic opportunity to restore fish passage and establish meaningful pollution limits at Chief Joseph and Grand Coulee dams. As it did recently for other dams on the Columbia and Lower Snake rivers, the Washington Department of Ecology (Ecology) should exercise its authority under Clean Water Act section 401 to hold the U.S. Army Corps of Engineers (Corps) and Bureau of Reclamation (Bureau) accountable for their profound and well-documented harm to water quality and fisheries.

I. Regulatory Background

Compelled by legal settlements with Columbia Riverkeeper, the Corps and Bureau applied to the U.S. Environmental Protection Agency (EPA) for NPDES permits for the Chief Joseph (Permit No. WA0026891) and Grand Coulee (Permit No. WA0026867) dams to regulate previously un-authorized pollution discharges. EPA requested 401 certifications for the permits from Ecology, as well as the Confederated Tribes of the Colville Indian Reservation, in January of 2022. Ecology requested public comment on what conditions to include in Ecology's 401 certifications.

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II. Clean Water Act Section 401

Congress enacted section 401 to allow states and tribes to protect their waterways from the impacts of federally permitted activities, like dams, that discharge into state waters.¹ Before any federal agency can issue a permit for any activity that involves a discharge into a navigable water, the federal agency must obtain a 401 certification. A 401 certification can contain any conditions necessary to ensure that the applicant for the federal permit will not violate the state's water quality standards or other laws, and those conditions must become part of the resulting federal license.

In the landmark case *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology* (*PUD No. 1*), Washington established that its section 401 certification authority reached all water quality impacts of federally permitted dams.² The U.S. Supreme Court agreed with Washington that, under section 401, the existence of any discharge at a federally permitted dam gives Washington the authority to address *all* of that dam's impacts to water quality and the designated uses of the waterway. As the Washington State Pollution Control Hearings Board recently reminded the Corps, the type of federal permit that triggers the 401 certification is irrelevant to the scope of Washington's 401 certification authority.³ Accordingly, Washington's 401 certifications may address all the impacts of Chief Joseph and Grand Coulee dams on Washington's water quality standards, even though the federal permit triggering the 401 certification is a NPDES permit and not a FERC license.

III. Specific Comments on 401 Certifications for the Dams

The decline of Columbia Basin salmon runs contributes to the starvation of Southern Resident orcas, is responsible for significant cultural and economic harm to Columbia Basin Tribes, and forced the curtailment of recreational fall salmon and steelhead fishing in the Columbia River and its tributaries in recent years.⁴ The system of dams on the mainstem Columbia River is largely, though not exclusively, responsible for failing salmon runs.

¹ *S.D. Warren Co. v. Maine Bd. Of Env'tl. Prot.*, 547 U.S. 370, 386 (2006).

² 511 U.S. 700, 707–08 (1994) (explaining that states may regulate the impacts of a project as a whole under Section 401, so long as a discharge is involved).

³ *U.S. Army Corp of Engineers v. Dept. of Ecology*, Summary Judgment Order, PCHB No. 20-043c, pp. 17–19 (Nov. 3, 2021) (holding that the scope of Ecology's 401 certification authority applied to all water quality impacts of federal dams on the Columbia and Lower Snake rivers, not just impacts stemming from the discharges authorized by NPDES permits).

⁴ See, e.g., WDFW, *News Release: Most of the Columbia River closing to salmon and steelhead fishing* (Sept. 11, 2018).

Washington should use its authority under the Clean Water Act to address the serious ecological impacts of Chief Joseph and Grand Coulee dams in order to protect and restore salmon, Pacific lamprey, sturgeon, Southern Resident orcas, and other species threatened with extinction.

As demonstrated by empirical evidence and EPA modeling, the presence and operation of dams warms the Columbia River to unsafe levels for salmon.⁵ Temperatures are also increasing over historical levels due to the impacts of climate change.⁶ During the summer, the rivers are frequently so warm that salmon are unable to migrate upriver to spawn.⁷ When river temperatures exceed 20°C for several days at a time—as happens with increasing frequency due to climate change⁸—salmon begin succumbing to stress and disease.⁹ According to the Fish Passage Center, “[U]nder a climate change scenario, the long-recognized and largely unaddressed problem of high water temperatures in the [Columbia and Snake rivers] becomes an ever-increasing threat to the survival of salmon.”¹⁰

Compelled by litigation brought by Columbia Riverkeeper, EPA recently released a Columbia and Snake River Temperature Total Maximum Daily Load (TMDL). The temperature TMDL is a pollution budget designed to protect salmon from hot water—caused largely by the presence of reservoirs. Notably, the TMDL indicates that Lake Roosevelt and Grand Coulee Dam can warm the Columbia River by 2.1 °C in September and over 4.4 °C in October.¹¹ As Ecology recently did in similar 401 certification processes for dams on the Lower Snake and Lower Columbia, Ecology should condition the Chief Joseph and Grand Coulee certifications to require the permitted to meet the load allocations in the TMDL as well as comply with the TMDL implementation plan that Ecology will formulate in the near future.

⁵ EPA Region 10, *RBM-10 Columbia River Temperature TMDL-Preliminary Technical Information Presentation to Columbia River Tribes* (August 14, 2018); RMJOC II, *Climate and hydrology datasets for RMJOC Long-term Planning Studies. Second Edition. Part I: Hydroclimate Projections and Analyses* (2018); Fish Passage Center, *Review of April 2016 Draft of NOAA Fisheries Report*, p. 1 (May 4, 2016).

⁶ U.S. Global Change Research Program, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment*, Volume II (2018).

⁷ Fish Passage Center, *Requested data summaries and actions regarding sockeye adult fish passage and water temperature issues in the Columbia and Snake rivers* (Oct. 28, 2015).

⁸ John Yearsley, *A semi-Lagrangian water temperature model for advection-dominated river systems*, 45 *Water Resources Research*, pp. 15–16 (2009).

⁹ National Marine Fisheries Service, *2015 Adult Sockeye Salmon Passage Report*, pp. 20–22 (2016).

¹⁰ Fish Passage Center, *Review of April 2016 Draft of NOAA Fisheries report 2015 Sockeye Salmon Passage Report*, p. 1 (May 4, 2016).

¹¹ EPA, *Columbia and Snake River Temperature Total Maximum Daily Load*, pp. 58, 59 (2021).

Changes to the structure and operation of these two dams and reservoirs could radically improve water quality and help set a native fish stocks in the Upper Columbia on a path to recovery. We recommend that Ecology consider the following draft conditions and comments to ensure compliance with numeric and narrative water quality standards, protect designated beneficial uses, and comply with the state’s antidegradation policy, and implement other appropriate requirements of state law. While we divide the following sections for the sake of clarity, technical solutions to the fish passage, temperature, flow, dissolved gas, and pollution problems at these dams are interrelated and cannot be developed in isolation.

A. Fish Passage

By extinguishing fish passage at Chief Joseph and Grand Coulee dams, the Corps and Bureau brought grave—and foreseeable—biological and social harm to the Pacific Northwest. **It is long past time to reverse this injustice, and Ecology now has authority to require the Corps and Bureau to do so.** Efforts and conversations to re-establish fish passage above these dams are already underway—thanks to leadership, funding, and significant efforts by upper Columbia Basin Tribes and the State of Washington. Unfortunately, federal agencies that have historically resisted fish reintroduction currently retain authority over critical decisions about if and how fish passage and reintroduction may proceed. Section 401 certification is an opportunity to change that dynamic.

To that end, we recommend that Ecology’s 401 certifications fortify the ongoing [Phased Approach](#) outlined in the Northwest Power and Conservation Council’s 2014 Fish and Wildlife Program by creating enforceable deadlines and, ultimately, giving Ecology the authority to determine whether and how fish passage and reintroduction efforts should proceed. The iterative study and approval process in the Phased Approach is similar in concept to the Water Quality Attainment Plan process for dams mandated by WAC 173-201A-510(5), so Ecology should be equipped to review and approve fish reintroduction and passage studies and plans. Fish passage for native species, including salmonids, lamprey, and sturgeon, is long overdue. Washington should take this opportunity to ensure that the federal agencies that purposefully extinguished fish migration in the upper Columbia Basin correct their mistakes in a timely and effective manner.

We also request, in the strongest terms, that Ecology discusses and attempts to coordinate its actions on these 401 certifications with all impacted Tribal nations and particularly the Confederated Tribes of the Colville Reservation (CTCR). The CTCR is a sovereign Tribal nation whose reservation boundaries encompass essentially half of the Columbia River within the areas

primarily affected by the 401 certifications, and CTCR’s designated uses for these segments of the Columbia are very similar to Ecology’s. Moreover, EPA has asked CTCR for 401 certifications for Chief Joseph and Grand Coulee dams, meaning that CTCR’s authority appears to be essentially coextensive with Ecology’s authority. The State of Washington, CTCR, and other upper Columbia River tribes all have significant and well-documented interests in restoring fish migration to the upper Columbia Basin.

Ecology’s authority to require fish passage as a 401 certification condition is clear. Section 401 empowers states and tribes to protect their water quality and fisheries resources from the effects of federally licensed dams.¹² Specifically, Ecology’s *Guidance Manual for Water Quality Certifications for Existing Hydropower Dams* explains that “[f]ish passage systems” are among the “water quality problems at hydropower projects” that can be addressed through section 401 certifications.¹³ The water quality standards for the segments of the Columbia River above and below Chief Joseph and Grand Coulee include “salmonid spawning, rearing, and migration” as designated uses.¹⁴ The lack of fish passage at these dams disrupts the designated use of salmon migration. Because fish passage is required to enforce the designated use component of Washington’s water quality standards, fish passage at Grand Coulee and Chief Joseph dams is a proper, and necessary, condition of 401 certification.¹⁵

Washington’s fish passage law, RCW 77.57.030, provides an additional justification for requiring the Corps and Bureau to construct fish passage. Clean Water Act section 401(d) empowers Ecology to include, as a condition of 401 certification, “any other appropriate requirement of State law.”¹⁶ As applicable here, Washington’s law requiring that any “dam . . .

¹² *S.D. Warren & Co. v. Maine Bd. of Env’tl Protection*, 547 U.S. 370, 375 (2006) (upholding a 401 certification for a hydroelectric dam that included a condition requiring “passage for various migratory fish and eels”).

¹³ Ecology, [*Water Quality Certifications for Existing Hydropower Dams, Guidance Manual*](#), p. 3 (2005).

¹⁴ WAC 173-201A-600; WAC 173-201A-602.

¹⁵ *Pud No. 1*, 511 U.S. 700, 712–13 (1994) (“ensuring compliance with § 303 [water quality standards including designated uses] is a proper function of the § 401 certification. Although § 303 is not one of the statutory provisions listed in § 401(d), the statute allows States to impose limitations to ensure compliance with § 301 of the Act. Section 301 in turn incorporates § 303 by reference. As a consequence, state water quality standards adopted pursuant to § 303 are among the ‘other limitations’ with which a State may ensure compliance through the § 401 certification process. This interpretation is consistent with EPA’s view of the statute. Moreover, limitations to assure compliance with state water quality standards are also permitted by § 401(d)’s reference to ‘any other appropriate requirement of State law.’”) (internal citations omitted).

¹⁶ 33 U.S.C. § 1341(d).

shall be provided with a durable and efficient fishway”¹⁷ is a condition of state law necessary to protect the designated use of salmonid migration. The fish passage requirement in Washington law is therefore an “appropriate requirement of State law”¹⁸ that may become a condition of a 401 Certification.¹⁹ Accordingly, Ecology has at least two sources of authority to require the Corps and Bureau to construct fish passage.

Further, Ecology has routinely conditioned 401 certifications for other dams to require, or regulate, fish passage facilities. For instance:

- The [401 certification for Youngs Creek Hydroelectric Project](#) requires that “Downstream passage of resident fish will be provided;”
- The [401 certification for the Calligan Creek Hydroelectric Project](#) requires that “SNOPUD install volitional passage for resident fish;”
- The [401 certification for the Henry M. Jackson Hydroelectric Project](#) requires the construction of volitional fish passage for salmon and steelhead at a diversion dam on the Sultan River;
- The [401 certification for the McNary North Shore Fishway](#) places conditions and restrictions on the construction of a fishway at McNary dam; and
- The 401 certifications for Wells, Rock Island, and Priest Rapids/Wanapum dams all incorporate by reference agreements requiring dam operators to operate and, where necessary, improve fish passage facilities.

Ecology should not depart from its practice of requiring fish passage in 401 certifications for dams that impair the movements of important fish populations.

Ecology’s Section 401 authority to require fish passage is not tempered or restricted by congressional authorizations for Chief Joseph and Grand Coulee dams. First, 401 certifications requiring fish passage would not conflict with the primary purposes of these dams because (despite their effect) the *purpose* of the dams was not to extinguish fish migration. Second, federal dam authorizations cannot preempt state 401 conditions because, as the State Pollution Control Hearings Board recently explained to the Corps, “preemption ‘does not apply in a context where a state is acting to fulfill its federally mandated role’ in the CWA’s comprehensive

¹⁷ RCW 77.57.030(1).

¹⁸ 33 U.S.C. § 1341(d).

¹⁹ *Pud No. 1*, 511 U.S. at 712–13 (1994) (“limitations to assure compliance with state water quality standards are also permitted by § 401(d)’s reference to ‘any other appropriate requirement of State law’”).

federal scheme.”²⁰ Finally, if a court (incorrectly) found that congressional authorizations for these dams conflict with a state’s 401 conditions, the court would resolve that conflict in favor of the more recently enacted law: the Clean Water Act of 1972.²¹

B. Temperature

We support continuing the approach Ecology has taken in the 401 certifications for other Columbia and Lower Snake dams to date, with changes to the language of some conditions to reflect EPA’s recent finalization of the Columbia and Lower Snake Temperature TMDL and Ecology’s intent to prepare a TMDL implementation plan. We recommend that Ecology consider the following draft conditions:

- The Permittee must implement temperature control strategies and meet the load allocations in the Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load, as well as meet the requirements of any temperature TMDL implementation plan completed in the future. EPA must include a re-opener clause in the final permit to incorporate TMDL implementation plan.
- The Permittee must consult with Ecology to develop and implement a water quality attainment plan (WQAP) per the conditions below:
 - The WQAP shall include all applicable requirements in WAC 173-201A-510(5), Compliance schedule for Dams, and must include a detailed strategy that achieves Washington’s water quality standards for temperature and associated designated uses, including on an ongoing basis in light of climate change.
 - Identify and describe in detail all measures, and combinations of measures, that could meet temperature standards, including, but not limited to, the following:
 - Seasonal reservoir drawdown to various pool levels;
 - Releasing stored water to enhance spring and early summer flows for fish migrations and habitat;
 - Constructing a variable-release penstock at Grand Coulee dam to release cooler water from depth in Lake Roosevelt.

²⁰ *U.S. Army Corp of Engineers v. Dep’t of Ecology*, Summary Judgment Order, PCHB No. 20-043c, p. 20 (Nov. 3, 2021) *citing* *Dep’t of Ecology v. Pub. Util. Dist. No. 1*, 121 Wash. 2d 179, 195 (1993).

²¹ *Cf. Tennessee Valley Authority v. Hill*, 437 U.S. 153, 172–74, 189–91 (1978) (explaining that congressional appropriations for federal dams do not create exemptions to otherwise-applicable environmental laws).

- The Permittee must provide the scope of the WQAP to Ecology for review one year after the permit effective date.
- The Permittee must provide the final WQAP to Ecology for approval within 2 years of the permit effective date.
- If Ecology determines, pursuant to WAC 173-201A-510(5)(c) and (d), that the WQAP submitted does not ensure compliance with all applicable water quality criteria or provide a reasonable assurance that the dam will not cause or contribute to a violation of the water quality standards, Ecology shall retain the right to revoke or reopen the certification.
- If Ecology determines that the WQAP submitted would ensure compliance with the temperature water quality criteria, TMDL load allocations, or TMDL implementation plan, the permittee must implement the measures in the WQAP as soon as possible, but in no case later than five years after Ecology makes the determination required by this section.

C. Total Dissolved Gas

We recommend that Ecology consider the following draft conditions to protect designated uses and meet narrative and numeric water quality standards.

- Except during involuntary spill events, dam operations—including spill to enhance fish passage—should not cause or contribute to exceedances of the applicable total dissolved gas (TDG) water quality criteria or any short-term modification thereto authorized under Washington law.
- During voluntary spill conditions during the spring and summer fish-spill seasons, the Permittee must cause the maximum volume of water to flow over the spillway of each dam that will not result in violations of Washington’s TDG water quality criteria for the Columbia River described in WAC 173-201A-200(1)(f)(ii)(B) or future short-term or permanent amendments thereto.
- During each involuntary spill event, permittees must sample a statistically meaningful number of juvenile salmonid migrants for gas bubble trauma and subsequently report to Ecology on the TDG levels associated with observed gas bubble trauma (if any).

D. Flow

Ecology should require the Bureau and the Corps to study ways to improve flow conditions to improve salmonid migration success. Ecology's *Guidance Manual for Water Quality Certifications for Existing Hydropower Dams* explains that "[c]hanges to water flow" is among the "water quality problems at hydropower projects" that can be addressed through section 401 certifications.²² In addition to the seminal 401 certification case *PUD No. 1* wherein the U.S. Supreme Court expressly approved Ecology's authority over flows, Ecology has routinely included flow conditions in 401 certifications for hydroelectric projects including Trinity, Sullivan Creek, Snoqualmie Falls, and Newhalem Creek. Because it is currently unclear what flow improvements are achievable (and at what cost to other resources such as resident fisheries and water quality in Lake Roosevelt), Ecology should require the Corps and Bureau to formulate Water Quality Attainment Plans²³ to study and address how the dams' alterations of the natural flow regime effect the designated uses of salmonid migration, spawning, and rearing.

E. Monitoring

We recommend that Ecology include conditions that require routine monitoring and evaluation of water quality parameters impacted by the presence and operation of federal dams. For example, Ecology should require that the federal agencies conduct, and submit to Ecology on a regular basis, water quality monitoring sufficient to document: (1) baseline environmental conditions; (2) compliance with the conditions of the certification; and (3) progress toward meeting water quality standards in the reservoirs.

Specifically with respect to PCBs discharged from the dams, Ecology should require the Corps and Bureau to do at least quarterly monitoring with Method 1668C, or a test method with sensitivity, that can detect down to at least Washington numeric criteria for PCBs. This information is critical to understanding the PCB loading that is caused by the dams, and the use of this testing methodology for information-gathering purposes was recently approved by the Washington Court of Appeals.²⁴

²² Ecology, [*Water Quality Certifications for Existing Hydropower Dams, Guidance Manual*](#), pp. 3, 31 (2005).

²³ WAC 173-201A-510(5).

²⁴ *Nw. Pulp & Paper Ass'n v. Dep't of Ecology*, No. 55164-1-II, 2021 Wash. App. LEXIS 2970, at *7-8 (Ct. App. Dec. 14, 2021).

F. Existing and Designated Use Studies

We recommend that Ecology include conditions to protect existing and designated uses. In particular, Ecology could include conditions, such as the examples provided below, to inform revised and future 401 certifications. Examples include:

- Within one year of permit issuance, the Permittee shall complete and submit to Ecology a report/study describing:
 - Existing and designated beneficial uses impacted by the dams;
 - Historic impacts of the project on the existing and designated beneficial uses;
 - Anticipated future impacts, in particular climate change of the dams on the existing and designated beneficial uses.

The report/study should examine uses that do not currently exist and uses that would be available without the project impacts.

G. General Conditions

We recommend that Ecology include general conditions similar to those Ecology includes 401 certifications on Federal Energy Regulatory Commission licenses. For example, Ecology should include a condition that states: “Notwithstanding any other language in the certification, any violation of water quality standards is prohibited.” Ecology should also state that conditions are subject to changes based on new state or federal laws that reflect better understanding of how to protect designated beneficial uses. In addition, Ecology should include a reopener provision to provide flexibility in the event Ecology needs to review the certifications based on new information to meet water quality standards, TMDLs, and other applicable requirements of state law.

H. Oil, Grease, and Cooling Water

EPA’s draft NPDES permits would regulate discharges including oil, grease, and cooling water. We recommend that Ecology include conditions to ensure that oil, grease, cooling water, and other discharges comply with state water quality standards, protect designated uses, and comply with the state’s antidegradation policy. Conditions similar to those in the 401 certification for the federal dams on the Lower Snake and Lower Columbia rivers that were recently upheld by the Washington Pollution Control Hearings Board would be sufficient in this regard.

V. Conclusion

Ecology and Washington led the nation in achieving water quality regulation at privately-owned FERC-licensed dams. Now, Washington has an unprecedented opportunity to improve water quality and fisheries by setting appropriate conditions on federally owned and operated dams—including the restoration of salmon to the Upper Columbia basin and its peoples. A cleaner, healthier, more connected Columbia River will restore endangered salmon, help feed starving Southern Resident orcas, and support all of the communities in and outside the Columbia River basin that depend on its clean water and healthy salmon.

In particular, we urge Ecology to exercise its section 401 authority broadly to address the dams' deleterious impacts to fish migration and water quality, including the designated uses that have, to date, gone unaddressed under alternative regulatory pathways. Such action is in line with Washington's leadership on climate change and salmon restoration, its stated commitment to justice for Tribes, and its history of advocating for state regulatory authority over water quality protection.

As our region becomes hotter, our rivers and the species and communities that depend on them are suffering the consequences. If Columbia River salmon, and the fisheries they support, are to recover and withstand climate change, Washington must exercise its authority to address the significant impacts from federal dams.

Sincerely,



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