

**American Rivers • Columbia Riverkeeper • Natural Resources Defense
Council • Northwest Sportfishing Industry Association •
Pacific Rivers Council • Save Our Wild Salmon •
Snake River Waterkeeper • Spokane Riverkeeper • Washington
Chapter Sierra Club • Washington Environmental Council**

February 19, 2019

Washington Department of Ecology
Water Quality Program
Eleanor Ott, PE
PO Box 47600
Olympia, WA 98504

Via Online Comment Portal & Email

**RE: Public Comments on 401 Certifications for Nine Federal Columbia
and Snake River Dams**

Washington Department of Ecology:

We write on behalf of American Rivers, Columbia Riverkeeper, the Natural Resources Defense Council, the Northwest Sportfishing Industry Association, Pacific Rivers Council, Save Our Wild Salmon, Snake River Waterkeeper, Spokane Riverkeeper, Washington Chapter Sierra Club, and the Washington Environmental Council with respect to Clean Water Act (CWA) 401 certifications for nine federal dams on the Columbia and Snake rivers. Washington state has an historic opportunity to protect water quality and fish in the Columbia and Snake rivers. The state can—for the first time ever—require that federal dams—Bonneville, The Dalles, John Day, McNary, Grand Coulee, on the Columbia River and Ice Harbor, Lower Monumental, Little Goose and Lower Granite on the Snake River—meet Washington’s water quality standards pursuant to CWA section 401. The nine federal dams have operated for decades without federal licenses or pollution discharge permits. The state now has a critical opportunity to address many well-documented impacts to water quality and designated uses caused and exacerbated by the dams.

Our organizations urge the Washington Department of Ecology (Ecology) to exercise its authority under section 401 to hold the federal dam operators

accountable for the significant and well-documented impacts of federal dams to water quality and designated uses in the Columbia and Snake rivers.

I. Background

The U.S. Environmental Protection Agency (EPA) requested Ecology section 401 certification on December 19, 2018,¹ for the following draft National Pollutant Discharge Elimination System (NPDES) permits:

- Ice Harbor Lock and Dam, NPDES Permit No. WA 0026816
- Lower Monumental Lock and Dam, NPDES Permit No. WA0026808
- Little Goose Lock and Dam, NPDES Permit No. WA0026786
- Lower Granite Lock and Dam, NPDES Permit No. WA0026794
- Bonneville Project, NPDES Permit No. WA 0026778
- The Dalles Lock and Dam, NPDES Permit No. WA 0026701
- John Day Project, NPDES Permit No. WA0026832
- McNary Lock and Dam, NPDES Permit No. WA 0026824
- Grand Coulee Dam, NPDES Permit No. WA0026867

The nine NPDES permits would authorize discharges from cooling water, equipment, floor drains, sumps, facility maintenance water, and other miscellaneous discharges. The U.S. Army Corps of Engineers (Corps) applied for NPDES permits for eight dams (the four lower Columbia and four lower Snake) in 2015 and the U.S. Bureau of Reclamation applied for a NPDES permit for Grand Coulee Dam in 2017.

On February 1, 2019, EPA abruptly withdrew the agency's request for 401 certifications. EPA provided no explanation for its decision. Notably, EPA's decision to withdraw the requests for 401 certification came one day after *The Seattle Times* ran a front-page story describing the temperature crisis on the Columbia and Snake rivers and Ecology's 401 certification authority for the nine federal dams.²

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¹ EPA initially requested preliminary certifications for federal dams in letters to Ecology dated September 19 and 20, 2018, and October 4, 2018. Ecology's current comment period requests comments on EPA's December 19, 2018, request.

² Mapes, Lynda, "Washington state to regulate federal dams on Columbia, Snake to cool hot water, aid salmon," *The Seattle Times* (Jan. 31, 2019); See also Mapes, Lynda, "EPA ices Washington state's effort to regulate hot water in Columbia, Snake rivers," *The Seattle Times* (Feb. 6, 2019).

II. Clean Water Act Section 401

Congress enacted section 401 to allow states to protect their waterways from the impacts of federally permitted activities, like dams, that discharge into state waters.³ 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 state 401 certification.² The state's 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, and those conditions "shall become" part of the resulting federal license.³

In the landmark case *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, Washington established that its section 401 certification authority reached *all* water quality impacts of federally permitted dams.⁴ The United States 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. This includes temperature in the reservoirs, spill over the dams, total dissolved gas, and salmon migration.

III. Specific Comments on 401 Certifications for the Federal Dams

The decline of Columbia Basin salmon runs contributes to the starvation of Southern Resident orcas and recently forced Washington to close the Columbia River to fall salmon fishing.⁵ Washington should use its authority under the Clean Water Act to do what the Trump administration and federal agencies cannot or will not do: protect and restore salmon, Pacific lamprey, sturgeon and other species threatened with extinction.

As demonstrated by empirical evidence and EPA modeling, the presence and operation of individual and multiple dams combines to warm the Columbia and Snake Rivers to unsafe levels for beneficial uses.⁶ Temperatures are also increasing over

³ *S.D. Warren Co. v. Maine Bd. Of Env'tl. Prot.*, 547 U.S. 370, 386 (2006).

⁴ 511 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). The fact that the § 401 certifications at issue were triggered by federal NPDES permits, rather than FERC licenses, has no bearing on the scope of Ecology's authority under § 401. *Cf. Or. Nat. Desert Ass'n v. Dombeck*, 172 F.3d 1092, 1097–98 (9th Cir. 1998) (explaining that § 401 certifications can impose far-reaching protections for water quality, provided a discharge triggers the state's § 401 authority).

⁵ WDFW, [News Release: Most of the Columbia River closing to salmon and steelhead fishing](#) (Sept. 11, 2018).

⁶ EPA Region 10. RBM-10 Columbia River Temperature TMDL-Preliminary Technical Information. Presentation to Columbia River Tribes. August 14, 2018. Spokane, WA; River Management Joint

historical levels due to the impacts of climate change.⁷ During the summer, the rivers are frequently so warm that salmon are unable to migrate upriver to spawn.⁸ When river temperatures exceed 20°C for several days at a time—as happens with increasing frequency due to climate change⁹—salmon have difficulty migrating upstream and begin succumbing to stress and disease.¹⁰ 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.”¹¹

In the early 2000s, EPA completed a draft Columbia and Snake River Temperature Total Maximum Daily Load (TMDL). The temperature TMDL is a pollution budget designed to protect salmon from hot water in the Columbia and Snake rivers. EPA concluded, “The majority of the temperature increases (as much as 6 °C) are caused by the larger dams[.]”¹²

Despite decades of litigation, federal agencies have not complied with the Endangered Species Act, CWA, or recovered the Columbia Basin’s once-mighty salmon runs.¹³ EPA has not issued a final temperature TMDL. Notably, EPA’s own modeling analyses clearly indicate the effects of the dams and climate change on elevated temperatures that violate water quality standards. Nonprofit organizations challenged the EPA’s failure to finalize the temperature TMDL and, in October 2018, Hon. Ricardo Martinez, Chief District Judge for the Western District of Washington, ruled in plaintiffs favor. The court ordered EPA to issue a TMDL within 60 days. EPA appealed the district court’s order to complete the temperature TMDL. Even if the court of appeals upholds

Operating Committee (RMJOC II). 2018. Climate and hydrology datasets for RMJOC Long-term Planning Studies. Second Edition. Part I: Hydroclimate Projections and Analyses. Bonneville Power Administration, U.S. Army Corps of Engineers and U.S. Bureau of Reclamation. Portland, Oregon; Fish Passage Center, [Review of April 2016 Draft of NOAA Fisheries Report](#), p. 1 (May 4, 2016).

⁷ USGCRP, 2018: *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II* [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. DOI: 10.7930/NCA4.2018.

⁸ 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).

⁹ John Yearsley, [A semi-Lagrangian water temperature model for advection-dominated river systems](#), 45 *Water Resources Research*, pp. 15–16 (2009).

¹⁰ National Marine Fisheries Service, [2015 Adult Sockeye Salmon Passage Report](#), pp. 20–22 (2016).

¹¹ Fish Passage Center, [Review of April 2016 Draft of NOAA Fisheries report 2015 Sockeye Salmon Passage Report](#), p. 1 (May 4, 2016).

¹² U.S. EPA, [Preliminary Draft Columbia/Snake Temperature TMDL](#), p. 39 (July 2003).

¹³ See *NWF v. NMFS*, 184 F. Supp. 3d 861 (D. Or. 2016); *Columbia Riverkeeper v. Pruitt*, No. 17-00289 (W.D. Wash. 2018).

the district court's order (and EPA does not appeal that decision), the earliest Washington can expect EPA will issue the TMDL is in about two years. Washington listed the Columbia River as impaired by high temperatures in 1994, and Washington and Oregon asked EPA for a temperature TMDL over 20 years ago.¹⁴

The state should not wait for EPA to act because that action is years away and highly uncertain. Section 401 provides Washington the critical legal tool to require the federal dam operators to address temperature impacts from federal dams now—a tool Washington has already used for federally licensed private dams on the river. In fact, even after EPA issues a final TMDL, the provisions in that TMDL are not self-executing. The state will need to incorporate those requirements into 401 certifications to turn them into binding measures.¹⁵

EPA may take the position that Washington's review and CWA certification is constrained to oil pollution, cooling water, and other pollutants discharged through point sources at the dams. Under section 401, Washington is not limited to regulating pollution discharged by point sources. The state must ensure that the applicant's activities—here, the dams and reservoirs—meet Washington water quality standards. Washington regularly issues comprehensive 401 certifications for other federally permitted dams in Washington—including the Columbia River dams operated by public utility districts. We groups urge Ecology to expediently pursue comprehensive 401 certifications for the nine federal dams.

Specifically, many large- and small-scale modifications to the structure and operation of the dams and reservoirs could improve water quality and salmon and native fish survival. Ecology should use the 401 certification process to require the federal agencies to model and identify mitigation actions including modifying adult and juvenile fishways, selectively drawing down certain reservoirs, increasing spring and summer flows, dam removal, and other measures that could reduce temperature and enhance fish survival. Ecology's [section 401 certifications for other, non-federal dams on the Columbia River](#) address similar conditions to promote achievement of temperature standards for beneficial uses

¹⁴ *NWF v. U.S. Army Corps of Eng'rs*, 132 F. Supp. 2d 876 (D. Or. 2001).

¹⁵ U.S. EPA, [Preliminary Draft Columbia/Snake Temperature TMDL](#), p. 49 (explaining that hydroelectric dams are considered “nonpoint sources” under the Clean Water Act and therefore the TMDL assigns load allocations that are not implemented through NPDES permits); *see also id.* at viii (explaining “TMDLs are not self-implementing. Nor do they impose any binding legal requirements under federal law.”); *id.* at vii (stating “the TMDL is implemented through the NPDES Permit Program, State Water Quality Standards Certification Program, States Non-point Source Management Program and other appropriate mechanisms.”).

We recommend that Ecology consider the following draft conditions and comments to ensure compliance with numeric and narrative water quality standards, protect designated uses, and comply with the state's antidegradation policy.

A. Temperature

We recommend that Ecology consider the following draft conditions to address designated use protection and compliance with narrative and numeric water quality standards.

- When EPA issues a final temperature TMDL for the Columbia River, the load allocations and any implementation plans of that TMDL shall become conditions of the certification.
- Pursuant to Washington Administrative Code (WAC) 173-201A-510(5), the U.S. Army Corps and U.S. Bureau of Reclamation (collectively "the federal agencies") must, within two years, develop and submit to Ecology a water quality attainment plan (WQAP) that provides a detailed strategy for achieving compliance with temperature standards in the face of climate change in the reservoir, fish passage facilities, and tailwaters, including:
 - 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, including drawdown to the spillway crest and to the maximum extent achievable under the dam's current configuration;
 - Releasing water stored pursuant to the US-Canada Columbia River Treaty to enhance spring and early summer flows for fish migrations and habitat.
 - Altering the dam structure and fishways to allow seasonal reservoir drawdowns below the levels achievable under the dam's current configuration;
 - Increasing attraction flows to fishways to reduce adult migration times over dams.
 - Dam removal;
 - Altering fish ladders and intakes to achieve water quality standards within the fish ladders and to reduce or eliminate temperature differences between the tailwater and the water exiting the fish ladders;

- Pumping cool water into fish ladders from the coldest part of the reservoir, the tailwater, or artificially cooling the water that feeds the fish ladders.
 - Model and engage in other technical work to define the expected impacts of those identified measures, and combinations of measures, on water temperatures in the reservoir, forebays and tailraces fish ladders, and downstream free flowing river sections for individual dams and the system as a whole.
 - Seek operational and structural measures to selectively access cool water in Lake Roosevelt for downstream releases, including changes to the location of pumping facilities from Lake Roosevelt to Banks Lake.
- If Ecology determines, pursuant to WAC 173-201A-510(5)(c) and (d), that the WQAP submitted by the federal agencies 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 by the federal agencies would ensure compliance with the temperature water quality criteria the federal dam operators 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.

B. Total Dissolved Gas

We recommend that Ecology consider the following draft conditions to address designated use protection and compliance with 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 or Oregon law.
- During the fish-spill season, the federal agencies must cause, at least, the maximum volume of water to flow over the spillways that will not result in violations of applicable TDG water quality criteria, or any short-term modification thereto authorized under Washington or Oregon law.

- The federal agencies must conduct field monitoring for gas bubble trauma in salmonids and other forms of vertebrate and invertebrate aquatic life throughout the fish spill season, including when TDG levels exceed the water quality criteria during flood or involuntary spill events. The federal agencies must report the results of such field monitoring to Ecology once a year. *NOTE: If Ecology or the Oregon Department of Environmental Quality (DEQ) amend or temporarily change TDG WQS, any associated monitoring requirements should complement rather than duplicate the monitoring requirements in the 401 Certification.*

C. 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 and fishways.

D. Existing and Designated Use Studies

We recommend that Ecology include conditions to address existing and designated use protection. 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 federal agencies shall complete and submit to Ecology within one year a report/study containing:
 - 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 not only uses that do not currently exist, but also uses that would be available without the project impacts.

- The federal agencies shall coordinate with Columbia River tribes regarding anadromous fish passage at Grand Coulee Dam and evaluate alternative fish passage scenarios.

E. General Conditions

We recommend that Ecology include general conditions similar to those the agency includes in 401 certifications on Federal Energy Regulatory Commission (FERC) 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 beneficial uses. In addition, Ecology should include reopener language to provide flexibility in the event the agency needs to review the certifications based on new information to meet water quality standards, TMDLs, and other applicable requirements of state law.

F. Oil, Grease, and Cooling Water

EPA’s draft NPDES permits regulate point source discharges, including oil, grease, and cooling water.¹⁶ We recommend that Ecology include conditions to ensure that oil, grease, cooling water, and other point source discharges comply with state water quality standards, protect designated uses, and comply with the state’s antidegradation policy. As part of Ecology’s evaluation, the agency should evaluate EPA’s proposed approach to requiring that the dams transition to environmentally acceptable lubricants (EALs). In the draft permits, EPA proposes to require the use of EALs for all equipment with oil to water grease interfaces, unless technically infeasible. Ecology should evaluate conditions to ensure the state retains authority to review and approve the federal agencies’ determinations on whether EALs are “technically infeasible.”

G. Other Potential Conditions

We also recommend that Ecology evaluate potential conditions to address:

- Flow for habitat and recreation;
- pH, dissolved oxygen, turbidity, and toxics; and
- Pacific Lamprey passage

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¹⁶ To date, EPA has not posted the draft permits for public review, which undermines the public’s ability to comment on 401 certification for the draft permits.

IV. Conclusion

Ecology and Washington state led the nation in achieving water quality regulation of FERC-licensed dams. Now there is an unprecedented opportunity to require the federal dam operators to do their part to help improve water quality in the Columbia Basin by setting appropriate conditions for federal dams. A cleaner Columbia and Snake river will protect endangered salmon, help feed the starving Southern Resident orcas, and support all the communities in and outside the Basin that depend on a clean water and healthy salmon.

In particular, we urge Ecology to exercise its section 401 authority broadly to address the dams' significant impacts to water quality and designated uses that have, to date, gone unaddressed under alternative regulatory pathways. Ecology should require the federal agencies to address oil, temperature, and other pollution caused by the nine dams. Taking this action is in line with Washington's leadership on climate change.

As our region becomes hotter, our rivers and the species and communities that depend on them are suffering the consequences. If Washington is going to achieve a resilient Columbia Basin that can withstand climate change, the state must exercise its authority to address the significant impacts from federal dams.

Sincerely,

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Enc.