May 4, 2020

Office of Water and Watersheds
U.S. EPA Region 10
Attn: Jennifer Wu
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Seattle, WA 98101

Submitted via email to wu.jennifer@epa.gov

RE: Public Comment on EPA's Draft NPDES Permits for Eight Federal Columbia and Snake River Dams

Dear Ms. Wu:

Columbia Riverkeeper and Snake River Waterkeeper (collectively Commenters) submit the following comments on the draft NPDES permits for the following hydroelectric facilities located on the lower Columbia and lower Snake rivers (hereafter collectively Draft Permits):

- Bonneville Project (WA0026778);
- The Dalles Lock and Dam (WA0026701);
- John Day Project (WA0026832);
- McNary Lock and Dam (WA0026824);
- Ice Harbor Lock and Dam (WA0026816);
- Lower Monumental Lock and Dam (WA0026808);
- Little Goose Lock and Dam (WA0026786); and
- Lower Granite Lock and Dam (WA0026794).[1]

Commenters represent thousands of people who rely on clean water and healthy aquatic ecosystems in Washington, Oregon, and elsewhere in the Columbia River Basin. Commenters support the U.S. Environmental Protection Agency's (EPA) long-awaited decision to issue the

[1] Commenters refer to the hydroelectric facilities as "the Dams."

Draft Permits. Hydroelectric facilities discharge pollution via point sources to waters of the United States and, in turn, EPA must regulate pollution from hydroelectric facilities pursuant to Clean Water Act (CWA) Section 402 and its implementing regulations. Academic, government, and industry studies, as well as oil spills reported to the National Response Center and state agencies, demonstrate that hydroelectric facilities, including those regulated under the Draft Permits, discharge pollutants through point sources. Yet, to date, EPA and most states have failed to regulate hydroelectric facilities under Section 402. This must change.

Commenters support EPA's decision to regulate hydroelectric facilities under Section 402, which should result in significant and important reductions in toxic and conventional pollutants. Commenters offer the following comments to ensure the eight NPDES permits comply with the CWA and protect high-quality waters and healthy aquatic ecosystems.

BACKGROUND

A. Legal Background.

Washington's rivers, and the use of rivers by people, fish, and wildlife, are protected by both federal and state law. In 1972, Congress passed the CWA to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[2] The CWA is the cornerstone of surface water quality protection in the United States. In the forty years since its passage, the CWA has dramatically increased the number of waterways that are once again safe for fishing and swimming. Despite the great progress in reducing water pollution, many of the nation's waters still do not meet the water quality goals. In fact, the vast majority of rivers and streams in Washington fail to meet basic state water quality standards for pollutants such as toxics and temperature.[3] These standards are designed to protect designated uses, including aquatic life, fishing, swimming, and drinking water.

The NPDES permitting scheme is the primary means by which discharges of pollutants are controlled. At a minimum, NPDES permits must include technology-based effluent limitations, any more-stringent limitations necessary to meet water quality standards, and monitoring and reporting requirements.[4] EPA and the state of Washington have issued hundreds of permits for pollution discharges into the Columbia and Snake rivers. These include permits that regulate the discharge of toxic pollution, hot water, bacteria, and other pollutants. According to EPA, improvements to water quality are directly linked to the implementation of the NPDES

[2] 33 U.S.C. § 1251(a).
[3] *See* State of Washington 303(d) List, available at https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d; State of Oregon 303(d) List, available at https://www.oregon.gov/deq/wq/Pages/WQ-Assessment.aspx.
[4] *See* 33 U.S.C. §§ 1311, 1342, 1318.

program and the associated control of pollutants discharged from both municipal and industrial point sources.[5]

B. The Heavy Toll of Pollution in the Columbia River Basin.

The Columbia and Snake rivers support rich fishing traditions, supply water to communities and agriculture, provide recreational opportunities and navigation, and power hydroelectric dams. The rivers are also severely degraded by pollution. Toxic pollution threatens the health of people who eat local fish and jeopardizes the public's right to eat fish caught locally. Rising water temperatures also threaten the health of salmon and other aquatic life that rely on cool water for survival.

EPA designated the Columbia River Basin a Critical Large Aquatic Ecosystem in 2006 because toxic contamination and other pollution is so severe. In 2009, EPA released an in-depth report on toxic pollution in the Columbia, the *Columbia River Basin: State of River Report for Toxics*.[6] EPA's report concluded that harmful pollutants are moving up the food chain, impacting humans, fish, and wildlife. As the report explains, "[i]n 1992, an EPA national survey of contaminants in fish in the United States alerted EPA and others to a potential health threat to tribal and other people who eat fish from the Columbia River Basin." This survey prompted further study on the contaminated fish and the potential impacts on tribal members.

In particular, EPA funded four Columbia River tribes, through the Columbia River Intertribal Fish Commission (CRITFC), to study contaminant levels in fish caught at traditional fishing sites.[7] The study demonstrated the presence of 92 toxic chemicals in fish consumed by tribal members, resulting in a 50-fold increase in cancer risk among tribal members whose diets rely on river-caught fish. Contaminants found in these fish include PCBs, dioxins, furans, arsenic, mercury, and DDE, a toxic breakdown product of DDT.[8]

The CRITFC study is not alone in demonstrating the serious problem of toxic contamination. From 1989 to 1995, the Lower Columbia River Bi-State Water Quality Program (Bi-State Program) generated substantial evidence demonstrating that water and sediment in the

[5] U.S. EPA, *Water Permitting 101* at 11, http://www.epa.gov/npdes/pubs/101pape.pdf.
[6] U.S. EPA, *Columbia River Basin State of River Report for Toxics* (hereafter *State of the River Report*) (January 2009) (https://www.epa.gov/columbiariver/2009-state-river-report-toxics).
[7] *Id*. at 3.
[8] *Id.* at 19.

Lower Columbia River and its tributaries have levels of toxic contaminants that are harmful to fish and wildlife.[9] The Bi-State Program concluded that:

- Dioxins and furans, metals, PCBs, PAHs, and pesticides impair the water sediment, and fish and wildlife;
- Arsenic, a human carcinogen, exceeded both EPA ambient water criteria for protection of human health and the EPA human health advisories for drinking water;
- Beneficial uses such as fishing, shellfishing, wildlife, and water sports are impaired;
- Many toxic contaminants are moving up the food chain and accumulating in the bodies of animals and humans that eat fish;
- People who eat fish from the lower Columbia over a long period of time are exposed to health risks from arsenic, PCBs, dioxins and furans, and DDT and its breakdown products.[10]

Other studies have confirmed and added to the overwhelming scientific evidence on toxic contamination in the Columbia River Basin.[11]

Pollution discharges from the Dams contribute to the pollution crisis on the Columbia River. According to the National Oceanic & Atmospheric Administration (NOAA):

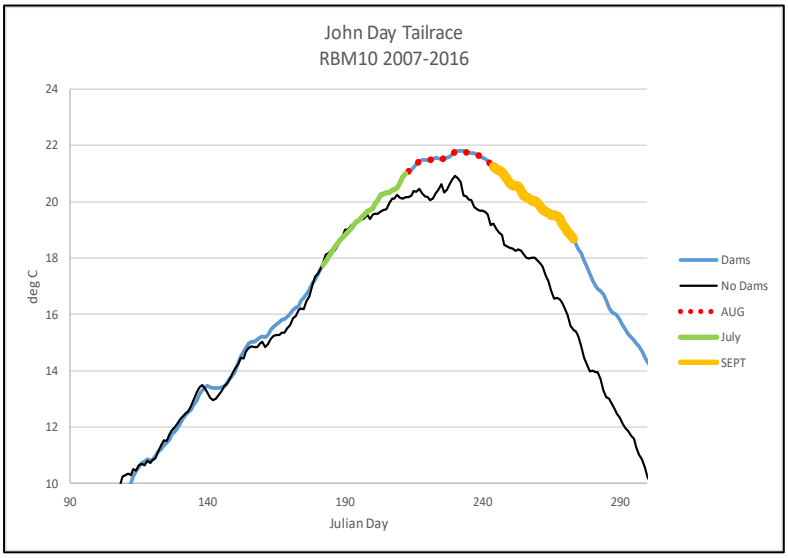
> Spilled oil can harm living things because its chemical constituents are poisonous. This can affect organisms both from internal exposure to oil through ingestion or inhalation and from external exposure through skin and eye irritation. Oil can also smother some small species of fish or invertebrates and coat feathers and fur, reducing birds' and mammals' ability to maintain their body temperatures.[12]

The impacts of oil pollution are sobering. Yet the Corps has discharged oil and other pollution from the Dams without the NPDES permit authorization required by the CWA for

[9] Lower Columbia River Estuary Partnership. 2007. *Lower Columbia River and Estuary Ecosystem Monitoring: Water Quality and Salmon Sampling Report* at 1.
[10] *Id.* at 5–6.
[11] *Id.* at 6 (citing studies by USGS, the U.S. Army Corps of Engineers, DEQ, and others); *see generally* U.S. EPA, *State of the River Report*.
[12] NOAA, Office of Response and Restoration, *How Oil Effects Fish and Wildlife in Marine Environments,* http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/how-oil-harms-animals-and-plants-marine-environments.html.

decades. In turn, the Corps has failed to monitor and report pollution in a manner that enables the public to fully understand the extent and severity of the problem.

The Dams also add heat—through cooling water and reservoir heating—to a river system recognized by EPA as too warm to support designated uses, including salmon habitat. Salmon need cool water to survive. Nearly two decades ago, federal scientists declared the Columbia River too hot for healthy salmon runs. Hot water pollution from point sources, including the Dams, contributes to elevated water temperatures in the Columbia River. Recent modeling by EPA (below) shows that the summer water temperatures at John Day dam are significantly warmer because of the John Day pool and upstream reservoirs.[13]



EPA modeling also shows that John Day and McNary dams together raise the temperature of the Columbia an average of 0.5 and 0.6 degrees C in August and September, respectively.[14] Similarly, the four Lower Snake River dams impound reservoirs that add heat to the river, as illustrated in the figure below.[15]

[13] EPA, *Columbia River Temperature TMDL: State and Tribal Meetings PowerPoint Presentation*, Slide 33 (January 2020).
[14] *See* EPA, *Draft Assessment of Impacts to Columbia and Snake River Temperatures using the RBM10 Model*, pp. 28–29 (December 19, 2018).
[15] Columbia Riverkeeper, *White Paper: Computer modeling shows that Lower Snake River dams caused dangerously hot water for salmon in 2015*, p. 4 (2017).

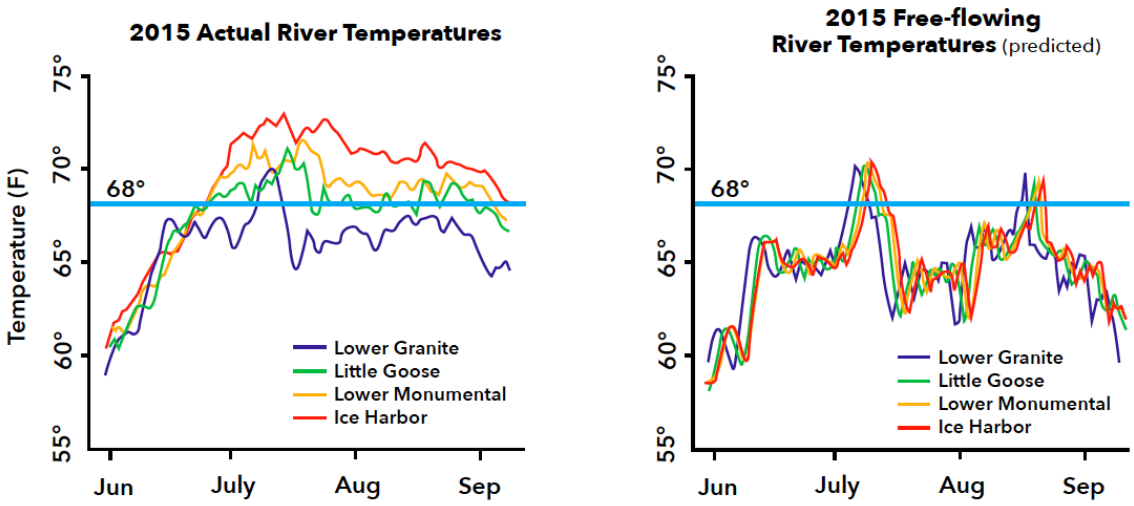


Figure 1. Comparison of 2015 summer water temperatures between the actual, dammed Lower Snake River (left) and a modeled, free-flowing Lower Snake River (right).

The devastating impact of hot water pollution on the Columbia River is not hypothetical. Northwest rivers had unreasonably high temperatures in summer 2015, warm enough to kill more than 277,000 adult sockeye salmon (about 55 percent of the total run, including 96% of endangered Snake River sockeye) returning to the Columbia and Snake rivers.[16] The Fish Passage Center, which provides technical assistance and information to fish and wildlife agencies, concluded that higher water temperatures in the Columbia and Snake rivers are largely due the Dams.[17] Unfortunately, subsequent years have shown that adult Snake River sockeye frequently die in significant numbers in the hydrosystem, largely due to warm water conditions created or exacerbated by the Dams. In 2017, the National Marine Fisheries Service (NMFS) estimated that passage through the hydrosystem killed 43% of returning adult endangered Snake River sockeye.[18] In 2018, NMFS estimated that 15% of adult Snake River sockeye died between the Bonneville and McNary dams;[19] and ladder counts suggested that 28% of the remaining fish died in the Lower Snake.[20] In 2019, ladder counts suggested 75% mortality for sockeye in the

[16] *Columbia Riverkeeper v. Pruitt*, Case No. 2:17-cv-00289-RSM, Defendants' Answer, ¶ 3 (May 15, 2017) (EPA admits that the 2015 fish kill was "attributable primarily to warm water.").
[17] Fish Passage Center, *Memorandum on Water Temperature Issues in The Columbia and Snake Rivers* (Oct. 28, 2015), http://www.fpc.org/documents/memos/159-15.pdf.
[18] NMFS, *"2019 adult survival estimates for distribution" spreadsheet; "SR Sockeye" tab* (2019).
[19] *Id.*
[20] Fish Passage Center, *Adult Returns for Columbia & Snake River Dams Webpage* (queried April 5, 2020).

Lower Snake: 320 sockeye were observed at Ice Harbor Dam ladder, but only 81 were observed in the ladder at Lower Granite Dam.[21] Adult Snake River steelhead and Chinook also suffer significant mortality from the hydrosystem. After eliminating other sources of mortality, the arduous summer and fall migrations through the hydrosystem appear to be killing 10–20%[22] of all pre-spawn adult fish from these populations, which are not meeting recovery objectives mandated by the Endangered Species Act. Moreover, these estimates of out-right fish mortality in hydrosystem do not capture the effects of chronic or cumulative thermal stress that may contribute to additional mortality or reproductive failure upstream. Clearly, the Columbia and Snake rivers are already too warm to support healthy native fish populations.

C. Pollutant Discharges from the Dams.

Section 301(a) of the CWA prohibits discharges of oils, greases, lubricants, cooling water, and other pollutants to the Columbia and Snake rivers from the Dams without NPDES permit authorization.[23] Without NPDES permits, the Corps has failed to monitor, report, and reduce pollution discharges pursuant to the CWA and state and federal implementing rules for decades.

The Dams discharge oils, greases, lubricants, and other pollutants collected from various sources through sumps, including powerhouse drainage sumps, unwatering sumps, spillway sumps, and other systems. The Dams also discharge cooling water, and the associated heat, used to cool a variety of components and materials, including turbines, generators, transformers, and lubricating oils.

The Dams utilize Kaplan turbines, which discharge oil and grease to the Columbia and Snake rivers.[24] Kaplan turbines have variable pitch blades that can be adjusted to increase

[21] *Id.*
[22] U.S. Army Corps of Engineers, *Columbia River System Operations Draft Environmental Impact Statement*, p. 3-302 (2020).
[23] 33 U.S.C. § 1311(a).
[24] *See e.g.*, Bonneville Power Administration, *Technology Innovation Project, TIP 405: Kaplan Turbines Oil Leak Elimination* (2019), https://www.bpa.gov/Doing%20Business/TechnologyInnovation/TIPProjectBriefs/2019-HY-TIP%20405-final.pdf; BBA, *Addressing Pressure Loss and Oil Leakage in Kaplan Turbines and the Impact on Efficiency* (Dec. 12, 2018), https://www.bba.ca/publication/addressing-pressure-loss-issues-for-the-kaplan-turbine-runner-blade-and-impact-on-efficiency/.

efficiency. The shaft and hubs of these turbines are filled with oil or another lubricant. This oil or lubricant leaks to surface waters from certain locations, including the turbine blade packing/seals, especially when the turbines are not properly maintained and/or operationally controlled. Available information indicates that the Corps has not properly maintained and/or operationally controlled the Kaplan turbines on the Dams in a manner to prevent or minimize discharges.

Wicket gates control the amount of water flowing through the turbines at the Dam. The Wicket gate bearings are lubricated with grease or another lubricant. This grease or lubricant is continuously fed into the bearings and discharged directly into surface waters.

Oil releases from points sources at the Dams are routine. As EPA is aware, the Corps has reported a number of large oil releases from the Dams. Notably, in 2012, the Corps reported discharging over 1,500 gallons of PCB-laden transformer oil at the Ice Harbor Dam on the Snake River. Corps officials first spotted and reported sporadic sheens in December 2012, but an investigation concluded that the leaks had been occurring since June 2012 based on transfomer oil inventory records.[25] Commenters provide the following examples of several oil discharge events from January 2017 to March 2020 to illustrate the need for monitoring, reporting, and pollution controls at the Dams:

- In 2017 the Corps reported that a series of oil spills at Lower Monumental released over 1,600 gallons of oil into the Snake River.

- The Corps reported that approximately 100 gallons of turbine oil from the Lower Monumental Dam spilled into the Snake River during a three-week period from December 14, 2017, to January 4, 2018.

- In April 2018 the Corps reported the McNary Dam discharged 162 gallons of hydraulic oil from a turbine generator head gate.

- The Corps could not account for approximately 192 gallons of turbine oil at The Dalles Dam; the agency presumed the oil discharged into the Columbia from November 29 to December 18, 2018.

[25] Scott Learn. *Slow leak at Ice Harbor dam spill 1,500 gallons of transformer oil into Snake River*, Oregonian (Jan. 27, 2012), https://www.oregonlive.com/environment/2012/01/slow_transformer_leaks_at_ice.html.

- The Corps also reported that approximately 474 gallons of turbine oil was unaccounted at The Dalles Dam and discharged to the river from February 7 to March 22, 2018.

- On March 15, 2020, the Corps reported that approximately 500 gallons of hydraulic oil was discharged to the Fish Unit 2 gate slot from the hydraulic gate system. The unit was shut down and isolated.

This non-exhaustive list of oil discharges at the Dams highlights the need for NPDES permits and the critical role they will play in reducing pollution in the Columbia and Snake rivers.

D. EPA's Arbitrary Decision to Delay Issuance of the Draft Permits.

For decades, EPA has failed to implement and enforce the CWA and require the Corps obtain NPDES permits. In 2009, following a high-profile oil spill at The Dalles Lock and Dam (The Dalles Dam), the Corps submitted an NPDES permit application for The Dalles Dam. Over eleven years later, EPA has not issued an NPDES permit for The Dalles Dam or any other federal dam on the Columbia or Snake river.

In 2013, Riverkeeper sued the Corps for discharging oil and other pollution from eight Columbia and Snake river dams in violation of the federal CWA. The lawsuit addressed oil pollution at the following dams: Bonneville, The Dalles, McNary, Ice Harbor, Lower Monumental, Little Goose, and Lower Granite. In 2014, Columbia Riverkeeper and the Corps reached a legal settlement whereby the Corps agreed to apply for NPDES permits. The settlement included three key components.

- The Corps agreed to investigate switching from conventional oils to Environmentally Acceptable Lubricants (EALs) at the Dams and, if technically feasible, use EALs. Compared to conventional lubricants, EALs are less harmful to fish and other aquatic life. EALs are less toxic, biodegrade, and do not bioaccumulate in aquatic life. The settlement agreement called for the Corps to complete this assessment within twelve months of the agreement, *i.e.*, by August 2015, and "to switch to using one or more EALs as a lubricant on the in-water equipment where the Corps has determine[d] doing so is technically feasible" within eighteen months of the Settlement Agreement, *i.e.*, by February 2016.

- The Corps agreed to apply for pollution discharge permits from EPA and the Oregon Department of Environmental Quality (DEQ).

- The Corps agreed to account for and reduce oil pollution from the Dams while state and federal agencies developed pollution permits. Oil Accountability Plans track the addition, and then the removal, of all oil and grease to the Dams and account for the difference.

In 2018, EPA developed draft NPDES permits for nine federal dams.[26] On December 19, 2018, EPA requested CWA Section 401 certification for nine federal dams from the Washington Department of Ecology. EPA also requested CWA 401(a)(2) certification from DEQ. The nine draft NPDES permits would authorize discharges from cooling water, equipment, floor drains, sumps, facility maintenance water, and other miscellaneous discharges.[27]

On February 1, 2019, EPA abruptly withdrew its 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.[28]

EPA delayed issuance of the Draft Permits for over a year without disclosing to the states, tribal nations, or the public any rationale for delaying permit issuance. Moreover, Commenters cannot identify any significant revisions to the 2018 Draft NPDES Permits that explain EPA's decision to delay issuance of the Draft Permits. Furthermore, EPA provides no rationale for delaying issuance of the Grand Coulee Dam NPDES Permit. Commenters call on EPA to proceed with issuing the eight Draft Permits in 2020 and hold a public comment periods on the NPDES Permits for Grand Coulee and Chief Joseph dams.

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[26] EPA initially requested preliminary certifications for federal dams in letters to Ecology dated September 19 and 20, 2018, and October 4, 2018.

[27] The 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.

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

COMMENTS

I. Effluent Limitations.

A. EPA Must Revise the Draft Permit to Include Technology-Based Effluent Limits that Incorporate the Use of Environmentally Acceptable Lubricants.

EPA must revise the Draft Permits to: (1) explicitly require the use of environmentally acceptable lubricants (EALs) as a technology-based effluent, and (2) ensure EPA oversight of EAL selection and use at the hydroelectric facilities. Commenters support EPA's decision to include an EAL Plan in the Draft Permits. However, EPA must revise the Draft Permits to ensure the agency is not authorizing an illegal self-regulatory scheme.

The EAL Plans constitute technology-based effluent limits, yet EPA fails to comply with the CWA and implementing rule requirements for technology-based effluent limits.[29] The Draft Permits describe the EAL Plan requirement in Special Condition II.C.1–2, which state:

1. The permittee must select Environmentally Acceptable Lubricants (EALs) for all oil to water interfaces including wicket gates, bearings, lubricated wire ropes, Kaplan runners and other in-line equipment, unless technically infeasible. EALs should be consistent with the definition of EPA's 2011 report, Environmentally Acceptable Lubricants. For purposes of requirements related to EALs, technically infeasible means that no EAL products are approved for use in a given application that meet manufacturer specifications for that equipment; products which come pre-lubricated (e.g., wire ropes) and have no available alternatives manufactured with EALs; or products meeting a manufacturer's specifications are not available.

2. The permittee must prepare an EAL Annual Report under Part II.C.1 and describe the implementation and feasibility of EALs.[30]

EPA does not include any approval or disapproval mechanism for EAL Plans. First, EPA's decision to abandon its regulatory role vis-à-vis the EAL Plans runs afoul of the CWA.[31] EPA must review and approve plans; if it neglects this duty, the agency creates an impermissible self-regulatory scheme. Special Condition II.C. fails to include any review and approval procedure by EPA. Second, EPA must afford the public an opportunity to review and comment on the draft EAL Plans. The EAL Plans constitute "effluent limitations," which the public has a statutory

[29] EPA should revise the Draft Permits to clarify that BMP Plans constitute technology-based effluent limits.

[30] Draft John Day Permit at 15.

[31] *See e.g.*, *Environmental Defense Center, et al. v. EPA*, 344 F.3d 832 (9th Cir. 2003) (*EDC*).

right to review and offer comment upon.[32] Commenters urge EPA to revise the Draft Permits to include new terms specifying EPA's review and approval role, as well as the opportunity for public notice and comment.

EPA's treatment of EALs in the Draft Permit marks a notable departure from EPA's treatment of EALs in the NPDES Vessel General Permit for Discharges Incidental to Normal Operation of a Vessel (VGP).[33] Under the VGP, EPA requires that permittees use EALs where technologically feasible to reduce pollution to waters of the U.S. The VGP includes a series of EAL-related requirements and categorizes those terms as "technology-based effluent limitations and related requirements."[34]

EPA never explains why the Draft Permits fail to address EALs in a manner similar to the VGP. Like vessels regulated under the VGP, hydroelectric facilities interface with the aquatic environment and are known sources of oil pollution. Moreover, hydroelectric facilities in the Pacific Northwest—including the facilities regulated under the Draft Permits—and around the world are utilizing EALs to reduce toxic pollution in aquatic ecosystems.[35] EPA must revise the Draft Permits to include robust terms, similar to the VGP, that require—unless technologically infeasible—the use of EALs at hydroelectric facilities as a technology-based effluent limitation.

B. EPA Must Revise the Permit to Include Temperature Effluent Limits for Cooling Water Discharges.

i. EPA must address the reasonable potential analysis for temperature.

Under 40 C.F.R. §122.44(d)(1)(i), when issuing permits and setting effluent limits, EPA must determine if a pollutant has the reasonable potential to cause a violation of water quality standards. This assessment is commonly referred to as a reasonable potential analysis (RPA) and is required whenever a permit is originally issued or renewed. The RPA is typically included as an appendix to the permit. To comply with §122.44(d)(1)(i), EPA must perform an RPA for all pollutants that will or may be discharged from facilities seeking coverage. If the RPA shows that this discharge has the potential to violate water quality standards for any pollutant, EPA must include effluent limits for the pollutant in the NPDES permit.

[32] *See* 33 U.S.C. 1342(b)(3), *see also EDC*, 344 F.3d at 856.
[33] EPA Vessel General Permit for Discharges Incidental to Normal Operation of a Vessel, Appendix A at 143 (2013) (hereafter VGP). The VGP expired in 2018, but remains in effect. *See* EPA Vessel General Permit Website, https://www.epa.gov/npdes/vessels-vgp.
[34] *See* VGP at Section 2 ("Effluent Limits and Related Requirements").
[35] *See* Exhibits 1 and 2.

EPA's Draft Permit Fact Sheets summarily dismiss the need for temperature effluent limits *without* conducting RPAs.[36] Instead, EPA states:

> Cooling water receives heat from equipment that is being cooled, and through this exchange, heat is added to cooling water from hydroelectric generating facilities. Heat from cooling water may also be present in drainage sumps that receive cooling water, though temperature effects are likely to be minimal given the amount of cooling water compared to drainage water.[37]
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> As previously explained, the Lower Snake River is impaired for temperature. Effluent temperature data are limited, but based on these data and analysis shown in Table 10, discharges from the facilities have minimal impact on Lower Snake River temperatures. However, because temperature is important to threatened and endangered salmon in the Lower Snake River, the EPA is proposing year-round monitoring for temperature including:
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> - continuous monitoring for any discharges with cooling water and monthly monitoring where a similar discharge already has continuous monitoring.
> - continuous influent monitoring on cooling water for main units and large transformer units with continuous effluent monitoring.
>
> The hydroelectric generating facilities are also required to submit a Temperature Data Report with the next permit application that includes temperature data from each outfall expressed as 7DADM, monthly average, and daily maximum. These temperature monitoring requirements will apply at all of the facilities. The EPA believes this additional information is necessary to inform the next permit renewal cycle to better assess the impacts from the permitted discharges on temperature in the Snake River.[38]

The Fact Sheets' explanation for temperature permit conditions does not meet the minimum requirements of an RPA. Instead, EPA effectively issues temperature variances or use attainability analyses (UAAs) without meeting the CWA implementing regulations for those compliance offramps.[39] The Draft Permits therefore fail to comply with the CWA.

[36] EPA's website subpages for the Draft Permits do not contain appendices with RPAs for temperature.
[37] Fact Sheet for Lower Snake River Dams at 45–46; Fact Sheet for Lower Columbia River Dams at 45–46. The Fact Sheet for the Lower Columbia River Dams notes that McNary Dam does not contain cooling water discharges.
[38] *Id.*
[39] *See* 40 C.F.R. §§ 131.10(g) (describing UAAs); 131.14 (describing variances).

First, EPA had ample time to conduct RPAs for the Dams. The Corps submitted an NPDES permit application for The Dalles Dam in 2009 and NPDES permit applications for the remaining Dams (including a supplemental application for The Dalles Dam) in 2015. EPA therefore had five years to request the temperature monitoring that EPA now requires in the Draft Permits and uses as an illegal proxy for temperature effluent limits. EPA cannot substitute temperature monitoring for effluent limits, especially when the receiving water is not meeting water quality standards for heat pollution.

Second, EPA fails to explain why it cannot conduct RPAs with the temperature data submitted in the permit applications. Assuming *arguendo* that EPA lacks adequate data, EPA cannot substitute temperature monitoring over an entire permit term for an RPA and effluent limits. For example, EPA could: (1) require temperature monitoring during the first six months or year of the permits, and (2) include a reopener to conduct RPAs based on the temperature data collected by the Corps, and (3) based on the RPAs, amend the permits to include temperature effluent limits. As EPA is aware, the agency's five-year permit terms frequently result in lengthy permit-term extensions. In turn, EPA's decision to delay temperature RPAs, and associated temperature effluent limits, until the next permit term could result in a decade or more before EPA adopts temperature effluent limits. At a minimum, the Dams will not be subject to temperature effluent limits for five years. EPA must conduct an RPA and revise the Draft Permits to include temperature effluent limits.

ii. EPA must incorporate temperature effluent limits for discharges into impaired waters.

When discussing temperature effluent limits, the EPA states that the Draft Permits only includes monitoring requirements for temperature, citing that "Effluent temperature data are limited, but based on these data and analysis shown in Table 11, discharges from the facilities have minimal impact on Columbia River temperatures."[40] We are concerned with the accuracy of this statement given the lack of support as required by regulations (see previous comment on RPAs) as well as the fact that the eight hydroelectric facilities are located on waters listed on the 303(d) list for temperature and subject to a forthcoming temperature total maximum daily load (TMDL).

EPA must issue a temperature TMDL for the Columbia and Lower Snake River on May 18, 2020. That should include wasteload allocations (WLA) for the Dams' cooling water

[40] Lower Columbia River Dams Fact Sheet at 46.

discharges.[41] Accordingly, EPA must revise the Draft Permits to include such WLAs. If the temperature TMDL does not have WLA for the hydroelectric facilities, it would jeopardize the legality of the TMDL but EPA would still be required to assess the assimilative capacity of these impaired waterbodies to ensure thermal discharges from the eight facilities' cooling water discharges will not cause or contribute to a violation of water quality standards. The Draft Permits must include end-of-pipe thermal limits set at the applicable water quality standard. Anything less stringent would be in violation of not only the forthcoming TMDL but also the CWA.

C. EPA should regulate heat pollution added to the Columbia and Snake rivers by the Dams' impoundment of large, shallow reservoirs.

Even though the Dams cause significant heat pollution that routinely causes or contributes to water quality violations, the Draft Permits do not regulate heat pollution from the Dams, except for cooling water discharges.[42] Commenters urge EPA to evaluate and include effluent limits and permit conditions that address *all* of the heat pollution that the Dams add to the rivers.

As written, the permits would not control the discharge of heat over or through the Dams, even though EPA is currently writing a TMDL to address precisely this source of pollution. This is inconsistent with Section 301(a) of the CWA, 33 USC § 1311(a), which prohibits the addition of any pollutant from any point source to waters of the United States unless authorized by a NPDES permit.[43] Heat is a pollutant;[44] dams are point sources;[45] and the Columbia and Snake rivers meet any definition of the waters of the United States. The only outstanding question is

[41] EPA, *Guidelines for Reviewing TMDLs under Existing Regulations Issued in 1992*, p. 3 (May 20, 2002) ("EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to individual existing and future point source(s) (40 C.F.R. §130.2(h), 40 C.F.R. §130.2(i)).").
[42] Lower Columbia River Dams Fact Sheet at 18 ("The permits do not address waters that flow over the spillway or pass through the turbines. *See National Wildlife Federation v. Consumers Power Company*, 862 F.2d 580 (6th Cir. 1988); *National Wildlife Federation v. Gorsuch*, 693 F.2d 156 (D.C. Cir. 1982).").
[43] *See generally* Enion, M. Rhead, *Rethinking National Wildlife Federation v. Gorsuch: The Case for NPDES Regulation of Dam Discharge*, 38 *Ecology Law Quarterly* 4, pp. 797–850. (2011).
[44] 33 U.S.C. § 1362(6).
[45] *Nat'l Wildlife Fed'n v. Gorsuch*, 693 F.2d 156, 165 n.22 (D.C. Cir. 1982) ("The pipes or spillways through which water flows from the reservoir through the dam into the downstream river clearly fall within th[e] definition" of point sources.)

whether the Dams cause an "addition" of heat to the rivers, and EPA has answered that question in the affirmative.[46] EPA's reliance on the *Gorsuch* decision[47] is unavailing. *Gorsuch* is distinguishable on the facts,[48] and its reasoning has not convinced subsequent courts.[49] Neither does the Water Transfer Rule support EPA's position, as EPA expressly disclaimed that its rule applies to dams.[50] The reasoning in *LA County Flood Control District* also cannot save EPA's failure to properly apply the NPDES program because that decision was premised on the intervening point source *not* adding a pollutant to the water.[51] Here, by EPA's own admissions, the Dams and reservoirs cause the addition of heat pollution to the rivers.

As demonstrated by empirical evidence and EPA modeling, the presence and operation of the Dams warm the Columbia and Snake rivers to unsafe levels for designated beneficial uses.[52] Temperatures are also increasing over historical levels due to the impacts of climate change. During the summer, the rivers are frequently so warm that salmon are unable to migrate upriver to spawn. When river temperatures exceed 20°C for several days at a time—as happens with increasing frequency due to climate change—salmon have difficulty migrating upstream and begin succumbing to stress and disease. 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."

In the early 2000s, EPA completed a draft Columbia and Snake River TMDL. The temperature TMDL is a pollution budget designed to protect salmon from hot water in the

[46] *E.g.* EPA, *Columbia River Temperature TMDL: State and Tribal Meetings PowerPoint Presentation*, Slides 32, 44 (January 2020) (Explaining that the dams are the "biggest source" of heat pollution and that "Each of the four Snake River dams and John Day contribute to temperature impairments . . . throughout the [summer and fall].")
[47] Lower Columbia River Dams Fact Sheet at 18.
[48] The discussion of temperature pollution in *Gorsuch* focused on reservoirs that merely stratified the heat that already existed in the river when it entered the reservoir; in the Columbia and Snake river reservoirs, however, little to no stratification occurs and the reservoirs themselves accumulate additional heat pollution.
[49] *See, e.g., Greenfield Mills, Inc. v. Macklin*, 361 F.3d 934, 947–48 (7th Cir. 2004).
[50] National Pollutant Discharge Elimination System (NPDES) Water Transfers Rule, 73 Fed. Reg. 33,697, 33,705 (June 13, 2008).
[51] *L.A. Cty. Flood Control Dist. v. NRDC, Inc.*, 568 U.S. 78, 82–83 (2013).
[52] *See, e.g.*, EPA, *Columbia River Temperature TMDL: State and Tribal Meetings PowerPoint Presentation* (January 2020) (Commenters incorporate this document, and EPA's forthcoming temperature TMDL, into the record for these NPDES permits. Commenters are not submitting these documents to EPA due to size constraints and because these documents are already in EPA's possession).

Columbia and Snake rivers. Notably, EPA's modeling clearly indicated that the Dams increase water temperatures in ways that cause or contribute to water quality standard violations, and EPA concluded that "The majority of the temperature increases (as much as 6 °C) are caused by the larger dams[.]"

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. The decline of Columbia Basin salmon runs contributes to the starvation of Southern Resident orcas and forced significant curtailment of fall salmon and steelhead fishing in the Columbia and Snake rivers in 2018 and 2019. Washington listed the Columbia and Snake rivers as impaired by high temperatures in 1994, and Washington asked EPA for a temperature TMDL over 20 years ago. EPA should use its authority under the CWA to protect and restore salmon, Pacific lamprey, sturgeon, Sothern Resident orcas, and other species threatened with extinction.

II. Monitoring and Reporting.

A. EPA Must Specify Reporting Frequency for Visual Observations.

EPA fails to specify the required frequency for observing discharges subject to effluent limitations under Section I.B.4. Under 40 C.F.R. § 122.48, NPDES permits must specify monitoring methods, intervals, and frequency. *See also* 40 C.F.R. 122.44(i). The Draft Permits state:

> The permittee must not discharge a visible oil sheen, floating, suspended or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair the beneficial uses of the receiving water. There shall be no foam other than in trace amounts. The permittee must observe the surface of the receiving water in the vicinity of where the effluent enters the surface water. The permittee must maintain a written log of the observation which includes the date, time, observer, and whether there is presence of a visible oil sheen, floating, suspended or submerged matter. The log must be retained and made available to the EPA or Ecology.[53]

The Draft Permits fail to specify the method, interval, and frequency of visual observation. Commenters prepared a summary log of oil releases at the Dams over the last five years. These logs demonstrate the need for express requirements to detect oil and grease discharges at the Dams. In short, EPA must revise the Draft Permits' visual observation terms to comply with the CWA's monitoring and reporting requirements.

[53] Draft Permit for the John Day Dam at 7.

B. EPA Must Review and Approve BMP Plans and Provide for Public Notice and Comment on the Plans.

BMP Plans constitute technology-based effluent limits, yet EPA fails to comply with the CWA and implementing rule requirements for technology-based effluent limits.[54] Specifically, the Draft Permits lack review and approval requirements and opportunities for public comment. EPA must review and approve plans; if it neglects this duty, the agency creates an impermissible self-regulatory scheme. Second, EPA must afford the public an opportunity to review and comment on the draft plans because the plans constitute "effluent limitations," which the public has a statutory right to review and offer comment upon.[55] Commenters urge EPA to revise the Draft Permits to include new terms specifying EPA's review and approval role, as well as the opportunity for public notice and comment.

C. EPA Must Revise the Permit to Increase the Frequency of BMP and EAL Plan Compliance Reporting.

All NPDES permits must include monitoring and reporting requirements sufficient to ensure compliance with the permits' limitations. 40 C.F.R. § 122.44(i)(1). The Draft Permits requires that the Corps submit BMP and EAL Plan Reports once per year. Annual reporting undercuts the agency's oversight of permit compliance and ability to prioritize inspections based on current BMP Plan compliance. EPA's reporting requirement also undercuts the public's ability to understand pollution discharges from the facilities and review permit compliance. Citizen action is a "proven enforcement tool" that "Congress intended [to be used…] to both spur and supplement government enforcement actions."[56] Commenters urge EPA to revise the Draft Permit to increase BMP Plan Report frequency to at least four times per year (*i.e.,* quarterly reporting).

In addition, EPA should revise the Draft Permits to require specific reporting measures to detect oil spills and leaks. Many of the discharges cannot be sampled, including those from the wicket gates and the turbine hubs via blade packing. However, the Corps can conduct internal mass balance reports to determine if, and how much, oil is lost from the system.

[54] EPA should revise the Draft Permits to clarify that BMP Plans constitute technology-based effluent limits. *See e.g., EDC,* 344 F.3d 832.

[55] *See* 33 U.S.C. 1342(b)(3), *see also EDC,* 344 F.3d at 856.

[56] CWA Amendments of 1985, Senate Environment and Public Works Comm., S.Rep. No. 50, 99th Cong., 1st Sess. 28 (1985).

III. Protecting Fish from Cooling Water Intakes

EPA should reconsider its approach to permitting the Dams' cooling water intake structures. As an over-arching matter, the Fact Sheets and Permits appear to conflate gates that allow water into the Dams' turbines with the ports or other structures that actually draw water out of the river to cool the powerplants' internal machinery. The former are probably not cooling water intake structures within the meaning of CWA Section 316(b); nevertheless, most the permits' requirements for cooling water intake structures appear to apply to the turbine intakes (if only to duplicate existing requirements derived from CRSO Biological Opinions). The actual ports or diversions that withdraw water from the river to cool mechanical processes within each dam are, contrary to EPA's "interpretation" of its Section 316(b) regulations, cooling water intake structures subject to the rule. The final NPDES permits should clarify the difference and apply the requirements of CWA Section 316(b) to the actual cooling water intakes to prevent the illegal entrainment and impingement of endangered salmonids and other fish.

CONCLUSION

Commenters request that EPA revise the Draft Permits to ensure compliance with the CWA and protect the Columbia and Snake rivers.

Sincerely,

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