



Fact Sheet for Proposal of Additional Conditions in NPDES permits for the Lower Columbia River Hydroelectric Generating Facilities

The United States Environmental Protection Agency (EPA) proposes to issue National Pollutant Discharge Elimination System (NPDES) Permits to discharge pollutants pursuant to the provisions of the Clean Water Act, 33 USC §1251 et seq to:

<u>Facility</u>	<u>Permit Number</u>
Bonneville Project, U.S. Army Corps of Engineers	WA0026778
The Dalles Lock and Dam, U.S. Army Corps of Engineers	WA0026701
John Day Project, U.S. Army Corps of Engineers	WA0026832
McNary Lock and Dam, U.S. Army Corps of Engineers	WA0026824

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Technical Contact: Jenny Wu
Email: Wu.Jennifer@epa.gov
Phone: (206) 553-6328
1-800-424-4372 ext 6328 (within Alaska, Idaho, Oregon and Washington)

EPA Proposes to Issue NPDES Permits

EPA proposes to issue NPDES permits for the facilities referenced above. The draft permits place conditions on the discharge of pollutants from the hydroelectric generating facilities to waters of the United States (U.S.). To ensure the protection of water quality and human health, these permits place limits on the types and amounts of pollutants that can be discharged from the facilities.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures
- information supporting the addition of permit conditions to address objections under Section 401(a)(2) of the Clean Water Act (CWA) from Oregon Department of Environmental Quality (DEQ)

CWA § 401 Certification

EPA requested that the Washington Department of Ecology (Ecology) certify permits for these facilities pursuant to Section 401 of the CWA on March 18, 2020. On May 7, 2020, Ecology provided final certifications of these permits under Section 401 of the Clean Water Act (Ecology 2020).

CWA §401(a)(2) Notification

CWA section 401(a)(2) requires that, upon receipt of an application and 401 certification, EPA notify a neighboring State or Tribe with treatment in a manner similar to a State (TAS) when EPA determines that the discharge may affect the quality of the neighboring State/Tribe's waters. 33 U.S.C. § 1341(a)(2).

On March 18, 2020, EPA notified Oregon DEQ pursuant to CWA section 401(a)(2) that the discharges from the four Lower Columbia River federal dams "may affect" the quality of Oregon's waters. On May 15, 2020, Oregon DEQ notified EPA Region 10 in a letter ("May 2020 objection letter") that it had determined that the discharges from the dams "will affect the quality of Oregon's waters and violate state water quality requirements in the State of Oregon." Oregon DEQ further stated that it was objecting to the issuance of the NPDES permits and requested a public hearing. After reviewing a revised draft permit for the Bonneville Project which incorporated conditions from Ecology's 401 certification, Oregon DEQ sent EPA Region 10 a follow-up letter¹ ("October 2021 letter") that reiterated that the permits do not ensure that Oregon's temperature water quality standards are met. Oregon DEQ, therefore, maintained its objection from its May 2020 objection letter on the issuance of the permits related to temperature and requested a public hearing (Oregon DEQ 2021).

EPA, as the permitting authority under CWA section 402, held a public hearing on Oregon's CWA section 401(a)(2) objection on June 7, 2022. EPA accepted comments regarding the CWA section 401(a)(2) objection until June 21, 2022.

Public Comment

EPA is seeking comment on proposed conditions to ensure compliance with Oregon's water quality requirements for temperature. EPA is not seeking comment on other effluent limits or provisions in these permits. EPA will consider all comments received during the public comment period from March 18, 2020 to May 4, 2020, the second public comment period from January 15, 2021 to February 17, 2021, and this third comment period prior to issuing final permits.

Persons wishing to comment on, or request a Public Hearing for, the draft permits for these facilities may do so in writing by the expiration date of the Public Comment period. A request for a Public Hearing must state the nature of the issues to be raised as well as the requester's name, address and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to EPA as described in the Public Comments Section of the attached Public Notice. Comments must include the commenter's name, address, telephone number, permit name, and permit number. Comments must include a concise statement of the basis and any relevant facts the commenter believes EPA should consider in making its decision regarding the conditions and limitations in the final permit(s).

After the comment period closes, and all comments have been considered, EPA will review and address all submitted comments. EPA's Director for the Water Division will then make a final decision regarding permit issuance. If no substantive comments are received, the tentative conditions in the draft permits will become final, and the permits will become effective upon issuance. If substantive comments are received, EPA will address the comments and issue the permits. The permits will become effective no less than 30 days after the issuance date unless an appeal is submitted to the Environmental Appeals Board within 30 days pursuant to 40 CFR 124.19.

¹ <https://www.epa.gov/system/files/documents/2022-04/r10-npdes-usace-lower-columbia-hydroelectric-facilities-odeq-cwa-objection-2021.pdf>

Documents are Available for Review

The draft permits, fact sheet, and other information can be found by visiting the Region 10 NPDES website at: <https://www.epa.gov/npdes-permits/about-region-10s-npdes-permit-program> and at <https://www.epa.gov/npdes-permits/proposed-discharge-permits-federal-hydroelectric-projects-lower-columbia-river>.

For technical questions regarding the permits or fact sheet, contact Jenny Wu at the phone number or email listed above.

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DEFINITIONS

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative [40 CFR 122.2].

Average monthly limits means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month. It may also be referred to as the “monthly average limits” [40 CFR 122.2].

CFR means the Code of Federal Regulations, which is the official annual compilation of all regulations and rules promulgated during the previous year by the agencies of the United States government, combined with all the previously issued regulations and rules of those agencies that are still in effect.

CWA means the Clean Water Act in the United States Code (USC) (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, 33 USC 1251 et seq. [40 CFR 122.2].

The Director means the Regional Administrator of the EPA Region 10, or the Director of the Water Division, the Washington Department of Ecology, or an authorized representative thereof.

Discharge when used without qualification includes a discharge of a pollutant, and a discharge of pollutants.

Discharge Monitoring Report (DMR) means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees [40 CFR 122.2].

Discharge of a pollutant means any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source,” or any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any “indirect discharger” [40 CFR 122.2].

Draft permit means a document prepared under 40 CFR 124.6 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a “permit” [40 CFR 122.2].

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of “pollutants” which are “discharged” from “point sources” into “waters of the United States,” the waters of the “contiguous zone,” or the ocean [40 CFR 122.2].

Facility means any NPDES point source or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

Influent means the water from upstream that enters the facility.

Monthly Average Limit means the average of “daily discharges” over a monitoring month, calculated as the sum of all “daily discharges” measured during a monitoring month divided by the number of “daily discharges” measured during that month [40 CFR 122.2].

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA [40 CFR 122.2].

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials [except those regulated under the Atomic Energy Act of 1954, as amended (42 USC 2011 et seq.)], heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water [40 CFR 122.2].

Total Maximum Daily Load (TMDL) means the sum of the individual wasteload allocations (WLAs) for point sources, load allocations (LAs) for non-point sources, and natural background when allocating pollutant loading to a particular waterbody. The TMDL establishes loads at levels that meet applicable water quality standards.

I. General and Facility-Specific Information

This fact sheet provides information on the draft National Pollutant Discharge Elimination System (NPDES) permits for four hydroelectric projects: Bonneville Project, The Dalles Lock and Dam, John Day Project, and McNary Lock and Dam (collectively referred to as the “Lower Columbia River federal dams”).

EPA held two public comment periods for the four Lower Columbia River federal dam permits. The first public comment period was from March 18, 2020 through May 5, 2020. The second public comment period was from January 15, 2021 through February 17, 2021 and only related to the addition of proposed effluent limits for heat.

The fact sheet dated March 18, 2020 provides general information on the facilities, the receiving water, applicable water quality standards, permit history, tribal consultation, geographic area, facility operations and types of discharges, pollutants associated with the facilities, treatment, description of outfalls, compliance history, receiving water, and proposed effluent limits and conditions (EPA 2020a). The fact sheet and draft permits dated January 15, 2021 proposed additional effluent limits for heat (EPA 2021a).

Upon consideration of the recommendations of Oregon Department of Environmental Quality (Oregon DEQ) and EPA, and the evidence presented at the public hearing on June 7, 2022, EPA has revised the draft permits to ensure compliance with Oregon’s applicable water quality requirements consistent with Section 401(a)(2) of the Clean Water Act. The following sections in this fact sheet provide the basis for the additional conditions.

II. Background

A. Project Area

The Bonneville Project, The Dalles Lock and Dam, John Day Project, and McNary Lock and Dam are located on the Columbia River between the states of Washington and Oregon. The middle of the Columbia River separates Washington and Oregon. Table 1 and show the locations of each facility on the Lower Columbia River.

Table 1. Facility Location

Facility (NPDES Permit No.)	Location	Approximate River Mile Discharge Location in Columbia River
Bonneville Project (WA0026778)	Cascade Locks, Oregon	140
The Dalles Lock and Dam (WA0026701)	The Dalles, Oregon	190
John Day Project (WA0026832)	Rufus, Oregon	214
McNary Lock and Dam (WA0026824)	Umatilla, Oregon	291

Figure 1. Map of the Lower Columbia River Federal Dams

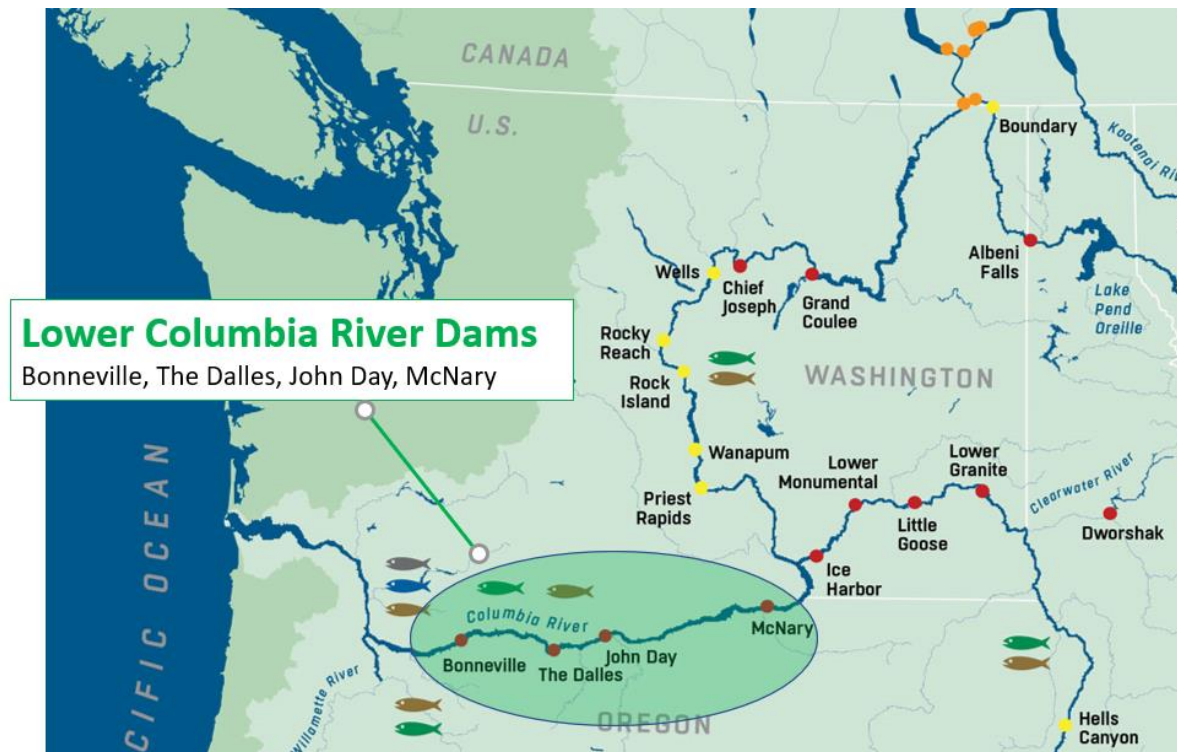


Figure: U.S. Army Corps of Engineers, Northwestern Division, <https://www.nwd.usace.army.mil/Media/Images/igphoto/2002118951/>

The facilities, with the exception of The Dalles Lock and Dam², discharge to both Oregon and Washington waters. Oregon DEQ has jurisdiction to issue NPDES permits to federal facilities in Oregon. However, Ecology does not have authority to issue such permits, and thus, EPA Region 10 is the permitting authority for federal facilities in Washington³. EPA Region 10's permits apply only to the outfalls discharging to Washington waters for the four federal dams. Oregon DEQ will issue permits for the outfalls discharging to Oregon waters, which include outfalls at Bonneville Project, John Day Project, and McNary Lock and Dam.

B. Description of the CWA section 401(a)(2) process

Under CWA section 401(a)(1), any federally licensed or permitted activity that may result in a discharge into navigable waters requires the jurisdiction in which the discharge originates to either issue CWA section 401 certification or waive certification. Upon receipt of the permit or license application and CWA section 401 certification, the federal permitting or licensing agency must provide notification of such application and certification to EPA pursuant to CWA section 401(a)(2). EPA has 30 days upon receiving this notification to make a determination as to whether the discharge may affect the water quality of any other jurisdiction, referred to as a "neighboring jurisdiction."

² The Dalles Lock and Dam discharges only to Washington waters.

³ NPDES Memorandum of Agreement Between the State of Washington and United States Environmental Protection Agency Region 10, July 2018. <https://www.epa.gov/sites/default/files/2013-09/documents/wa-moa-npdes.pdf>

If EPA determines that the discharge may affect a neighboring jurisdiction's water quality, CWA section 401(a)(2) requires EPA to notify that jurisdiction. The neighboring jurisdiction then has 60 days to determine whether the discharge will affect the quality of its waters so as to violate any of its water quality requirements. If the jurisdiction determines that the discharge will violate its water quality requirements, then it must notify EPA and the federal licensing or permitting agency in writing of its objection to the issuance of the permit and request a public hearing on its objection.

Pursuant to CWA section 401(a)(2), once a neighboring jurisdiction requests a public hearing on its objection, the "licensing or permitting agency shall hold such a hearing." The federal licensing or permitting agency must provide EPA with notice of the hearing at least 30 days prior to the hearing. At the hearing, EPA is required to submit an evaluation and recommendation(s) with respect to the objection. The federal licensing or permitting agency, based upon the recommendations of the objecting jurisdiction, EPA's evaluation and recommendations, and any additional evidence presented at the hearing, must condition the license or permit as may be necessary to ensure compliance with applicable water quality requirements. If the imposition of conditions cannot ensure compliance with applicable water quality requirements, then the license or permit cannot be issued. Water quality requirements are defined at 40 CFR § 121.1(n) as the applicable provisions of CWA sections 301, 302, 303, 306, and 307, and state or tribal regulatory requirements for point source discharges into waters of the United States.

Here, EPA Region 10 is the federal permitting agency for the Lower Columbia River federal dam NPDES permits. EPA Region 10 was also responsible for evaluating Oregon DEQ's objection and providing recommendations at the CWA section 401(a)(2) public hearing pursuant to CWA section 401(a)(2).⁴

C. Project History

On March 18, 2020, EPA Region 10 began the public comment period for the four Lower Columbia River federal dam NPDES permits (EPA, 2020a). At that time, EPA Region 10 requested certification of the permits from Ecology pursuant to CWA section 401(a)(1) (EPA 2020b). EPA Region 10 also determined that the permits may affect Oregon's waters and, thus, notified Oregon DEQ as a neighboring jurisdiction pursuant to CWA section 401(a)(2) (EPA 2020c).

Ecology provided CWA section 401 certifications for the permits with conditions on May 7, 2020 (Ecology 2020a; 2020b; 2020c; 2020d). The temperature-related conditions in these certifications required the Corps to:

- Implement temperature control strategies and meet temperature load allocations from the Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load (TMDL), once the TMDL was issued; and
- Develop and implement a water quality attainment plan (WQAP) that meets Washington's temperature water quality standards within two years of the effective date of the permit to reduce temperatures behind reservoirs.

On May 15, 2020, Oregon DEQ notified EPA Region 10 that the discharges from the dams "will affect the quality of Oregon's waters and violate state water quality requirements in the State of Oregon" and that it was objecting to the issuance of the permits and requesting a public hearing. In

⁴ The EPA Administrator's role under CWA section 401(a)(2) has been delegated to EPA Region 10.

its May 2020 objection letter, Oregon DEQ provided example conditions that would address its objections regarding the following pollutants: temperature, total dissolved gas (TDG), biocriteria and statewide narrative criteria, and polychlorinated biphenyls (PCBs).

On May 18, 2020, EPA Region 10 issued the Columbia and Lower Snake Rivers Temperature TMDL⁵ (EPA 2021b). The TMDL included temperature targets (wasteload allocations and load allocations) for the federal dams. Wasteload allocations (WLAs) at the dams pertain to point source discharges of cooling water from outfalls. Load allocations (LAs) at the dams pertain to nonpoint source discharges related to reducing water temperatures behind reservoirs. EPA Region 10 held a second public comment period from January 15, 2021 through February 16, 2021 on the draft NPDES permits that incorporated the WLAs established in the TMDL by proposing heat limits in the permits consistent with the WLAs (EPA 2021a).

On July 26, 2021, EPA Region 10 transmitted a draft final NPDES permit for Bonneville Project to Oregon DEQ to allow Oregon DEQ to determine whether the addition of the 401 certification conditions in the permits would address Oregon DEQ's objections. The draft final permit incorporated the conditions from Ecology's CWA section 401 certification, including the following conditions for temperature:

1. The permittee must implement temperature control strategies and meet the LAs in the Columbia and Lower Snake Rivers Temperature TMDL (RCW 90.48.080 and WAC 173-201A-510(5)).
2. The permittee must consult with Ecology to develop a WQAP per the conditions below:
 - a) The WQAP shall include all applicable requirements in WAC 173-201A-510(5) Compliance Schedule for Dams, and must include a detailed strategy for achieving Washington's water quality standards for temperature and associated designated uses, including but not limited to, conditions in fish bypass systems of the dam.
 - b) The permittee must provide the scope of the WQAP to Ecology for review one year after the permit effective date.
 - c) The permittee must provide the final WQAP to Ecology for approval within two years of the permit effective date.
 - d) The permittee must submit a progress report to Ecology for approval within six years of the effective permit date. The permittee must submit a summary report to Ecology for approval within nine years of the permit effective date and prior to the end of the ten-year dam compliance period.

The draft final permit also incorporated other conditions from Ecology's CWA section 401 certification that addressed TDG, biocriteria and statewide narrative criteria, and PCBs.

D. Oregon DEQ's Objection Related to Temperature

On October 8, 2021, Oregon DEQ sent a follow-up letter to EPA Region 10 to clarify that since the Lower Columbia River federal dam permits would include Ecology's CWA section 401 certification conditions, Oregon DEQ was withdrawing its objection for all pollutants except temperature. For temperature, Oregon DEQ concluded that the discharges from the dams "will affect the quality of Oregon's waters and violate state water quality requirements in the State of Oregon."

⁵ <https://www.epa.gov/columbiariver/tmdl-temperature-columbia-and-lower-snake-rivers>

Specifically, Oregon DEQ’s October 2021 letter stated that there has been inadequate action by the Corps to address high water temperatures from reservoirs behind the Lower Columbia River federal dams. Without conditions in the permits to compel the Corps to identify, evaluate, and adopt additional specific alternatives, Oregon DEQ stated that there is inadequate assurance that Oregon’s water quality requirements for temperature will be met, even though the permits will contain conditions that require the facilities to meet the LAs in the Columbia and Lower Snake Rivers Temperature TMDL and to develop and implement a WQAP (Oregon DEQ 2021). Oregon DEQ concluded that “EPA must incorporate specific requirements for the development and implementation of actions to reduce temperature increases resulting from the operations of [these facilities], in order to ensure that applicable Oregon’s water quality standards are met” (Oregon DEQ 2021).

Oregon DEQ provided example permit conditions that it asserts will ensure the discharges from the permitted activity satisfy Oregon’s temperature water quality requirements. In addition, Oregon DEQ stated that an alternative condition could satisfy the objection. The example conditions are shown in Figure 2.

Figure 2. Oregon DEQ Example Conditions for Temperature from October 2021 Letter (Oregon DEQ 2021)

- I. Initial Study of Temperature.
Impacts of Facility Operations. Within the first year of receipt of the NPDES permit for the Bonneville Project² USACE shall study alternatives actions to reduce thermal loading resulting from the operation of the facility. The study shall focus particularly on water temperatures during the period from July 15 to September 30, but also shall include analysis for other times of the year that are during key periods of salmonid migration. Such actions must include, but are not limited to, changes in operating pools during this period (limited by minimum operating pool). USACE must submit the results of that analysis to EPA, Washington Ecology, and Oregon DEQ within this one-year period. With regard to changes in operating pools, the study shall include, but is not limited to, the following components:
 - A. An estimate of how much the surface area of the reservoir would change when operating the reservoir at the Minimum Operating Pool;
 - B. An analysis of how the reduction in surface area and reduction of water residence time in the reservoir would affect discharge temperatures;
 - C. An analysis of the extent to which changes in reservoir pool elevations would affect the frequency, duration, and magnitude of state water quality standards exceedances in the lower Columbia River; and
 - D. An analysis of operational tradeoffs resulting from lower operating pools, and whether such changes would significantly impair other goals, including, but not limited to:
 - i. The ability of USACE to meet operational needs for congressionally authorized purposes.
 - ii. The potential effects of such changes on USACE’s ability to meet other federal requirements, including requirements under the federal Endangered Species Act for spill.
- II. Development and Submission of an Implementation Plan. Within one year of submitting the Initial Study of Temperature Impacts, USACE must develop and submit to EPA, the Washington Department of Ecology and Oregon DEQ an

implementation plan (for EPA’s review and approval). The Implementation Plan must include a timeframe and milestones for implementing actions that EPA, Washington Ecology and Oregon DEQ have agreed will provide substantial improvements to thermal conditions without impairing other requirements that USACE must meet in operating the facility. The Implementation Plan must include:

- A. Provisions for adequate monitoring of water temperature over the term of the permit.
 - B. Provisions for evaluating the thermal benefits achieved and any resultant effects from the change in operations.
- III. Following EPA review and approval, USACE will carry out the implementation plan, and will provide regular reporting to EPA, Washington Ecology and Oregon DEQ regarding changes in thermal loading resulting from the plan.

E. CWA 401(a)(2) Public Hearing on Oregon DEQ’s Objection

On June 7, 2022, EPA Region 10 held a CWA section 401(a)(2) virtual public hearing on Oregon DEQ’s objection to the Lower Columbia River federal dam permits. At the hearing, EPA Region 10 had two roles: (1) as the federal permitting agency and (2) EPA’s role to provide an evaluation and recommendations under Section 401(a)(2) of the CWA. EPA Region 10 conducted the meeting pursuant to its role as the federal permitting agency.

Pursuant to its role to provide an evaluation and recommendations under CWA section 401(a)(2), EPA Region 10 provided a presentation at the hearing of its evaluation of and recommendation on Oregon DEQ’s objection.

EPA Region 10’s Evaluation and Recommendations

EPA Region 10 considered the following information in its evaluation and recommendations for the CWA Section 401(a)(2) public hearing:

- May 2020 objection letter and October 2021 letter (Oregon DEQ 2020; 2021);
- CWA section 401 certifications for the four Lower Columbia River federal dam permits issued by Ecology on May 7, 2020 (Ecology 2020a; 2020b; 2020c; 2020d);
- Temperature water quality standards in the states of Washington (WAC 173-201a) and Oregon (OAR-340-041); and
- Implementation authorities for the Columbia and Lower Snake Rivers Temperature TMDL (EPA 2021b).

At the public hearing, EPA Region 10 recommended that the WQAP conditions in the draft NPDES permits be modified to require the Corps to develop a plan that will ensure that both *Washington and Oregon’s* water quality standards for temperature are met. EPA Region 10 also recommended the WQAP conditions be modified to require that *Ecology and Oregon DEQ* review and approve the WQAP and that Oregon DEQ’s review and approval of the WQAP be limited to actions to meet Oregon’s water quality standards for temperature, where those standards are different from Washington’s temperature water quality standards, in the following three areas:

- 13°C for the salmon and steelhead spawning through fry emergence designated use at RM 141.5-143.5 in the Lower Columbia River (to protect chum salmon spawning) from October 15 – March 31 below Bonneville Dam [OAR-340-041-0101-Table 101B; OAR 340-041-0028(4)(a)];
- “The seasonal thermal pattern in Columbia and Snake Rivers must reflect the natural seasonal thermal pattern.” [OAR 340-041-0028(4)(d)]; and

- “...waterbodies must have cold water refugia that are sufficiently distributed so as to allow salmon and steelhead migration without significant adverse effects from higher water temperatures elsewhere in the waterbody.” [OAR 340-041-0028(4)(d)].

Where Washington’s water quality standards for temperature are substantially similar to Oregon’s, Oregon DEQ would not have review and approval authority on the WQAP (EPA 2022a; 2022b).

Basis for Recommendations Presented at the Public Hearing

EPA Region 10 described the following basis for its recommendations at the hearing (EPA 2022a) and in writing after the hearing (EPA 2022b).

- **Oregon and Washington’s temperature water quality standards are similar. However, the differences between the two states’ water quality standards warrant additional permit conditions to ensure Oregon’s water quality requirements for temperature are met. Oregon DEQ is the more appropriate entity to determine the specific actions necessary to meet Oregon’s water quality requirements in the WQAP, where Oregon’s water quality requirements for temperature are different from Washington’s.**

Ecology’s CWA section 401 certification conditions require that the WQAP meet Washington’s temperature water quality standards (Ecology 2020a; 2020b; 2020c; 2020d). This does not ensure that Oregon’s water quality standards for temperature will be met. Although Washington and Oregon’s water quality standards for temperature applicable to the Lower Columbia River are similar, there are some distinct differences, as outlined below. Appendix A of the Columbia and Lower Snake Rivers Temperature TMDL (EPA 2021b) describes Washington’s and Oregon’s water quality standards for temperature in the Lower Columbia River. EPA Region 10 analyzed applicable water quality standards from June to October, the time period of the TMDL, when high temperatures occur in the Lower Columbia River that can impact aquatic life uses.

Washington’s and Oregon’s temperature water quality standards are substantially similar in that both include criteria of 20°C [Washington Administrative Code (WAC) 173-201A-602- Columbia River, Note 1; Oregon Administrative Rules (OAR) 340-041-0028(4)(d)] with the same allowable incremental increase of 0.3°C [WAC 173-201A-320; OAR 340-041-0028(12)(b)(B)].

However, EPA Region 10 identified three areas with substantial differences between the two states’ temperature water quality standards applicable to the Lower Columbia River including the following:

- Oregon has a numeric criteria of a 7-day average daily maximum of 20°C for salmon and steelhead migration corridors designated use [OAR-340-041-0101-Table 101B; OAR 340-041-0028(4)(d)] and 13°C for the salmon and steelhead spawning through fry emergence designated use at RM 141.5-143.5 in the Lower Columbia River (to protect chum salmon spawning) from October 15 – March 31 below Bonneville Dam [OAR-340-041-0101-Table 101B; OAR 340-041-0028(4)(a)]; Washington has a numeric criterion of a 1-day daily maximum of 20°C for spawning and rearing uses for aquatic life [WAC 173-201A-602- Columbia River Note 1].
- Oregon’s migration corridor criterion includes the following supplementary narrative temperature criterion, “The seasonal thermal pattern in Columbia and Snake Rivers must

reflect the natural seasonal thermal pattern.” [OAR 340-041-0028(4)(d)]; Washington’s water quality standards do not include this criterion.

- Oregon also includes the following narrative temperature criterion: “...waterbodies must have cold water refugia that are sufficiently distributed so as to allow salmon and steelhead migration without significant adverse effects from higher water temperatures elsewhere in the waterbody.” [OAR 340-041-0028(4)(d)]; Washington’s water quality standards do not include this criterion.

Therefore, to ensure that both states’ water quality standards for temperature are met, the WQAP conditions should be revised to require that the Corps develop and implement a WQAP that meets both Washington *and Oregon’s* temperature water quality standards in this shared water, consistent with CWA requirements. In addition, requiring Oregon DEQ to review and approve the plan allows Oregon DEQ, rather than Ecology, to assess whether the actions are sufficient to meet Oregon’s water quality requirements, where Oregon’s water quality requirements for temperature are different from Washington’s in the three areas EPA Region 10 has identified. Oregon DEQ’s review and approval of the WQAP, however, would not apply where Washington’s and Oregon’s water quality standards for temperature are substantially similar.

- **Ecology’s CWA section 401 certification conditions require the Corps to meet TMDL load allocations. The specific actions, studies, and timelines to meet TMDL load allocations are not specified in these conditions, and will be determined during TMDL implementation discussions led by Oregon and Washington.**

Ecology’s CWA section 401 certification conditions require the federal dam facilities to meet the LAs for the Columbia and Lower Snake Rivers Temperature TMDL (Ecology 2020a; 2020b; 2020c; 2020d). As noted by Oregon DEQ, however, specific actions, studies, and timelines to meet the LAs are not detailed in Ecology’s CWA section 401 certification conditions (Oregon DEQ 2021). Instead, these actions will be determined during TMDL implementation discussions that will be led by Oregon DEQ and Ecology, since they are the regulatory authorities responsible for TMDL implementation and the development of a TMDL implementation plan.

The LAs in the Columbia and Lower Snake Rivers Temperature TMDL allow the dams to increase temperature from their operations by 0.1°C in the tailraces (downstream of the dam) (EPA 2021g). Although the TMDL estimated the reductions needed at each dam location to meet the load allocation, and those estimates account for migration and Oregon’s spawning criteria, the TMDL does not specify the actions needed to reduce water temperature, meet load allocations, and attain Oregon’s water quality requirements.

The TMDL notes that implementation “is the responsibility of state governments because states with applicable water quality standards retain sole authority for development and oversight of implementation plans to meet the wasteload allocations and load allocations included in the TMDL” (EPA 2021g). Oregon’s authority to implement TMDLs is contained within its regulations at OAR 340-042-0040(4)(1). Ecology and Oregon DEQ have initiated discussions with the public on TMDL implementation. Ecology and Oregon DEQ are leading the development of the TMDL implementation plans, as explained in Oregon DEQ’s October 2021 letter.

Since both Ecology and Oregon DEQ are responsible for TMDL implementation, it is EPA Region 10’s view that both Ecology and Oregon DEQ should have review and approval authority over plans

that will be used to meet LAs from the TMDL. The WQAP required in the permits will identify actions needed to address temperature and meet the load allocations in the TMDL. Therefore, the WQAP condition in the permits should align with the TMDL implementation process by explicitly requiring the WQAP to meet both states' standards for temperature and providing Oregon DEQ review and approval authority over the WQAP in circumstances where Oregon's water quality standards are different than Washington's in the three areas EPA Region 10 has identified.

- **Ecology's CWA section 401 certification conditions requiring a WQAP provide a broad framework to ensure Washington's temperature water quality standards are met, but do not require that Oregon's temperature water quality standards are met. Nor does the WQAP require specific actions and studies (Ecology, 2020a; 2020b; 2020c; 2020d). The specific actions, studies, and timelines to address temperature in the WQAP will be determined during discussions and reviews of the WQAP.**

The broad framework of the WQAP requires the federal dams to meet Washington's temperature water quality standards. However, the WQAP framework does not guarantee that specific actions will be included to meet Oregon's temperature water quality standards in a timely and substantive way. Nor does the WQAP require that Oregon's temperature water quality standards are met.

Adding an additional permit condition that the WQAP must meet Washington *and Oregon's* water quality standards will ensure that Oregon's water quality requirements must be considered and implemented in the WQAP, where Oregon's water quality standards are different from Washington's in the three areas EPA Region 10 has identified. Further, adding an additional permit condition that the WQAP must be submitted to Ecology *and Oregon DEQ* for review and approval will enable Oregon DEQ to determine whether its standards are met by the proposed WQAP studies and actions in the three areas EPA Region 10 has identified.

- **The example conditions proposed by Oregon DEQ in its October 2021 letter are unnecessarily limiting.**

EPA Region 10 considered the example conditions that Oregon DEQ provided in its October 2021 letter, which would require the Corps to study lower operating pools. However, this study is not the only action that could be taken by the Corps to ensure compliance with applicable temperature water quality standards and the TMDL load allocations. While it is possible that Lower Columbia River federal dams running at lower operating pools will assist in meeting the load allocations in the TMDL and both states' water quality standards for temperature, there could be other actions that could achieve this outcome. As such, it is EPA Region 10's view that it would be premature to require the Corps to focus on only one possible solution where a suite of actions may better meet Oregon's water quality requirements for temperature and decrease water temperatures in the Lower Columbia River. Therefore, EPA Region 10 does not recommend adopting the example conditions in Oregon DEQ's October 2021 letter, as these conditions are unnecessarily limiting. However, EPA Region 10's recommendation does not preclude the Corps from undertaking a study of lower operating pools, as proposed by Oregon DEQ.

F. Public Testimony and Written Comments

EPA Region 10, as the federal permitting agency, accepted verbal testimony on Oregon DEQ's objection at the public hearing, and accepted written comments on Oregon DEQ's objection from June 7 through June 22, 2022.

At the hearing, Oregon DEQ, Northwest Sportfishing Industry Association (NSIA), Columbia Riverkeeper, the McGregor Group, the Corps, and Northwest River Partners provided verbal testimony.

In the public notice for the public hearing, EPA Region 10 asked the public for feedback on the following questions:

- Are additional permit conditions necessary to ensure compliance with Oregon’s water quality requirements for temperature?
- Is it necessary for EPA to include any or all aspects of Oregon’s example condition described above to meet Oregon’s water quality requirements for temperature? If so, which aspects of the example condition are necessary to ensure compliance with Oregon’s water quality requirements for temperature and why?
- As an alternative to Oregon’s example condition, what permit conditions would ensure that Oregon’s water quality requirements for temperature are met?
- Are there other conditions EPA should consider in the draft permits to meet Oregon’s water quality requirements for temperature?

Summary of Verbal Testimony and Written Comments

At the hearing, organizations provided verbal testimony generally either supporting the need for additional permit conditions or stating that no additional permit conditions are needed to meet Oregon’s water quality requirements for temperature (EPA 2022a). The organizations and their general positions are described below:

- Support for additional permit conditions including a study of lower operating pool levels, including a minimum operating pool (MOP) (Oregon DEQ, Northwest Sportfishing Industry Association, Columbia Riverkeeper); and
- No additional permit conditions needed to meet Oregon’s water quality requirements (Corps), McGregor Group, Northwest River Partners).

Many parties who provided verbal testimony at the public hearing also provided written comments, along with additional groups that did not provide verbal testimony. The groups included Bonneville Power Association (BPA), Columbia River Inter-Tribal Fish Commission (CRITFC), Region 10 Regional Tribal Operations Committee (R10 RTOC), Pacific Northwest Waterways Association (PNWA), Public Power Council (PPC), the Corps, U.S. Bureau of Reclamation (BOR), and the Yakama Nation (EPA 2022c).

The commenters’ positions on whether additional permit conditions are needed are summarized below. The full written comments will be available at <https://www.epa.gov/npdes-permits/public-hearing-proposed-discharge-permits-federal-hydroelectric-projects-lower>.

- No additional permit conditions needed (BPA, Corps, PPC), including the study and implementation of MOP (BOR);
- Support for EPA’s recommendation to not require a MOP study (PNWA);
- Support for EPA’s recommendation and a lower operating pool study, including MOP (R10 RTOC);
- Support for additional permit conditions to give Oregon DEQ full review and approval authority on the WQAP (Columbia Riverkeeper, NSIA, Save our Wild Salmon Coalition, Northwest

Environmental Defense Center (NEDC), Oregon Chapter of the Sierra Club (one letter), Oregon DEQ);

- Support for additional permit conditions to give Oregon DEQ full review and approval authority on the WQAP; require a lower operating pool study, including minimum operating pools (CRITFC, Yakama Nation); and
- Support for additional permit conditions that uses an integrated watershed approach (Freshwater Trust, R10 RTOC).

Rationale in Written Comments to Include Additional Permit Conditions

The following section summarizes the rationale from written comments for why additional permit conditions are needed to meet Oregon's water quality requirements for temperature.

- **Additional conditions are needed to address high mainstem temperatures in the Columbia River that have been harming endangered and threatened salmon for decades. Dams have been identified as the biggest human-caused source of heating (Oregon DEQ, CRITFC, Columbia Riverkeeper, R10 RTOC, Yakama Nation)**
 - *There is urgency to act to protect salmon and steelhead.* Hot temperatures in the Columbia River are one of the biggest factors harming salmon. Rising temperatures, recent fish kills, and higher temperatures from climate change reinforce the urgency to use all tools to cool water temperatures in the Columbia River (CRITFC, R10 RTOC, Columbia Riverkeeper, NSIA, Save our Wild Salmon Coalition, Northwest Environmental Defense Center (NEDC), Oregon Chapter of the Sierra Club).
 - *EPA's Columbia and Lower Snake Rivers Temperature TMDL (EPA 2021b) identified dam operations and climate change as the biggest sources of heating in the Columbia River.*
 - *Yakama Nation treaty rights on fishing must be protected.* The federal dams on the Columbia River must be regulated to prevent violations of temperature water quality standards. (Yakama Nation)
- **Adding permit conditions to address Oregon DEQ's objection is within the scope of the CWA Section 401 (Oregon DEQ).**
 - *The scope of Section 401 of the Clean Water Act allows for the addition of permit conditions to address Oregon DEQ's objection.* The Pollution Control Hearings Board (PCHB) upheld Ecology's 401 certification conditions in their Summary Judgment Order issued on November 3, 2021, citing Jefferson County PUD v. Washington Department of Ecology, where the U.S. Supreme Court concluded the permitted or licensed activities must comply with state water quality standards under Section 401.
- **Additional permit conditions are needed, and Oregon should have full review and approval authority of the WQAP (CRITFC, Yakama Nation, Columbia Riverkeeper, NSIA, Save our Wild Salmon Coalition, Northwest Environmental Defense Center (NEDC), Oregon Chapter of the Sierra Club, Oregon DEQ).**

- *Limiting Oregon review and approval authority to Oregon's three water quality standards that are distinct from Washington's may inadvertently set up an inefficient system of coordination among Washington, Oregon, and the Corps. This may result in Washington and Oregon providing different perspectives and input on implementation of different elements of their standards at different times. (Oregon DEQ, Yakama Nation)*
- *Relying on Washington to fully enforce Oregon's temperature standards is inadequate assurance that Oregon's water quality requirements for temperatures will be met. The purpose of Section 401 of the Clean Water Act is to give states and tribes the authority to protect their own water quality standards. Oregon and Washington have equal stakes, and there is not a good reason to prevent Oregon from simultaneously safeguarding its water quality standards. Section 401(a)(2) strongly suggests that EPA has broad latitude to go beyond proposing the minimum conditions that might result in attainment of downstream water quality standards. EPA, therefore, should not unnecessarily limit Oregon's authority over the WQAP.*
- **Evaluating the operation of dams at lower pools, including MOP, is necessary and should be added as a condition (Yakama Nation, CRITFC).**
 - *Solutions to reducing higher water temperatures from dams are limited, and all options should be evaluated. A lower operating pool study is one of the few options available that has not been thoroughly explored. Reservoir surface area and water residence time appear to be significant drivers to higher water temperatures (Columbia Riverkeeper).*
 - *The study will yield valuable information regarding potential changes to federal dams that would improve water quality. New management strategies can only occur if regulatory agencies have adequate data (Yakama Nation).*
 - *Oregon DEQ is seeking permit conditions that require the Corps to describe and document its operational constraints and evaluate alternatives to meet its temperature load allocation and achieve compliance with water quality standards (Oregon DEQ). This includes an extensive analysis and modeling of all potential temperature attainment conditions, and that modeling results and analysis be peer reviewed (CRITFC).*

Rationale in Written Comments to Exclude Additional Permit Conditions

The following section summarizes the rationale from written comments for why additional permit conditions are not needed to meet Oregon's water quality requirements for temperature.

- **No additional permit conditions are needed to address Oregon's water quality requirements for temperature (BPA, Corps, PPC)**
 - *Oregon's objection is outside the scope of Section 401(a)(2). The relevant issue is whether the requirements in the NPDES permit will ensure the discharge complies with Oregon's water quality requirements in the NPDES permit. The relevant discharge is the point source discharge of cooling water. (Corps, BPA, PPC)*
 - *EPA's NPDES draft permits already ensure discharges will comply with Oregon's water quality requirements. The TMDL determined that heat load from NPDES point sources are negligible, therefore, point source discharges from dams are expected to meet Oregon's water quality temperature requirements. The TMDL complies with Oregon's water quality standards for temperature, and permits include WLAs from the TMDL. (Corps, BPA, PPC)*

- *Ecology's water quality certification provides sufficient assurance that Oregon's water quality will be protected.* The certification requires that TMDL load allocation must be met, and the TMDL meets Oregon's water quality standards. (Corps, BPA, PPC)
- **No permit condition requiring study and implementation of lower operating pools, including minimum operating pools should be included;** Operating at MOP is unproven and could be harmful to fish, tribal resources and harvest, and affect the ability of the dams to fulfill its Congressional requirements
 - *The assumption that running dams at MOP will improve mainstem temperatures is speculative and not based on scientific or engineering analysis.* The Corps has modeled operations with lower operating pools and found that overall, hourly river temperatures would change a negligible amount compared to current operational pools. (Corps, BPA, PPC, PNWA)
 - *Operating at MOP could harm fish.* Lower operating pools could harm adult fish by reducing flow in adult fish ladders and could harm juvenile fish by reducing flows at surface passage structures, (e.g., sluiceways and weirs). (Corps, BPA, BOR, PNWA)
 - *Operating at MOP could harm tribal cultural resources and tribal harvest.* Lower operating flows could unearth important tribal cultural sites. Lower flows at tribal fish harvest locations could impact tribal fish harvest rights. (Corps, BPA, BOR, Yakama Nation)
 - *Operating at MOP could reduce navigation, water supply (Corps, BPA, PNWA), and energy delivery from Lower Columbia River Dams and other dams in the Columbia River system impacting grid reliability (BPA, BOR, PPC, PNWA)*

Additional Comments for Consideration

- ESA consultation is necessary if the permit requires that the Corps alter its operations (Corps).
- Multiple actions are needed to solve the temperature issue, including cold water refugia, and the permits should consider solutions that encompass the entire watershed (R10 RTOC, TFT).

G. EPA Evaluation of Verbal Testimony and Written Comments from the Public Hearing

Section 401(a)(2) of the CWA states that after EPA provides its evaluation and recommendations, the federal permitting authority, “based upon the recommendations of such State, the Administrator, and upon any additional evidence, if any, presented to the agency at the hearing, shall condition such license or permit in such manner as may be necessary to insure compliance with applicable water quality requirements. If the imposition of conditions cannot insure such compliance such agency shall not issue such license or permit.”

Pursuant to its role under CWA section 401(a)(2), EPA presented its evaluation and recommendations at the public hearing on June 7, 2022, (EPA 2022a) and presented a written evaluation and recommendation after the public hearing (EPA 2022b). EPA Region 10, as the federal permitting authority, accepted comment on ODEQ's objection from June 7-21, 2022. EPA Region 10, as the federal permitting authority, evaluated the verbal testimony and written comments on whether additional permit conditions are needed to meet Oregon's water quality requirements. Below is EPA's basis for including the additional permit conditions.

After reviewing comments that assert additional permit conditions are not necessary, EPA has concluded that additional permit conditions are necessary. EPA has determined that additional permit conditions are needed to ensure compliance with Oregon's applicable water quality

requirements because Oregon has distinct water quality standards that are not addressed by including into the permits the conditions from Washington's 401 certification. EPA Region 10's written evaluation described Oregon's and Washington's distinct water quality standards for temperature and the necessity for additional permit conditions to ensure that Oregon's water quality standards for temperature are addressed. EPA Region 10's written evaluation also described that Oregon DEQ, not Ecology, is the appropriate entity to determine whether its own water quality requirements are met. EPA believes the conclusions from the evaluation still apply and that additional permit conditions are needed to ensure compliance with Oregon water quality requirements for temperature. Therefore, EPA is seeking comment on the proposed permit conditions at Section II.H of this Fact Sheet.

EPA has also determined that an additional permit condition that requires the facilities to study and implement lower operating pools, including minimum operating pools, is not needed. EPA recognizes that a study evaluating the facilities operating at lower pools could be valuable to understanding the potential impacts on water temperatures and could inform ways to meet LAs specified in the Columbia and Lower Snake Rivers Temperature TMDL, a requirement of Ecology's 401 certification. EPA considered the example conditions that Oregon DEQ provided in its October 2021 letter, which would require the Corps to study changes in operating pools, including minimum operating pools (MOP), and include particular elements in the study. Oregon's conditions would also require the Corps to develop and enact an Implementation Plan based on the results of their study (See **Figure 2**; Oregon DEQ 2021). EPA has determined that Ecology's 401 certification allows for the inclusion of a lower operating pool study in the WQAP and that the WQAP process affords Ecology and Oregon DEQ the opportunity to determine the appropriate scope and elements of such a study if it is required. Therefore, EPA is not proposing a specific permit condition requiring a study of the temperature effects of lower pool operations.

EPA is also taking comment on whether Oregon should have full review and approval authority of the WQAP. EPA is not proposing that Oregon have full review and approval authority of the WQAP. However, EPA sees merit in comments that permit conditions granting Oregon full review and approval would align with TMDL implementation efforts, which have significant overlap with development of the WQAP. Therefore, EPA is seeking comment on the alternative permit conditions at Section II.I of this Fact Sheet.

H. Proposed Permit Conditions to Ensure Compliance with Oregon's Water Quality Requirements for Temperature

EPA is proposing the following permit conditions to ensure compliance with Oregon's temperature water quality requirements. EPA added to the existing permit conditions to ensure compliance with Oregon's water quality requirements for temperature. These changes are highlighted below:

1. The permittee must implement temperature control strategies and meet the load allocations in the Columbia and Lower Snake Rivers Temperature TMDL (RCW 90.48.080 and WAC 173-201A-510(5)).
2. The permittee must consult with Ecology to develop a water quality attainment plan (WQAP) per the conditions below:
 - a) The WQAP shall include all applicable requirements in WAC 173-201A-510(5) *Compliance schedule for Dams*, and must include a detailed strategy for achieving Washington's **and Oregon's** water quality standards for temperature and associated designated uses, including but not limited to, conditions in fish bypass systems of the dam.
 - b) The permittee must provide the scope of the WQAP to Ecology for review one year after the permit effective date.
 - c) The permittee must provide the final WQAP to Ecology for approval within two years of the

- permit effective date.
- d) The permittee must submit a progress report to Ecology for approval within six years of the effective permit date. The permittee must submit a summary report to Ecology for approval within nine years of the permit effective date and prior to the end of the ten-year dam compliance period.
3. **The permittee must consult with Oregon DEQ on the following conditions of the WQAP per the conditions below:**
- a) **The permittee must provide the final WQAP to Oregon DEQ within two years of the permit effective date for review and approval of actions to achieve the following standards:**
- i. **13°C for the salmon and steelhead spawning through fry emergence designated use at RM 141.5-143.5 in the Lower Columbia River (to protect chum salmon spawning) from October 15 – March 31 below Bonneville Dam [OAR-340-041-0101-Table 101B; OAR 340-041-0028(4)(a)];**
- ii. **Seasonal thermal pattern in the Columbia River [OAR 340-041-0028(4)(d)]; and**
- iii. **Cold water refugia [OAR 340-041-0028(4)(d)].**
- b) **The permittee must submit a progress report to Oregon DEQ for approval within six years of the effective permit date. The permittee must submit a summary report to Oregon DEQ for approval of the actions for the standards at Permit Part [insert].**
4. The permittee must comply with total dissolved gas standards in WAC 173-201A-200(1)(f), or any future modification to the standards thereof.
5. The permittee must submit WQAP reports to Ecology **and Oregon DEQ** to the following address, unless agreed upon by Ecology **and Oregon DEQ**:

Angela Zeigenfuse
Water Quality Program
PO Box 47600
Olympia, WA 98504-7600

Columbia River Coordinator
Oregon Department of Environmental Quality
700 NE Multnomah St. Ste 600
Portland, OR 97232

I. Alternative permit conditions for full WQAP review and approval by Oregon DEQ

Although EPA is not proposing the permit conditions below, EPA is requesting comment on permit conditions that would provide Oregon DEQ review and approval authority over the entire WQAP. These alternative changes to the conditions to ensure compliance with Oregon's water quality requirements for temperature are highlighted below:

1. The permittee must implement temperature control strategies and meet the load allocations in the Columbia and Lower Snake Rivers Temperature TMDL (RCW 90.48.080 and WAC 173-201A-510(5)).
2. The permittee must consult with Ecology to develop a water quality attainment plan (WQAP) per the conditions below:
- a) The WQAP shall include all applicable requirements in WAC 173-201A-510(5) *Compliance schedule for Dams*, and must include a detailed strategy for achieving Washington's **and Oregon's** water quality standards for temperature and associated designated uses

- b) The permittee must provide the scope of the WQAP to Ecology **and Oregon DEQ** for review one year after the permit effective date.
 - c) The permittee must provide the final WQAP to Ecology **and Oregon DEQ** for approval within two years of the permit effective date.
 - d) The permittee must submit a progress report to Ecology **and Oregon DEQ** for approval within six years of the effective permit date. The permittee must submit a summary report to Ecology **and Oregon DEQ** for approval within nine years of the permit effective date and prior to the end of the ten-year dam compliance period.
3. The permittee must comply with total dissolved gas standards in WAC 173-201A-200(1)(f), or any future modification to the standards thereof.
 4. The permittee must submit WQAP reports to Ecology **and Oregon DEQ** to the following address, unless agreed upon by Ecology **and Oregon DEQ**:

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J. References

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EPA 2020b. Letter from Susan Poulson, EPA Region 10, to Vince McGowan, Washington Department of Ecology re: Public Notice of Draft Permit for the Federal Hydroelectric Generating Facilities on the Lower Columbia River and Lower Snake River in Washington and Request for Final Clean Water Action Section 401 Certification. March 18, 2020.

EPA 2020c. Letter from Susan Poulson, EPA Region 10, to Jennifer Wigal, Oregon Department of Environmental Quality re: Notification of 401(a)(2) requirements for Bonneville Project, WA0026778; The Dalles Lock and Dam, WA0026701; John Day Project, WA0026832; McNary Lock and Dam, WA0026824. March 18, 2020.

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Oregon DEQ 2020. Letter from Richard Whitman, Oregon DEQ, to Chris Hladick, EPA re: Notification to U.S. Environmental Protection Agency (EPA) Pursuant to 401(a)(2) for Bonneville Project, WA0026778; The Dalles Lock and Dam, WA0026701; John Day Project, WA0026832; and McNary Lock and Dam, WA0026824. May 15, 2020.

EPA 2022a. EPA Region 10 Public Hearing on Clean Water Act Section 401(a)(2) Objection from Oregon DEQ on the Proposed NPDES permits for Lower Columbia River Federal Hydroelectric Projects. Will be available upon request.

EPA 2022b. EPA Region 10 Clean Water Act Section 401(a)(2) Evaluation and Recommendations on the Proposed NPDES permits for Lower Columbia River Federal Hydroelectric Projects. June 7, 2022.

EPA 2022c. Written Comments on EPA Region 10's Clean Water Act Section 401(a)(2) Evaluation and Recommendations on the Proposed NPDES permits for Lower Columbia River Federal Hydroelectric Projects. Will be available at: <https://www.epa.gov/npdes-permits/public-hearing-proposed-discharge-permits-federal-hydroelectric-projects-lower>.

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