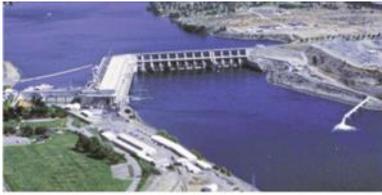


## Chelan County PUD (Alene Underwood)

Please find attached our comments. Thank you.



## PUBLIC UTILITY DISTRICT NO. 1 of CHELAN COUNTY

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December 31, 2025

Washington Department of Ecology  
300 Desmond Drive SE  
Lacey, WA 98503

RE: Columbia & Snake River Temperature TMDL Implementation Plan Survey

Chelan County Public Utility District (Chelan PUD) appreciates the opportunity to provide input to the Washington State Department of Ecology (Ecology) as it develops an implementation plan in response to the Environmental Protection Agency's 2021 Columbia & Snake River Total Maximum Daily Load (TMDL). Two of Chelan PUD's hydroelectric projects in the Mid-Columbia River, Rocky Reach and Rock Island, have been assigned temperature load allocations under the TMDL. These comments address our concerns with the TMDL and Ecology's implementation approach for non-federal hydropower projects that operate pursuant to licenses issued by the Federal Energy Regulatory Commission (FERC). In addition, Chelan PUD is a member of Northwest River Partners and the Northwest Public Power Association and supports their separate comments.

### **Background**

Chelan PUD is a Washington State public utility district formed in 1936 by local voters who wanted affordable power for both rural and urban residents. We own and operate two hydroelectric dams on the Columbia River (the Rocky Reach and Rock Island Projects) and one on Lake Chelan – all licensed by FERC. These three hydropower projects total about 2,000 MW of capacity and deliver about 1,100 average megawatts (aMW) of clean, renewable energy. For decades, the region has relied on our hydropower system, which generates surplus power to sell throughout the Northwest after serving our 50,000 local customers. Pursuant to the terms and conditions of our Rocky Reach Project license, issued in 2009, Chelan PUD intends to develop a Water Quality Attainment Plan for the Project to address its responsibility under the TMDL<sup>1</sup>. Meanwhile, Chelan PUD is seeking a new federal operating license for the Rock Island Project, whose license expires December 31, 2028, and will complete a Water Quality Attainment Plan for this Project through the relicensing process.

### ***Policy Considerations***

In April 2025, the Pacific Northwest Utility Coordinating Committee (PNUCC) released its 2025 Northwest Regional Forecast, which collects and aggregates data to assess loads and resources in

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<sup>1</sup> Ecology approved the Water Quality Attainment Plan schedule for the Rocky Reach Project on November 3, 2025. The 18-month schedule began October 1, 2025. (Ecology, 2025)

Washington, Oregon, Idaho and Montana.<sup>2</sup> The report suggests loads could grow by approximately 7,800 aMW over the next decade – an increase of more than 30 percent. This translates to around 23,800 aMW in 2025, rising to roughly 31,600 aMW by 2034. Then in September 2025, the consulting firm E3 completed a new analysis of resource adequacy in the Pacific Northwest, which projected a stark resource shortfall beginning in 2026 and reaching nearly 9 GW by 2030– a shortfall about the size of Oregon’s entire energy load.<sup>3</sup> Rapid load growth is a huge challenge for the region. Yet mitigation for EPA’s temperature TMDL being discussed in Ecology’s stakeholder Advisory Groups includes such options as structural modifications to dams that could reduce generating capability and even negatively impact ongoing fish and wildlife programs and commitments.

- Upriver Temperature Contributions

The specter of structural modifications to hydropower projects in the United States is a steep price to pay for speculative and unlikely temperature benefits. Fundamentally, water flowing across the border from Canada is generally already warmer than Washington state water quality standards. This is acknowledged in EPA’s 2021 TMDL itself. Specifically, EPA explains that “...where the rivers cross the upstream boundaries of the TMDL study area (Canadian border and the Washington/Idaho border) the water temperatures exceed the Washington water quality criteria by a substantial margin from June through September. The current water quality conditions present a significant challenge to achieving downstream water quality standards in Washington and Oregon.”<sup>4</sup>

With this baseline, implementation of the EPA TMDL is, on its face, impractical and probably unachievable. It attempts to address temperature conditions in the U.S. but does not accommodate, from a compliance perspective, the fact that state water quality standards (WQS) are already exceeded at the border. The EPA-issued TMDL allocates all hydropower projects *combined*, including Chelan PUD’s projects, a heat contribution equivalent to a river temperature change of only 0.1 degrees Celsius. The cumulative 0.1 degree Celsius allocation is practically impossible to measure accurately, much less achieve.

In its Implementation Plan, Ecology should acknowledge background conditions set by inflows from Canada and moderate its domestic objectives. This should include moving toward a numerical standards change, including through a use attainability analysis if necessary, which is, in fact, contemplated in Ecology’s standards to be used in a situation such as this.

- Temperature Impacts and Options

Not only does the water enter the U.S. from Canada out of compliance, but U.S. projects upstream of Chelan PUD’s dams (most notably Grand Coulee) are so large that their activities dwarf any attempts to address any seasonal temperature exceedances within our small run-of-river reservoirs. Rocky Reach has 36,400 acre-feet of useable storage, or just 0.7% of Lake Roosevelt’s 5,185,500 acre-foot active capacity. Rock Island effectively has no storage capacity. In fact, the combined useable storage capacity of all five

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<sup>2</sup> [2025-PNUCC-Northwest-Regional-Forecast-final.pdf](#)

<sup>3</sup> [Solutions to Improve Interregional Transmission Planning and Permitting](#)

<sup>4</sup> Columbia and Lower Snake River Temperature Total Maximum Daily Load. U.S. Environmental Protection Agency. Region 10. Page 49. [Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load \(TMDL\) - August 13, 2021 \(Errata Update May 10, 2022\)](#)

Mid-Columbia run-of-river projects is 348,900 acre-feet, or just 6.7% of Lake Roosevelt's 5,185,500 acre-foot active capacity.

Ecology's TMDL Implementation Plan should recognize that projects with little operational control over the volume and timing of releases also have little to no control over the heat exchange that may occur within their impoundments, especially when these reservoirs do not stratify. River temperature at these projects is largely a function of the flows and the temperature received from upstream dams. Moreover, there is nothing that can be done operationally at these small projects to effectively offset exceedances originating from Canada or Grand Coulee's reservoir, Lake Roosevelt. Furthermore, the most sensible approach is to begin this Implementation Plan with the furthest upstream project that could result in the largest improvement to temperature before looking to run-of-river Projects with no active storage or stratification.

- Beneficial Hydro Operations

In its 2021 TMDL, EPA evaluated impacts from climate change, dams, and a variety of other factors on Columbia and Snake River temperatures. Specifically, "EPA determined that the warming trend due to climate change has significantly affected temperatures in the rivers since the 1960s, and these adverse thermal impacts continue to increase." EPA also highlights the role of dams on temperature. Finding that dams have a warming effect during some periods, EPA also acknowledges that the "impacts of dams are complex and variable: dam operations can result in cooler or warmer downstream temperatures, depending on time of year and dam operations."

In fact, multiple scientific analyses demonstrate that hydropower projects, depending on reservoir size, can moderate temperature swings, reduce peak summer highs, and help stabilize river conditions during the critical summer months. Yet Ecology's TMDL implementation process focuses only on the potential warming effects during certain times of the year without crediting cooling effects at other times that are especially protective for fish.

In its Implementation Plan, Ecology should consider how implementation requirements can be mediated to reflect the net effect of hydropower's contributions to temperature.

### ***Technical Comments***

Leaving aside these concerns with the TMDL and the underlying temperature standards, Chelan PUD requests that Ecology recognize individual dams are not solely responsible for achieving the TMDL's cumulative temperature allocation. EPA's TMDL allocates a cumulative 0.1° C increase in temperature to dam impoundments and also identifies each individual dams reach impact which is the maximum responsibility that each dam owner has for achieving the cumulative allocation.

EPA states, "[t]he dams contributing to downstream impairments are those dams in column E with a reach impact greater than zero."<sup>5</sup> However, not all dams contribute exceedances in each season. Rocky Reach only has reach impacts in June through August, and Rock Island has a reach impact only in August.

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<sup>5</sup> Ibid page 54.

Since a dam has no responsibility for reducing temperatures in any month by more than its modeled reach impact for that month, it has no responsibility for reducing temperatures in any month in which its modeled reach impact is zero or negative.

Limiting a dam's responsibility to its reach impact is also consistent with R.C.W. 90.48.422(3), which states that, "[w]ith respect to federal energy commission licensed hydropower projects, the department [Ecology] may only require a person to mitigate or remedy a water quality violation or problem to the extent there is substantial evidence such a person has caused such a violation or problem".<sup>6</sup> It would be inconsistent with R.C.W. 90.48.422(3) if Ecology implemented the TMDL by requiring an individual dam operator to mitigate or remedy the cumulative "allocation exceedance" after the operator has already met the "reach impact" assigned for its facility in TMDL Tables 6-6 through 6-10, and the "allocation exceedance" is still not met because of heat contributions by other upstream projects.

Accordingly, Ecology's TMDL Implementation Plan should clearly identify each individual dam's contribution to exceedances of the 0.1° C cumulative dam allocation as no greater than the individual dam's reach impact.<sup>7</sup>

### ***Process Versus Outcome***

Chelan PUD has been participating in Ecology's Technical Advisory Group meetings on TMDL implementation and appreciates the opportunity to provide input through this survey. However, we are concerned that the group is spending significant time considering unrealistic implementation options (ranging from floating wetlands to shade balls that clearly have no place in a fast-flowing river environment). We understand the challenges presented by the TMDL. However, we hope Ecology will move expeditiously past unproductive and speculative proposals and analysis that cannot be implemented without potentially degrading the regional hydropower system.

Chelan, and other mid-Columbia public utility districts, contribute significantly to tributary habitat restoration and enhancement and provide successful examples of processes already in place more likely to produce positive benefits to the resource. For example, Chelan PUD and its federal, state, and Tribal partners regularly invest in projects for temperature and habitat benefit through its Rocky Reach and Rock Island Habitat Conservation Plans (HCP) Tributary Committees that meet monthly. Tributary restoration and other offsite projects or financial contributions to fish habitat projects are topics currently contemplated under the HCPs; the FERC license and relicensing process; and Ecology's 401 water quality certifications.

Going forward, we encourage a reorientation of the TMDL implementation plan to contemplate mitigation options that preserve the net benefits of the hydropower system and more productively focus resources on achievable implementation pathways – sooner rather than later.

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<sup>6</sup> [RCW 90.48.422: Water quality standards—Compliance methods—Department authority.](#)

<sup>7</sup> See each dam's "reach impact" in column E, Tables 6-6 through 6-10. EPA's TMDL Pages 55 – 59. [Columbia and Lower Snake Rivers Temperature Total Maximum Daily Load \(TMDL\) - August 13, 2021 \(Errata Update May 10, 2022\)](#)

**Conclusion**

Thank you for the opportunity to provide comments. We appreciate Ecology's willingness to examine these complex issues and look forward to having productive conversations in 2026.

Sincerely,

Alene Underwood  
Director, Natural Resources  
Chelan County PUD