



# COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

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*Delivered via web portal and e-mail*

Marla Koberstein  
Water Quality Program  
Washington State Department of Ecology  
PO BOX 47600  
Olympia, WA 98504-7600  
[mkob461@ecy.wa.gov](mailto:mkob461@ecy.wa.gov)

RE: Proposed Revisions to Water Quality Standards for Surface Waters of the State of Washington: Use Attainability Analysis and Site-Specific Criteria for Chelan River

Dear Ms. Koberstein:

The Columbia River Inter-Tribal Fish Commission (CRITFC) appreciates the Washington State Department of Ecology (Ecology) reaching out to our staff to discuss the proposed changes to water quality standards for the Chelan River. CRITFC is invested in restoring and improving habitat for Columbia Basin fisheries. Chelan PUD's proposal to change designated uses of the Chelan River through a "use attainability analysis" (UAA) and then set site-specific water quality criteria that will diminish protections for the waterbody, is an action that should be taken with great care and thorough analysis. CRITFC finds the overall analyses inadequate; CRITFC does not agree that the new use designation is for the "highest attainable use" or that Chelan PUD has implemented all known, reasonable, and feasible measures to meet criteria. CRITFC therefore requests that Ecology reevaluate the proposals.

CRITFC's member tribes, the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of the Warm Springs Reservation of Oregon, have accessed the fisheries of the Columbia Basin since time immemorial. These rights were secured in each of their respective treaties with the U.S. government and as such, the tribal treaty fisheries have priority first in time and place to any hydropower dam in the basin. Dams are not and should not be considered part of any "baseline" when assessing the condition of a waterbody or attainability of its uses. Instead, dams must be held accountable for their contribution to water quality impacts such as heat trapping, dissolved oxygen reduction, and other conditions that reduce habitat viability for aquatic life.

The State of Washington has promised to take bold action to address climate change, yet actions such as this do not align well with those goals. For the Columbia Basin's salmonids to survive, the region needs to do the hard work to reduce water temperatures of tributaries as well as the mainstem river and find and maintain healthy habitat to support fisheries into the future.

### **The Proposal Sets a Precedent That Conflicts with the Purpose of the Clean Water Act.**

This proposal allows for removal of a designated use, a diminishment of another designated use, and downgrade of water quality criteria in an already water quality-compromised watershed, merely for the benefit of Chelan PUD. In fact, Ecology, in its cost-benefit analysis document, points out that the proposal will result in “benefits of avoided noncompliance for Chelan PUD” See Publication 21-10-005. Yet, Ecology does not factor the cost to fisheries, water quality, or the environment. The precedent of allowing a regulated discharger to change uses and downgrade its obligations, even though it has a direct impact on those conditions, is troubling. It is also contrary to the purpose and intent of the Clean Water Act (CWA) to “restore and maintain the biological integrity of the Nation’s waters” or Washington State’s goal to “retain and secure high quality for all waters of the state.” § 90.48 RCW.

### **Ecology Cannot Remove a Use that is Existing.**

A UAA allows states to remove a “designated use” (or set sub-categories of a use) if that use is not feasibly attainable. 40 CFR § 131.10(g). Designated uses are different from “existing uses” which cannot be removed. 40 CFR § 131.3. Furthermore, the CWA and Washington State’s antidegradation rule requires the state to maintain and protect existing uses. WAC § 173-201A-310(1). As such, Ecology must set appropriate water quality criteria to protect the most sensitive existing uses of the Chelan River.

It is unclear that Ecology has adequately researched whether salmonid spawning in the Chelan River is an existing use. An existing use is one that was “actually attained in the water body on or after November 28, 1975.” 40 CFR § 131.1(e). Based on the available documents, CRITFC cannot find evidence to support Ecology’s assertion that salmonid spawning was not an existing use. On the other hand, there is evidence that salmonid spawning occurred in the 1980s and 1990s.<sup>1</sup>

### **Ecology’s Proposed Site-Specific Criteria is Inadequate to Support Existing Uses.**

According to our assessments, the site-specific criterion downgrade is not warranted, and, in fact, the new criteria will not adequately support the current existing uses. Furthermore, Chelan PUD has not implemented all reasonable and feasible measures to improve the temperatures of Reach 4 of the Chelan River.

In Chelan PUD’s Chelan River UAA<sup>2</sup> And Site-Specific Criteria Development, Chelan PUD proposes a revision of the default aquatic life use (salmonid spawning, rearing, and migration in the Chelan River) to the highest attainable use and site-specific temperature and dissolved oxygen (DO) in the river. Water quality conditions in the river are heavily influenced by the

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<sup>1</sup> U.S. Fish and Wildlife Service, *Statute and Propagation of Chinook Salmon in the Mid-Columbia Through 1985*, at 68 (1987), Chelan PUD, Final 2019 Biological Objectives Status Report, 31.

<sup>2</sup> Four Peaks Environmental, Chelan River Use Attainability Analysis And Site-Specific Criteria Development, 2019.

water quality conditions in the lake, which is the river's source of water. In-lake and river water temperatures routinely exceed the temperature criteria of 17.5°C for salmonid spawning, rearing, and migration. In fact, in all years of the Chelan River Biological Evaluation and Implementation Plan<sup>3</sup> (CRBEIP), summer temperatures exceeded 20°C at the dam's lower-level outlet (LLO), which draws source river water from the lower forebay of Lake Chelan's Wapato Basin.

The site-specific water quality criteria for temperature being proposed by Chelan PUD was developed based on two factors. First, that high in-river temperatures are causally related to high in-lake water temperatures and second, solar heating also exhibits some control on the in-river temperatures. The proposed criteria are the product of a statistical boot-strapping analysis that involved 7-day average of the daily maximum (7-DADMax) temperature over a 10-year period of record. The details of the proposed standard are explained in Appendix A of the UAA. Visually, the proposed criteria look like current in-river temperature conditions (Fig. 1<sup>4</sup>).

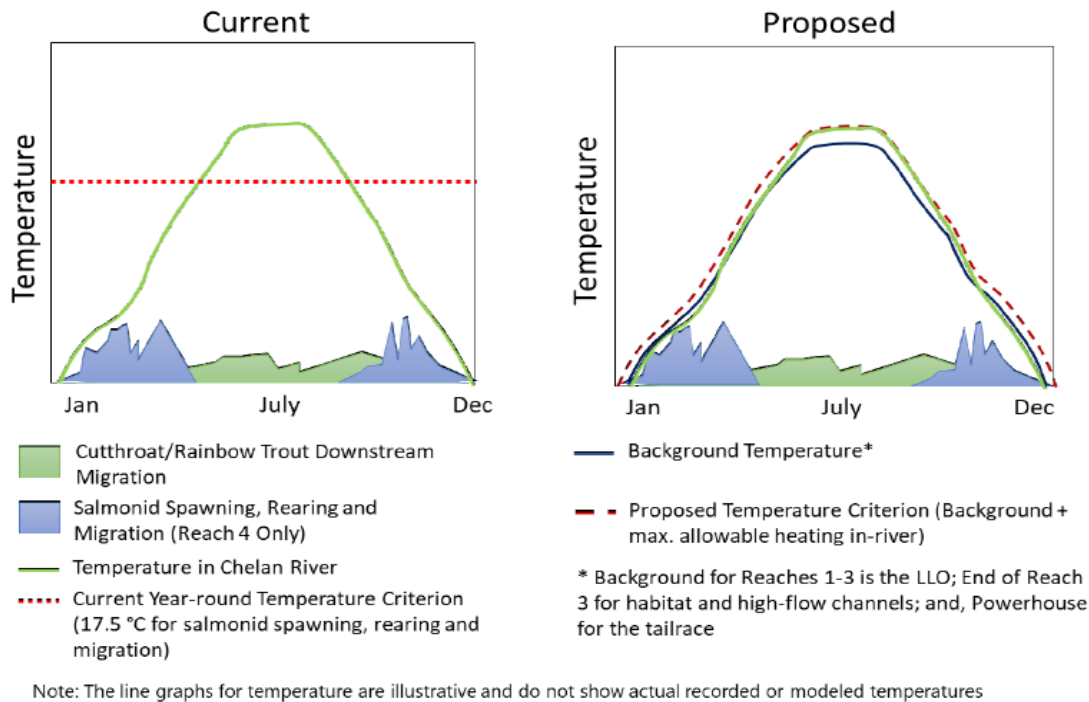


Figure 1. Conceptual Illustration of Proposed Site-Specific Temperature Criteria for the Chelan River, from the UAA.

To evaluate additional management options, a QUAL-2K model of the river was developed. Among other things, the model was used to investigate temperature effects at different discharges from the LLO<sup>5</sup>. Increasing flow was shown to reduce daily maximum temperature by up to 1°C for an increase from 80 cfs to 200 cfs, while increasing flow to 500 cfs could reduce daily maximum water temperature by 2°C. The model simulations also resulted in higher minimum nighttime temperatures. However, the model produced constant flow simulations,

<sup>3</sup> Chelan PUD, Chelan River Biological Evaluation And Implementation Plan, 2003.

<sup>4</sup> Four Peaks Environmental, Chelan River Use Attainability Analysis And Site-Specific Criteria Development, 82.

<sup>5</sup> WEST consultants, Chelan River Temperature Model Calibration and Initial Results, 2016

which may not have best represented snowmelt-influenced run-off patterns, where stream flows decrease at night.

We do not know exactly what the historic pre-dam flow regime was, and it was not modeled in the UAA. However, we can make inferences from the period of record (1903-present) inflows and outflows to the lake (Fig. 2). From that, we can see that the higher discharges simulated in the QUAL-2K model (e.g., 500 cfs) are not unlike discharges that would be seen in a naturally flowing Chelan River. In fact, an analysis of flow exceedance shows a 90% probability of exceeding 500 cfs over the period of record (Fig. 3).

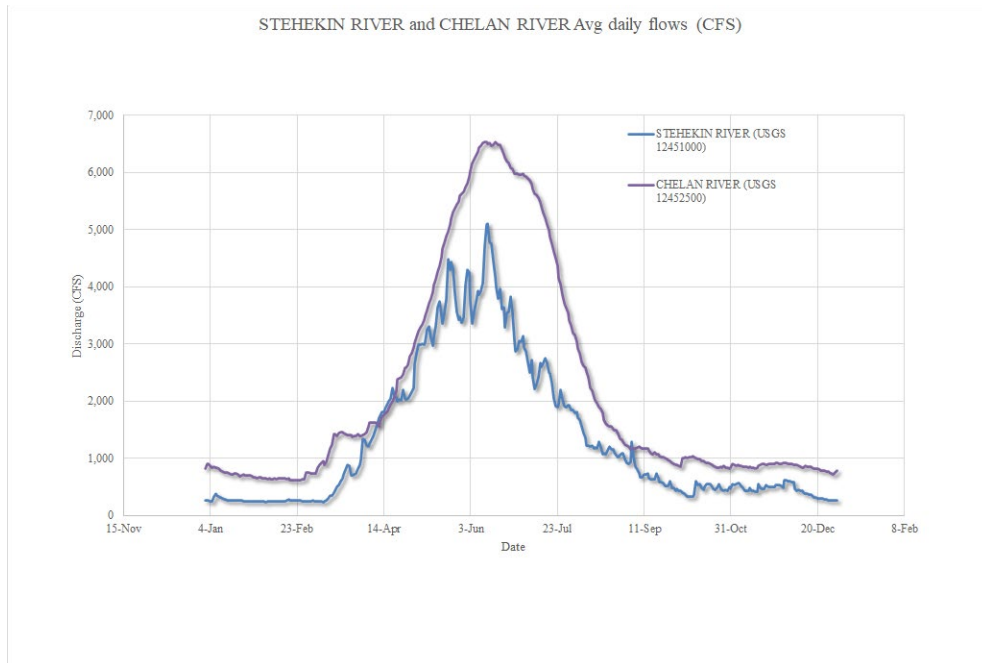


Figure 2. Average daily stream flows at the inflow to Lake Chelan (Stehekin River - USGS 12451000) and the outflow to Lake Chelan (Chelan River - USGS 12452500) from 1903 – 2021.

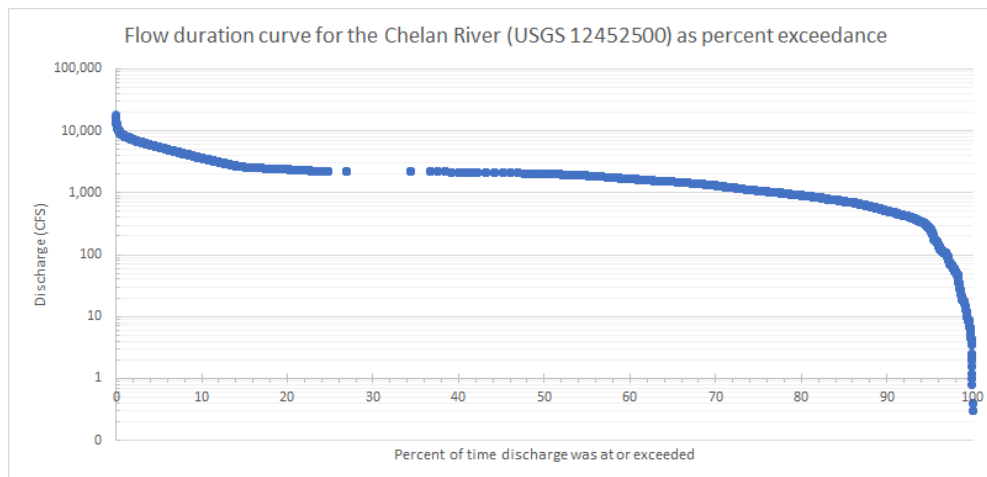


Figure 3. Probability exceedance curve for the Chelan River over the period of record, 1903-2021.

Thus, what we see in the UAA is a request for a site-specific criterion for temperature that closely follows the current operating conditions and not the natural flow regime of the river, pre- or post-development. When lake discharges are used as surrogate for natural Chelan River flows (e.g., non diverted powerhouse flows), it seems reasonable, then, to expect temperature benefits like those observed in the QUAL-2K modeled simulations. Thus, in the absence of more robust pre-development modeling, it is unreasonable to accept a site-specific criterion for temperature that resembles current operating conditions without considering natural free-flowing conditions.

The bar for issuance of the first-ever site-specific temperature criteria in the state of Washington should be onerously high. Again, this UAA proposes a site-specific criterion for temperature that closely resembles the current operating conditions without an exhaustive analysis of pre-development or natural flow conditions. Ecology should seriously consider the effect of setting a precedent where the applicant can set water quality criteria according to current conditions, not natural conditions. We do not feel that this analysis meets the high bar necessary for setting a rule-making precedent of that kind.

### **The Proposed Criteria Conflicts with Ecology's Position on the Columbia River TMDL.**

The proposed site-specific criteria allowance for temperature in the Chelan River is contrary to the position that Ecology takes in its August 2020 letter to EPA on the TMDL for temperature in the Columbia and lower Snake rivers. In its comments to EPA, Ecology states:

We must address the temperature issues on the Columbia and Snake River in order to provide cool, clean waters for salmon... We do not agree with EPA's recommendation to weaken our water quality standards... We should focus on implementing actions that can reduce temperatures and help us meet our water quality standards.


EPA's TMDL assigns a cumulative temperature load allocation to the 23 major tributaries that drain into the Columbia and lower Snake rivers. One of these 23 tributaries is the Chelan River. Ecology should adhere to the goals outlined in its August 2020 comments to EPA and find additional measures that can be taken to minimize the thermal load that the Chelan River delivers to the mainstem Columbia.

### **Ecology Should Consider the Yakama Nation Proposed Mitigation Options.**

In addition to using higher flow options, Yakama Nation has proposed two possible mitigation actions which need to be more fully explored. The first is building a pipeline connecting the penstock intake to water cooler than is available at the current intake location. The second is the use of groundwater to cool Reach 4. The pipeline option is summarily dismissed by Chelan PUD because of a limited ability to provide cooler water and cost. The groundwater option was eliminated because of a low probability that enough groundwater would be available. It is premature to take these alternatives off the table. Because the requests of UAA are extraordinary we feel these mitigation options should be more fully explored and the costs and benefits of these options shared.

CRITFC supports and incorporates by reference the entirety of the Yakama Nation comments. Thank you for your time and consideration. If you have any questions, please contact our staff, Dianne Barton, Tom Skiles, or Julie Carter at (503) 238-0667.

Sincerely,

A handwritten signature in black ink, appearing to read "Aja K. DeCoteau". The signature is fluid and cursive, with a large initial "A" and a long, sweeping underline.

Aja K. DeCoteau  
Interim Executive Director

Cc: Melissa Gildersleeve [mgil461@ecy.wa.gov](mailto:mgil461@ecy.wa.gov)