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RE: Columbia & Snake River Temperature TMDL Implementation Plan

To Whom it May Concern,

Thank you for the opportunity to provide comments on the Columbia & Snake River Temperature Implementation Plan.

Northwest Requirements Utilities (NRU) is a trade association representing 60 public utilities across 8 states. We advocate on behalf of our members for cost-effective and reliable power supply and transmission service, predominantly through the Bonneville Power Administration.

We appreciate the opportunity to provide input on the implementation of the TMDL and highlight several significant concerns we have with the existing TMDL.

Water coming into the State of Washington already exceeds the temperature standard

Upstream waters from Canada and domestic rivers routinely exceed the temperature standard before they even reach the Washington border. Yet the TMDL fails to account for these upstream conditions in a meaningful way.

The EPA's 2021 TMDL analysis notes 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."

The Department of Ecology's TMDL implementation will not accurately reflect changes in the system if it does not include water entering from Canada, Idaho, and other significant tributaries known to produce warmer water. In developing their enforcement regime, the Department should recognize these realities and make appropriate accommodations to their enforcement approach accordingly.

The hydropower system has helped moderate or even cool river temperatures

The standard the Department of Ecology is working with does not reflect the historic attributes of the Columbia-Snake River system. Multiple studies have demonstrated that the Columbia and Snake River Dams act as thermal buffers, absorbing heat and reducing temperature spikes during the hottest months. Since the 1990s, cold-water releases from Dworshak Reservoir – at the request of fisheries and sovereign tribes – have been used to lower temperatures during fish migration. These are not the actions of a system making things worse. They are evidence of a system actively mitigating temperature challenges, exacerbated by warming air temperatures.

According to John McKern, retired Fish and Wildlife Biologist for the U.S. Army Corps of Engineers, in an article titled, "The Case Against Breaching the Four Lower Snake River Dams to Recover Wild Salmon."

- "…In 1953, before the first of the USACE dams were built on the lower Snake River, water temperatures were recorded reaching 83°F at the mouth of the Snake River. In a mid-1950s study, it reached up to 77°F. When Ice Harbor Dam went into operation (1961), a continuous record of water temperature became available. Highest summer temperatures never exceeded 77°F even after Lower Monumental (1969), Little Goose (1970) and Lower Granite (1975) impounded reservoirs upstream…Instead of increasing water temperatures, the lower Snake River dams pass hot water downstream reservoir by reservoir."

- "The water temperature situation changed in the early 1990s when the Fish Passage Center representing the fishery agencies and Tribes requested cold water releases from Dworshak Reservoir on the Northfork of the Clearwater River. Their expressed purpose was to cool off the lower Snake River water temperatures for juvenile and adult fish migrations. For decades, the Corps of Engineers has endeavored to keep the lower Snake River water temperature below 68°F if possible by releasing 50 to 55°F (Spalding Gage) water from Dworshak Reservoir."

- According to the Pacific Northwest National Laboratory (2002), Regional Scale Simulation of Water Temperature and Dissolved Gas Variations in the Columbia River Basin. By Marshall C. Richmond, William A. Perkins, and Yi-Ju Chien.
    - "The unimpounded [Snake] river warms up faster and has higher midsummer temperatures than the impounded river…"

    - "These measurements show that prior to the completion of Grand Coulee Dam water temperatures at the Rock Island Dam (scroll case) could exceed the criteria during the summer months. After the completion of Grand Coulee Dam, water temperatures downstream at Rock Island Dam and at the Hanford B reactor (about 10 miles downstream of Priest Rapids Dam) have somewhat reduced peaks, but remain warmer into fall and early winter. Note that the Hanford B reactor data are from a period prior to the completion of the Wanapum and Priest Rapids Dams."

    - "The Snake River long-term temperature simulations showed that the primary difference between the current and unimpounded river scenarios is that the reservoirs decrease the water temperature variability."

- According to Water Temperatures and Passage of Adult Salmon and Steelhead in the Lower Snake River. (2003). U.S. Geological Survey, National Marine Fisheries Service for the U.S. Army Corps of Engineers.
    - "This effect, caused from predominantly turbine flow, combined with the effect from releasing Dworshak water in recent years appears to account for the lack of significant warming of water temperatures at the mouth of the Snake River over time. Although the data record is not complete, it appears that adult salmon and steelhead do not experience warmer water conditions at the mouth of the Snake River now than existed prior to impoundment."

- "Similar to the findings of others, we found little evidence that water temperatures have increased over time at the mouth of the Snake River (downstream from Ice Harbor Dam) but temperatures in the forebay of Ice Harbor Dam have trended upwards in the fall (September and October) since 1962. The latter trend can be explained at least in part by an increase in air temperatures during August and September in the region since 1948."

Thank you again for this opportunity to provide comments in this process; please reach out to Connor Reiten at creiten@nru-nw.com with any questions.