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

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. We provide our input with the respectful suggestion that the State of Washington's implementation must address significant flaws and other issues in the existing TMDL.

Upstream Conditions Exceed Temperature Standards
Water entering the State of Washington from upstream Canadian and domestic rivers routinely exceeds the temperature standard before it reaches the Washington border. The current TMDL fails to account for these conditions in a meaningful way.

- **EPA's 2021 TMDL analysis notes:** "...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."
- **Enforcement Regime:** The Department of Ecology's implementation will not accurately reflect changes in the system if it does not include water entering from Canada, Idaho, and other significant tributaries. The Department should recognize these realities and make appropriate accommodations to their enforcement approach accordingly.
- **Water Quality Standards for Washington, Idaho, and Oregon differ:** Idaho's standard is the least restrictive at 22° C, while Washington's is 20° C, and Oregon's is 17.8° C. The Snake River McDuff Rapids gauge at USGS 13317660 (RM 175.7), measured on the Idaho side, but land on the other side of the river is in Washington. This gauge on the Snake River is within one mile of Washington, Idaho and Oregon borders. The water is the same, but depending upon which standard is used, it can be in and out of compliance at the same time.
- **Prior studies by EPA of the Columbia and Lower Snake River Temperature Total Maximum Daily Load (TMDL) were incomplete and thus, failed relating to causation**: On May 18, 2020, EDA sought comments on an analysis touted to cover almost 900 river miles. This analysis *began* at the lower Snake River at the confluence of the Clearwater and Snake River (or RM 167.5—Anatone Gauge, USGS 13334300), when a more meaningful examination of the root cause could have been determined by including water temperature data analysis of Brownlee, Oxbow, and Hells Canyon dams (the latter being USGS 13290450 at Snake RM 247) as well as the McDuff Rapids gauge. Then inputs from the free-flowing Salmon and Grand Ronde rivers could be better understood, as well as the very highly impactful ambient temperatures within the roughly 80-mile undammed section of the river called Hells Canyon dam. (This is named for the very high summer ambient temperatures, which are increasing due to climate change and are impacting water temperatures.) As a result of the incompleteness of prior studies, removal of the four lower river dams is cited as one solution, even though only 9 or the 13 threatened or endangered species would be impacted.

Hydropower System Moderates 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 demonstrate that the Columbia and Snake River Dams act as thermal buffers, absorbing heat and reducing temperature spikes during the hottest months.

- **Active Mitigation:** Since the 1990s, cold-water releases from Dworshak Reservoir have been used to lower temperatures during fish migration, at the request of fisheries and sovereign tribes. These are evidence of a system actively mitigating temperature challenges exacerbated by warming air temperatures, not making things worse.

Supporting Evidence from Studies:

- **John McKern, retired USACE Biologist:** In "The Case Against Breaching the Four Lower Snake River Dams to Recover Wild Salmon," McKern notes:
  - In the mid-1950s (pre-dam construction), water temperatures reached 77°F-83°F at the mouth of the Snake River.
  - After the dams were operational, highest summer temperatures never exceeded 77°F.
  - Since the 1990s, the USACE has released 50°F-55°F water from Dworshak Reservoir to help keep the lower Snake River temperature below 68°F for fish migration.

- **Pacific Northwest National Laboratory (2002):** "Regional Scale Simulation of Water Temperature and Dissolved Gas Variations in the Columbia River Basin" found:
  - “The unimpounded [Snake] river warms up faster and has higher midsummer temperatures than the impounded river…”
  - Reservoirs "decrease the water temperature variability".

- **U.S. Geological Survey / National Marine Fisheries Service (2003):** "Water Temperatures and Passage of Adult Salmon and Steelhead in the Lower Snake River" reported:
  - There is "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," a trend linked to increased air temperatures.
  - Adult salmon and steelhead "do not experience warmer water conditions at the mouth of the Snake River now than existed prior to impoundment.”

We urge the Department of Ecology to consider this information as you move forward with the Columbia & Snake River Temperature TMDL Implementation Plan.

Thank you again for this opportunity to provide comments.

Port Clarkston
A NEW WAY TO GROW.

849 Port Way | Clarkston, WA 99403 | (509) 758-5272 | (509) 758-1746 fax | portofclarkston.com