SPOKANE RIVERKEEPER®

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November 25, 2024

Dear Ecology Water Quality Team:

Thank you for the opportunity to comment on your TMDL Prioritization presentation for 2024. As you may know, Spokane Riverkeeper is a non-profit, advocacy organization that works to protect the Spokane River Watershed. The mission of the organization is to protect and restore the health of the Spokane River watershed, defend access to clean water, and the opportunity for all communities to enjoy the benefits of a clean and healthy Spokane River.

Spokane Riverkeeper appreciates your efforts in implementing TMDLs in eastern Washington to restore our impaired waters. We recognize there are many challenges associated with prioritizing projects in our region, and appreciate the time and effort spent on our river thus far. We especially appreciate your work in establishing the current TMDLs on the Little Spokane, Spokane River & Lake Spokane, and Hangman (Latah) Creek. We wish to offer this brief comment letter to provide thoughts on priorities for the coming year.

1. <u>WDOE should prioritize a Temperature TMDL on the Spokane River</u>

We strongly believe that Ecology must consider a temperature TMDL for the Spokane River. Much of the Spokane River is above the temperature standard during the hottest parts of the summer, for many days at a time. These high temperatures are detrimental to the native fish populations and significantly limit their summer habitat. The effects of climate change will only further exacerbate the impacts the hot water temperatures will have on the native fish populations in our river.

We understand there are many different concerns that need to be addressed in the region, and across the state, however Ecology is obligated to produce a TMDL for temperature on the Spokane River. A state's discretion to prioritize TMDLs over other TMDLs does not remove its ultimate obligation to produce a TMDL for each water pollutant of concern in every 303(d) water segment. *See 33 U.S.C. § 1313(d) (2).* The obligation to create a TMDL cannot be avoided under the guise of prioritization, as that "administrative purgatory clearly contravenes the goal and purpose of the CWA." *Sierra Club v. McLerran, 2015 WL 1188522, at *13–14 (W.D. Wash. Mar. 16, 2015).* It is clear that a temperature TMDL is well-overdue on the Spokane River, and Ecology has an obligation under the Clean Water Act to create it.

Time is of the essence in addressing these impacts to ensure we have water quality capable of sustaining native fish. With shrinking habitat and growing predation concerns, native fish will not recover without significant water quality improvements. U.S. 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. Water temperature data clearly indicates that when the air temperature outside is warmer for longer periods of time, the temperatures of the river and its tributaries increase significantly. During these times, the only cold water refuges that remain are the short stretches where the Spokane Valley Rathdrum Aquifer discharges into the river.

Water temperature influences the health of many organisms that live in a water body and cooler water holds more dissolved oxygen, which fish and other aquatic life need to breathe. Temperatures above 25°C (77°F) are often lethal for rainbow trout species (Matthews & Berg, 1997). For Washington, the state standard for freshwater temperature is 18°C, a limit set based on what essential species such as trout require for survival and prosperity.

The Spokane River has had a Category 5 303(d) impairment listing for temperature for decades, and is only getting worse. Our data logs indicate that temperatures are continuing to rise and exceed state standards every summer. These temperatures are lethal to the native redband trout. Much of the river remains too hot for its designated use of salmonid spawning and migration. Native redband trout are forced to out migrate to colder waters or die.

As we see increased water temperatures in the Spokane River with greater frequency and for prolonged duration, the river ecosystem will suffer in several ways. The metabolic rate of fish and other aquatic organisms increases, which requires more oxygen. Unfortunately, as water warms, it holds less and less oxygen. At very high temperatures, coldwater fish, like our native redband trout, are literally fighting to breathe, and using all their energy to do so. This leaves little energy for growth, and summer is the time when fishes in temperate climates like Spokane experience 90% of their yearly growth (Ficke et al., 2007). Warmer water can also increase numbers of bacteria and parasites, and because fish are already stressed by the heat, their immune systems are not as capable of fighting off diseases (Ficke et al., 2007). Protozoan infections like whirling disease or “Ich” (Ichthyophthirius multifiliis) can be fatal to trout and easily spread if fish are congregating in cooler pools in the river.

The toxic effects of certain chemicals (e.g., pesticides and heavy metals) on fish also increase with elevated water temperature (Ficke et al., 2007). We know metals like zinc and lead are in our river from historical mining upstream in the Coeur d’Alene basin. Coldwater fish are breathing more rapidly in warm water and this increases their uptake of these dangerous pollutants. An increasingly warm Spokane River will limit the habitat for native coldwater fish like the redband trout. In general, rainbow trout prefer temperatures below 20°C (68°F) and grow best in temperatures between 13-17°C (~55-63°F) (Bear et al., 2007). When water temperatures exceed these levels, fish look for cooler refuges. In a summer like 2021, with low river flows, sanctuaries like these are hard to find in a habitat that is already fragmented by the seven dams on the river, all without fish-passage. Redband trout also have to compete for this limited habitat

with increasing numbers of fish acclimated to warmer water, like smallmouth bass and yellow perch. Many of these invasive fish prey on the native trout, further impacting their ability to thrive in the basin.

A TMDL is necessary to identify all known sources of temperature impairments in the basin, including that due to climate change, dams, major tributaries, point sources, and stormwater. The TMDL process provides a rational method for weighing the competing pollution concerns and developing an integrated pollution reduction strategy for point and nonpoint sources. Beyond pollution source identification, a TMDL also provides vital information on where temperature exceedances are most severe, and an in depth analysis of the riparian vegetation conditions. This information is vital in advancing the restoration efforts underway in the basin, and ensuring existing riparian vegetation is protected.

As tribes continue to invest significant resources into restoring salmon to our basin, we must work towards water quality that will allow these fish to thrive. Failing to address the clear issues with temperature in our river will undermine the progress tribes have been making towards restoring fish populations in our watershed. Warmer water temperatures will only exacerbate the challenges tribes must face in re-establishing salmon populations in the Columbia basin. The larger warm water species prey on the small salmon fry that hatch and grow in our river, eliminating the opportunity for these fish to migrate to the ocean. Without drastic changes to our water quality, and water temperatures in particular, these salmon populations may never be able to recover in our river.

For these reasons, please consider adding a Spokane River Temperature TMDL to the priorities list.

2. <u>Hangman Creek ARP</u>

We appreciate your prioritization of an advanced restoration plan for Hangman Creek, and look forward to seeing more about Ecology's plan to continue working to address nonpoint source pollution in the basin. Hangman Creek is a major source of pollution to the Spokane River, causing it to be impaired with sediment. In addition, because of the historical critical spawning habitat, re-establishing clean and healthy waters in this creek is necessary to support the restoration of salmon in our basin.

*a. Clean water in Hangman Creek is critical to restoring native fish populations to our basin.*

Redband trout populations that exist in Hangman Creek and its tributaries upstream of the Spokane River suggest that the impacted section of Hangman Creek historically provided suitable habitat for redband trout (Biladeau and Kinkead 2018). Hangman Creek prevent habitat access by redband trout and native salmon populations. Habitat for the interior redband trout, identified as a Species of Greatest Conservation Need under the Washington State Wildlife Action Plan (WDFW 2021), once extended the Spokane River downstream of Spokane Falls (Behnke 1994). But that habitat is significantly impacted by agriculture and riparian destruction.

High turbidity and large sediment loads within  The primary populations of interior redband trout are now isolated in the headwaters of Hangman Creek tributaries (WDFW 2012). Continued turbidity impairments could reduce or eliminate potential spawning grounds on the interior redband trout in Hangman Creek and the Spokane River.

Hangman Creek has highly erodible soils but was once a meandering stream through bunchgrass prairie, ponderosa pine forest and a dense riparian vegetation of shrubs and trees. The creek has since been degraded by vegetation clearing for agriculture, rerouting, and straightening that has created an unstable bank with increasing stream velocity further eroding the bank, and causing significant water quality problems.

Hangman Creek has some of the worst water quality in the state, and needs large investment in its restoration to attain healthy water quality levels. We need significant investment into large scale restoration projects to see real progress in water quality. The time is now to double down on the efforts toward recovery of abundant healthy salmon populations, and their habitat. Smaller, disconnected projects are not enough to bring back healthy enough water quality to support abundant native fish life. Large scale riparian vegetation and floodplain restoration projects are necessary to provide the habitat necessary for supporting abundant wild fish. The Spokane River cannot flourish without ecosystem diversity. Improving water quality conditions is a necessary step to enhance and protect the aquatic community, including cold water fisheries on which the water quality standards are based in this watershed.

b. *Sediment Pollution levels in the Spokane River should be considered and monitored in the Hangman ARP.*

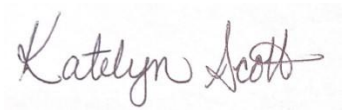
Because of the pollution levels in the Spokane River, Ecology should consider including monitoring in the river as part of the assessment and monitoring of progress of Hangman Creek. The Draft 2022 Water Quality Assessment, and data submitted by Spokane Riverkeeper in support thereof, indicate that the Spokane River is impaired due to sediment pollution out of the Hangman Basin. Should this listing become final, we believe that adequate restoration work in the basin would address the pollution in the Spokane River.

In preparing the ARP, Ecology should consider the pollution in the Spokane River as a benchmark for progress in the Hangman Creek Basin. While progress within the creek on its specific TMDL parameters must also be considered, the sediment pollution in the river and potential listing should also be incorporated into this plan.

We appreciate the work Ecology has done to advance water quality goals within the watershed. However, we also recognize that there are many other issues within the watershed that must be addressed in order to protect the designated uses of the river. We respectfully request that the Department of Ecology prioritize the development of a temperature TMDL to address critical impairments within the watershed.

Thank you for your attention to these important issues and for your continued efforts to protect and restore the health of the Spokane River and its watershed. We look forward to seeing meaningful progress in these areas.

Respectfully submitted,



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