



February 19, 2019

Department of Ecology
Water Quality Program
Eleanor Ott, PE
Post Office Box 47600
Olympia, Washington 98504

RE: Draft Federal Permits for State of Washington 401 Water Quality Certification

Washington Department of Ecology,

I am writing on behalf of the Natural Resources Defense Council. The Natural Resources Defense Council is a non-profit organization with offices across the country, millions of members, and a staff of over six hundred lawyers, scientists, and policy experts. We work to combat climate change, to restore the integrity of the elements that sustain life, and to defend endangered species and habitat. We ask you to exercise Washington's authority under § 401 of the Clean Water Act to ensure the federal agencies better protect the Columbia and Snake rivers, salmon, and the starving Southern Resident orcas that depend on Columbia Basin salmon for their survival.

The Columbia Basin's federal dam operators should act to correct not only the alarming oil spills and oil pollution caused by the federal dams—which impacts animals and human communities alike—but also the impoundments' chronic and increasing violations of the state's water quality standard for daily temperature.

I. Washington has the authority to demand greater protection from the impacts of the nine federal dams on the Columbia and Snake rivers' waters.

Washington State has a new opportunity to ensure that federal dam operators cannot continue to violate without consequence the state's water quality standards. Several years ago, in response to a series of large oil spills from Columbia River and Snake River dams, the environmental advocacy group Columbia Riverkeeper filed suit in federal court alleging, among other things, significant violations of state water quality standards.¹ In 2014, the Federal District Court for the Eastern District of Washington approved a settlement agreement between Columbia Riverkeeper and the U.S. Army Corps. The settlement requires the agency to apply to the Environmental Protection Agency for National Pollutant Discharge Elimination System (NPDES) permits that specifically cover discharge from the dams named in the complaint.

¹ *Columbia Riverkeeper v. US Army Corps of Engineers*, Order of Dismissal Without Prejudice. US District Court Eastern District of Washington, August 2014.

<https://www.columbiariverkeeper.org/sites/default/files/2014/08/Proposed-Order-with-Settlement-Agreement.pdf>

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NPDES permits limit the type and amount of discharge that a permit holder can release into a body of water and also establish monitoring and reporting requirements.² In addition to governmental oversight, this settlement is significant in that it requires the U.S. Army Corps to apply for federally issued permits. This requirement triggers the § 401 state permitting process.

Washington has established science-based water quality standards for the portions of the Columbia and Snake rivers on which the nine dams are located.³ These regulations include specified daily temperature maximums, among other requirements. Section 401 allows Washington to impose conditions on dam operations that enforce these water quality standards. Guidance issued by the EPA notes that “[u]nder §401, a federal agency cannot issue a permit or license for an activity that may result in a discharge to waters of the U.S. until the state or tribe where the discharge would originate has granted or waived § 401 certification.”⁴ As part of the certification process, states may impose conditions or limits on pollution to ensure compliance with state determined water quality standards. We ask Washington to exercise its authority and ensure that federal dam operators are doing their part to reduce not only dam-related oil , but also, temperature pollution.

II. Washington’s failure to demand action on temperature risks further decline of Columbia River and Snake River salmon and Southern Resident orcas.

Our ask is urgent. Neither the Southern Resident orcas nor salmon can achieve recovery—and it may risk their survival—if salmon in the Columbia Basin die in large numbers due to another low-flow and hot summer. The orcas depend on Columbia Basin salmon as a critical winter and spring food source. Fat stores from Columbia Basin salmon carry the orcas through the lean summer months spent in the Salish Sea and feed the orcas at this time of year when they are pregnant or nursing new calves. The orcas, as Ecology is aware, are devastatingly close to extinction. The population recently had its first viable calf in three years, and most pregnancies in the population are not successful. In addition to not being able to reproduce, the animals are visibly skinny and several young and adult animals recently died of starvation. As the population decreases in size, it becomes increasingly vulnerable to stochastic events—like a hot summer and consequent decrease in salmon abundance. Washington State can demand that the federal agencies and dam operators help safeguard these animals.

Dams alter natural temperature regimes as a result of their large reservoirs and timed releases of water. Reservoirs are much wider and shallower than the flowing river, meaning there is more surface area to be heated by the sun. They also slow water flow, creating more time for

² “NPDES Permit Basics.” US Environmental Protection Agency, July 2018. <https://www.epa.gov/npdes/npdes-permit-basics>

³ “Water Quality Standards for Surface Waters of the State of Washington.” Olympia, WA: Washington State Department of Ecology Water Quality Program, August 1, 2016.

⁴ “Clean Water Act Section 401: Water Quality Certification: A Water Quality Protection Tool for States and Tribes.” US Environmental Protection Agency Office of Wetlands, Oceans, and Watersheds, April 2010. https://www.epa.gov/sites/production/files/2016-11/documents/cwa_401_handbook_2010.pdf

the water to accumulate heat.⁵ In the Columbia and Snake rivers this means water remains warmer later into the fall than it would in a free-flowing river. Scientists estimate that Columbia River and Snake River water temperatures in early fall are increased by an average of 3.5°C (6.3°F) as a result of impoundment.

Average water temperature has been increasing steadily in the Columbia and Snake Rivers for decades. These days, temperatures regularly exceed 68°F during the summer and fall due to impoundment. At this threshold, salmon struggle to complete their upstream migration. They stop altogether when river temperatures hit 72 to 73°F.⁶ Fish ladders, in particular, create temperature stress for salmon because of their high temperature gradients caused by flow coming from different depths. Flow in the ladders is typically made up of warm surface water, while the tailrace – the area immediately below the ladder – is much cooler. High thermal differences cause salmon to repeatedly exit the ladder to seek refuge. Studies show that migration is slowed by a gradient of just 1C (1.8F).

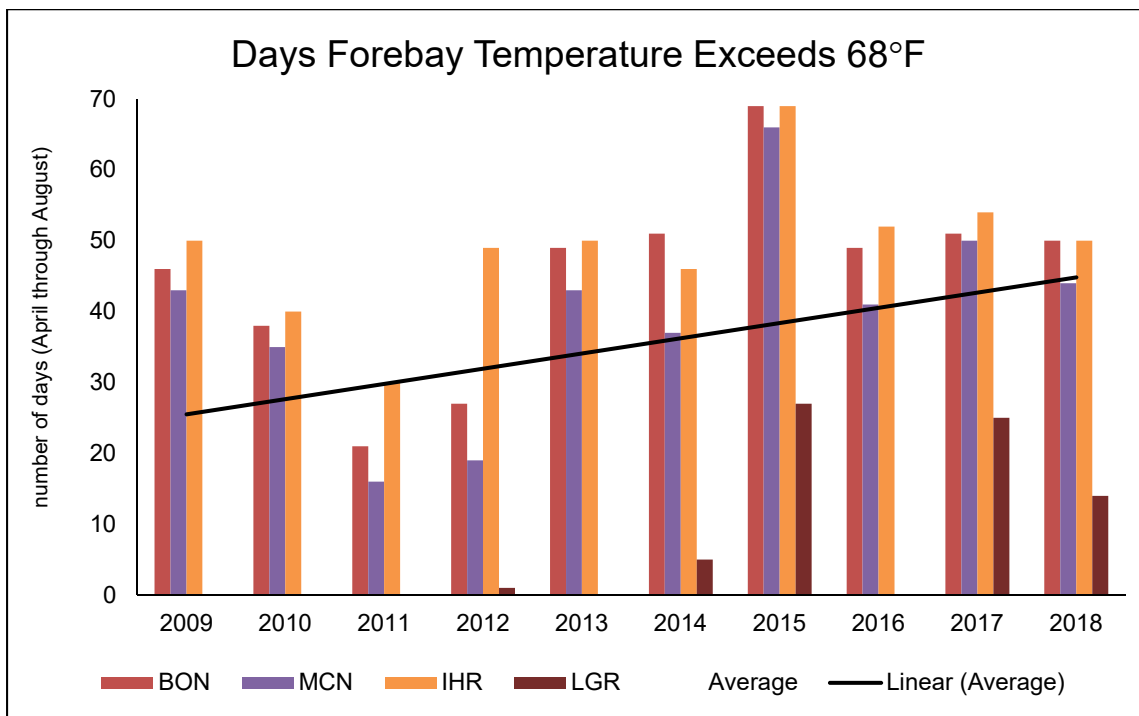


Figure 1: Forebay water temperatures during the summer months are steadily rising and frequently surpass the 68° F threshold.

⁵ “Requested Data Summaries and Actions Regarding Sockeye Adult Fish Passage and Water Temperature Issues in the Columbia and Snake Rivers.” Memorandum. Portland, OR: Fish Passage Center, October 28, 2015. <http://www.fpc.org/documents/memos/159-15.pdf>.

⁶ Shultz, Matthew, and Miles Johnson. “Computer Modeling Shows That Lower Snake River Dams Caused Dangerously Hot Water for Salmon in 2015.” White Paper. Columbia Riverkeeper, 2017.

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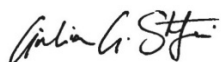
The summer of 2015 saw particularly warm temperatures and low flow and, thus, extreme water temperatures and associated low salmon survival compared to the previous ten years. Temperature in the forebays of the Bonneville, McNary, Ice Harbor, and Lower Granite Dams, which span the length of the Columbia and Snake rivers' dam system, exceeded the 68F threshold an average of 37 percent of days during the spring and summer migration season (April through August). This temperature was surpassed as much as 45 percent of the time at Bonneville and Ice Harbor Dams (Figure 1). Temperatures hit the migration-halting temperature of 72F at Bonneville, McNary, and Ice Harbor nearly 15 percent of days during the season. Accordingly, just over half of sockeye that passed Bonneville dam in 2015 made it through McNary, well below the average of 72 percent since 2005. On the lower Snake River, fewer than half of sockeye that passed Ice Harbor passed Little Granite, the lowest since 2006. According to a report by Columbia Riverkeeper, just four percent of sockeye that started the upstream migration in the Columbia River Basin made it through all four lower Snake River dams. Extreme years that result in low spawning success have long term impacts on salmon abundance, and scientists report that the present low numbers are likely due, at least in part, to the summer of 2015.

Conclusion

Washington has a water quality standard of 68°F as the 1-day maximum temperature in the Columbia and Snake rivers. The violation of that standard is well documented, and the federal government has openly recognized that the largest contributor to the problem is the dams. However, this water quality standard has never been enforced at the federal dams. Meanwhile, average water temperature has been increasing steadily in the Columbia and Snake rivers over the last decade, causing salmon to struggle to complete their upstream migration. Washington State's exercise of its § 401 authority is in line with the state's leadership on climate change: both to secure carbon emission reductions and to build necessary ecosystem resiliency. This action is also in line with the state's commitment to save the Southern Resident orcas for our and future generations.

The Clean Water Act was passed by Congress to allow states to protect their waterways from the impacts of federally permitted activities, like dams. We are aware that the federal government recently withdrew the underlying NPDES permits. We encourage Washington to continue to actively protect the state's rights and its species. Thank you for all your work to protect the rivers.

Sincerely,



Giulia Good Stefani
Senior Attorney
Natural Resources Defense Council