COLUMBIA RIVERKEEPER®

Surviving 2025

How Columbia Riverkeeper brought change to the hydrosystem, and what it meant to salmon.

Over the past decade, Columbia Riverkeeper has used science, litigation, strategic communications, and the Clean Water Act to expose how dams on the Lower Snake and Columbia rivers make the water too hot for salmon.

Though our work raised awareness, **we needed more action** from the federal government to cool the river and protect salmon. **And 2025 marked a turning point.**

The Story

What follows is not the story of a victory. It is a complex and incomplete story of incremental progress and trade-offs. It describes what happened to salmon and water temperatures in 2025, and what part Columbia Riverkeeper played.

The Bottom Line

Columbia Riverkeeper's work caused the federal government to change dam operations in hopes of cooling the river and helping endangered Snake River sockeye salmon—but bigger changes are still needed to protect water quality and recover healthy, abundant salmon.

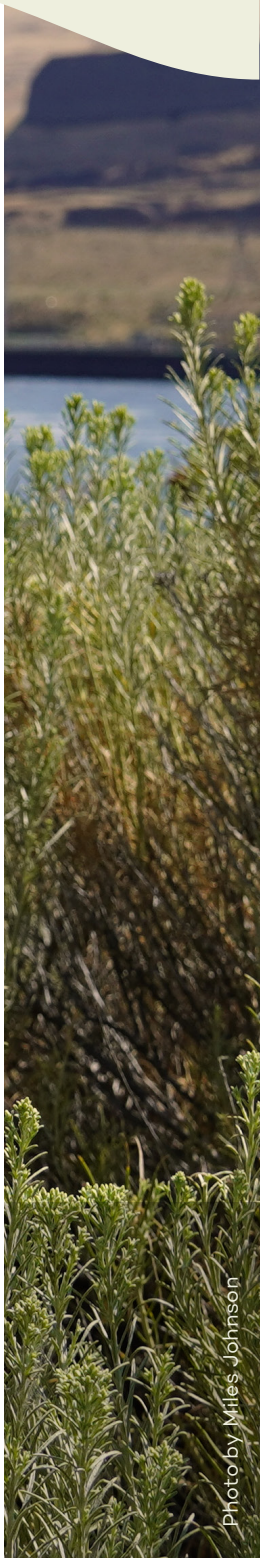


Photo by Miles Johnson

The Back Story

Between 2015 and 2023, Columbia Riverkeeper amassed indisputable evidence that the Lower Snake River dams make the water too hot and kill large numbers of critically endangered Snake River sockeye salmon.

2025 surprise:
Feds change dam operations in attempt to cool the Lower Snake

In July 2023:

We threatened to sue the federal government under the Endangered Species Act (ESA) and seek changes to, or removal of, the Lower Snake River dams to prevent extinction of Snake River sockeye.

Late in 2023:

Columbia Riverkeeper signed a historic agreement with States, Tribes, and the Biden Administration to restore Columbia River Basin salmon and replace the services of the Lower Snake River dams. As part of that agreement, we promised not to sue the federal government, essentially pausing our threatened lawsuit. President Trump canceled the agreement in early 2025—a move that Senator Murray rightly described as "a tremendous setback for the entire Northwest."

In 2025:

Canceling the agreement ended the federal government's protection from Columbia Riverkeeper's threatened lawsuit. Less than two weeks later, federal agencies made a surprise announcement: in 2025, they would change a long-standing schedule of summertime dam operations with the goal of cooling the Lower Snake River and protecting endangered Snake River sockeye. Federal documents describing the surprise changes mentioned a "Litigation Risk issue."

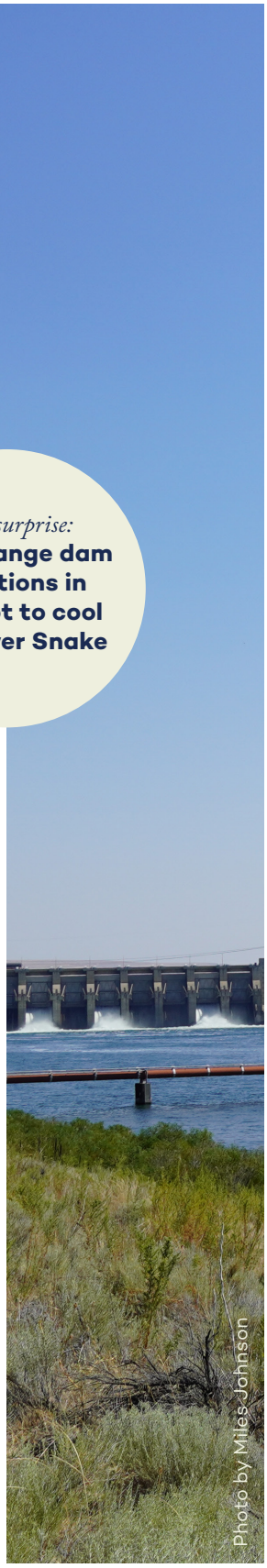


Photo by Miles Johnson

Changes to River Operations

The New Plan Was Simple:

Release more cold water while Snake River sockeye are migrating upstream. To that end, the Army Corps increased the flow of cold water from Dworshak Reservoir (a water-storage reservoir upstream of the Lower Snake) earlier in the summer than usual—late June, rather than early July—to better coincide with upstream the sockeye migration.

But There is a Catch:

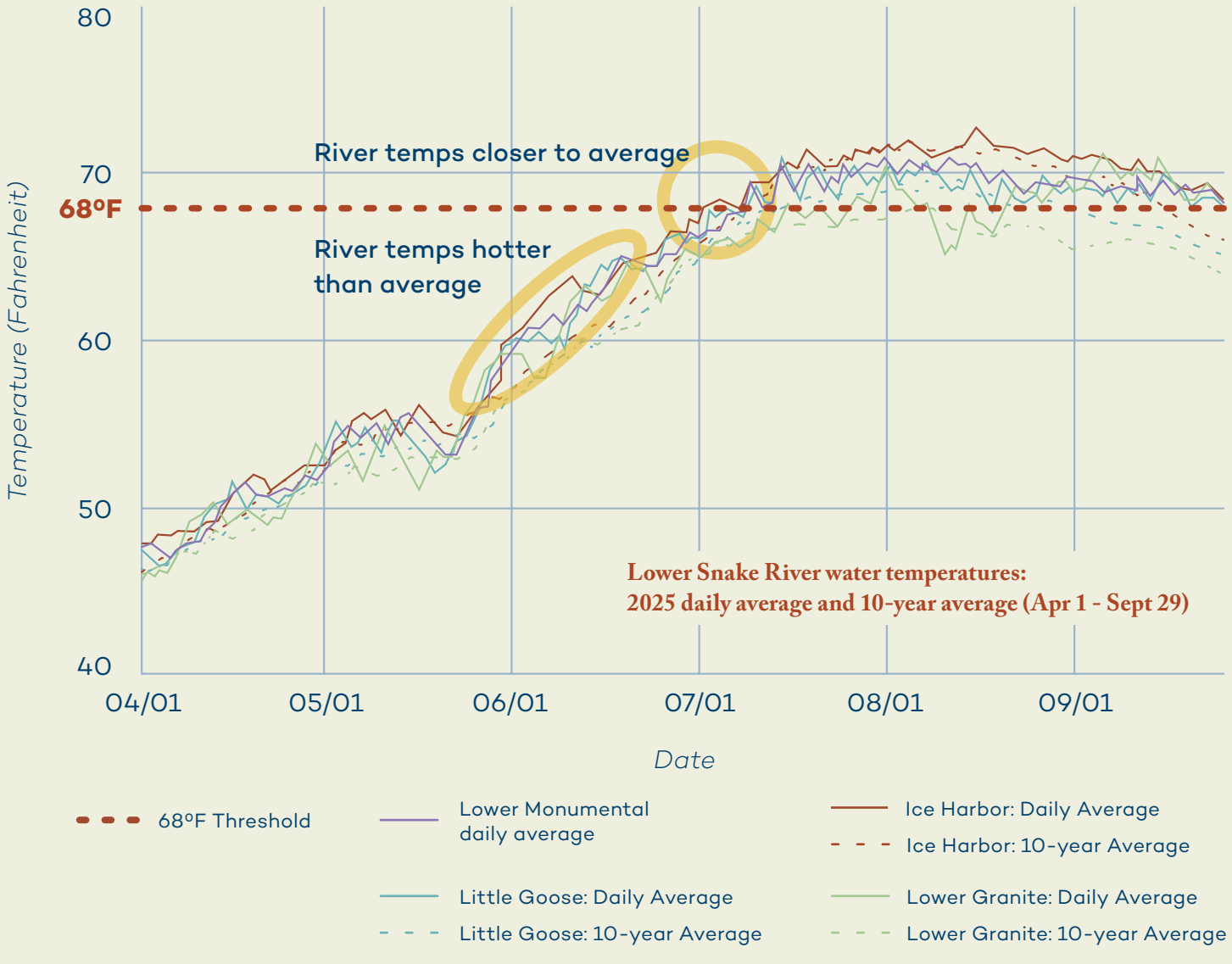
Dworshak Reservoir only holds so much cold water in any given year. Releasing more cold water in early summer to help sockeye means there could be less cold water to help Snake River fall Chinook and steelhead to get upriver later in the year. Rather than modeling the temperature impacts of their proposed actions, the federal agencies rolled the dice and increased Dworshak water releases from June 26 to July 3, before returning to normal summer operations in response to the concerns of State and Tribal fisheries managers.

Photo by David Moskowitz

Temperature & Sockeye in 2025

One year of data is not enough to say for sure if, or how much, the changes improved river temperature or sockeye survival. They certainly did not solve the problem. **But they may have helped a little, and Snake River sockeye are so close to extinction that every little bit of help matters.**

The changes *seemed* to help cool the river at a critical time. As this graph from the Save Our wild Salmon Coalition shows, the Lower Snake was hotter than average for most of the summer and fall of 2025. But in late June and early July (the new, earlier window for cold water releases), river temperatures dropped closer to average and stayed below the critical 68 ˚F threshold for fish migration. Had the trend of above-average temperatures continued, the Lower Snake could have become hotter than 68 ˚F in late June. Instead, it did not reach 68 ˚F until early July. **The difference was an extra week or two, during the sockeye migration, where the water remained cool enough for some fish to migrate upstream.** This cooler period in the Lower Snake coincided with the early release of cold water from Dworshak Reservoir—but also mirrored the temperature trend in the Columbia River, suggesting that regional weather also kept the river from warming quickly.



Temperature & Sockeye in 2025

Better, But Still Bad

These water temperatures resulted in Snake River sockeye survival in 2025 that was better than other recent hot years, but still pretty bad. About 40 percent of endangered Snake River sockeye died from hot water while migrating through the dams and reservoirs in 2025, and the effect of water temperature on migration success was clear. An estimated 80 percent of the Snake River sockeye that passed Bonneville Dam after July 1 died in the hydrosystem, and no tagged Snake River sockeye that arrived at Bonneville Dam after July 11 made it through the Lower Snake alive. Predictably, temperatures on the Lower Snake had reached 68 °F on roughly July 2 and approached 70 °F by July 11. By contrast, only 20 percent of the sockeye that arrived earlier in the summer, when the water was cooler, died. *If* the new water release schedule helped keep the Lower Snake river from reaching 68 °F range for a few days, then it likely increased the number of endangered Snake River sockeye that successfully migrated past the dams. This potentially contributed to 2025 being just a poor—rather than terrible—year for sockeye survival.

40%

of endangered Snake River sockeye died from hot water while migrating through the dams and reservoirs in 2025.

80%

of the Snake River sockeye that passed Bonneville Dam after July 1 died.

20%

of the sockeye that arrived earlier in the summer, when the water was cooler, died.

0%

of tagged Snake River sockeye that arrived at Bonneville Dam after July 11 made it through the Lower Snake alive.

Photo by Conrad Gowell

What about fall Chinook and steelhead?

State and Tribal fish and wildlife agencies expressed serious and justifiable concerns about how the new schedule of water releases could impact ESA-listed Snake River fall Chinook and steelhead. And **Snake River fall Chinook survival through the hydrosystem in 2025 was the worst in recent history**. But the main problem occurred at John Day Dam and did not appear to be related to Dworshak Reservoir water releases.

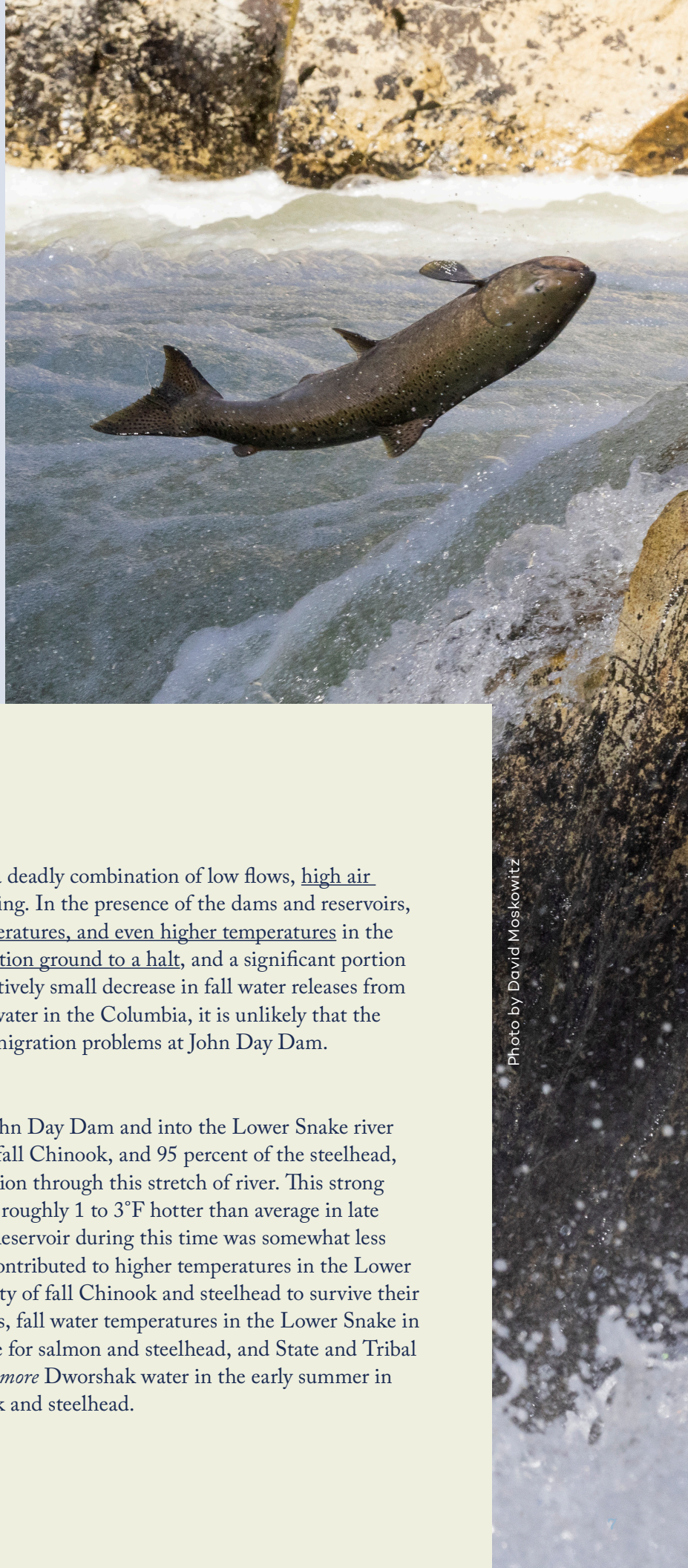


Photo by David Moskowitz

In August of 2025

The mainstem Columbia River experienced a deadly combination of low flows, high air temperatures, and very little overnight cooling. In the presence of the dams and reservoirs, these factors led to high overall water temperatures, and even higher temperatures in the fish ladders, at John Day Dam. Fall Chinook migration ground to a halt, and a significant portion of the run died because of hot water. Given the relatively small decrease in fall water releases from Dworshak, and the comparatively large volume of water in the Columbia, it is unlikely that the change in Dworshak water releases contributed to migration problems at John Day Dam.

The fall Chinook and steelhead that made it past John Day Dam and into the Lower Snake river survived well in 2025. Ninety-seven percent of the fall Chinook, and 95 percent of the steelhead, that entered the Lower Snake survived their migration through this stretch of river. This strong survival occurred *even though* the Lower Snake was roughly 1 to 3°F hotter than average in late August and September, and flow from Dworshak Reservoir during this time was somewhat less than in 2024. If the decreased Dworshak releases contributed to higher temperatures in the Lower Snake in the fall of 2025, it did not impact the ability of fall Chinook and steelhead to survive their migration through this stretch of river. Nevertheless, fall water temperatures in the Lower Snake in 2025 were above the levels generally considered safe for salmon and steelhead, and State and Tribal fisheries managers remain concerned that releasing *more* Dworshak water in the early summer in future years to help sockeye could hurt fall Chinook and steelhead.

Reflections & Next Steps

Again, one year of data is not enough to draw conclusions. The Army Corps should—but will almost certainly not—use its sophisticated water temperature model to predict what would have happened to water temperature in the Lower Snake, and at John Day Dam, in 2025 under the old regime of Dworshak water releases. That would help us understand if, and how, the changes actually affected water temperatures in 2025. Regardless, each new year brings unique weather and flow conditions, and it will take several years to understand whether this alternative approach, if continued or expanded, is helping sockeye and/or hurting fall Chinook and steelhead.

Photo by Conrad Gowell

Just releasing more water from Dworshak in the early summer will probably never boost sockeye survival enough to recover this species. And this strategy, if taken to an extreme, could harm other important fish runs. But releasing more cold water from Dworshak *along with other, additional temperature control measures* may keep the river cool enough for fish throughout the summer and fall. These additional strategies could include lowering the levels of the Lower Snake River reservoirs in the summer and fall, or removing these four dams entirely.

Columbia Riverkeeper is continuing to advocate for improvements to water temperature in several ways. In 2026, we look forward to the Washington Department of Ecology's publication of a temperature reduction implementation plan for the Columbia and Lower Snake Rivers, as well as Water Quality Attainment Plans for dams on the Lower Snake and Columbia rivers. These Clean Water Act compliance documents should provide the first comprehensive assessment of how the hydrosystem could be operated, collectively and at a dam-specific level, to cool the river. We are also asking a judge to order that reservoir levels be decreased in the summer to prevent reservoir heating and promote fish survival, as well as implementing emergency measures to protect sockeye.

One thing is clear: water temperature matters for salmon survival and recovery. Columbia Riverkeeper's advocacy on water temperature, based on factual research and grounded in the implementation of the Clean Water Act and the Endangered Species Act, is beginning to show tangible results. We look forward to broadening and deepening our advocacy for cold, clean water to help recover healthy and abundant salmon and reduce the toll that federal dams take on salmon and the cultures that depend on them.

By Miles Johnson, Legal Director

Miles Johnson is legal director at Columbia Riverkeeper, a nonprofit with a mission to protect and restore the water quality of the Columbia River and all life connected to it, from the headwaters to the Pacific. Johnson worked for state and federal fisheries management agencies before becoming an attorney, and has been studying and advocating for controlling heat pollution from Columbia and Snake river dams since 2015.

Photo by David Moskowitz

Your support fuels our victories

The Columbia River and the communities around it rely on supporters like you, and together we make an impact. Please consider making a contribution to Columbia Riverkeeper today.

ColumbiaRiverkeeper.org/Donate

25 years

ColumbiaRiverkeeper.org