

Seattle Times: Epic snow and rain help salmon now, but conflicts with hydropower lie ahead on Columbia River

This year's strong spring flows through the Columbia River come amid a high-stakes conflict over how much water should be used to help salmon migrate over the dams rather than run through hydroelectric turbines.

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By Hal Bernton

Seattle Times staff reporter

CASCADE LOCKS, Oregon — In this year of epic snow and rain, the Columbia River is a formidable sight, thundering over spillways at Bonneville Dam to form a turbulent stretch of white water that courses toward the sea.

The spring flows through the region's mightiest waterway are a dramatic turnaround from the drought that gripped <http://www.seattletimes.com/seattle-news/environment/snowpack-drought-has-salmon-dying-in-overheated-rivers/> the region two years ago. They have been some of the strongest in decades, with a March 25 peak at Bonneville that was the highest for that month since at least 1960, according to the Army Corps of Engineers.

These high flows come amid an intensifying clash over how to manage the federal network of Columbia Basin hydroelectric dams <http://www.nwd.usace.army.mil/Missions/Water/Columbia/> that offer the region abundant low-cost renewable power but also are a major obstacle to the recovery of 13 runs of wild salmon and steelhead.

In a court victory this spring, salmon advocates persuaded U.S. District Court Judge Michael Simon to order <http://earthjustice.org/sites/default/files/files/3-27-17%20Injunction%20NWF%20Columbia%20River%20salmon%20ruling.pdf> more water spilled over the dams to aid young salmon. That's easy to do in high-water years such as this spring. But the injunction, which already has stirred a backlash from some in Congress, will require higher levels in leaner water years, and that could mean, at times, running significantly less water through the hydroelectric dams.

In his ruling, Simon cited a “growing scientific body of evidence and growing consensus” to support the higher levels of spills.

This water helps to guide young salmon over the dams, steering them away from a more treacherous trip downstream through the powerhouses that can prove fatal. It also creates a current that can help propel these juvenile fish toward their ocean feeding grounds, where they mature before returning to freshwater to spawn.

“Spill helps this dammed-up river act a little more like an actual river,” said Joseph Bogaard, executive director of the Seattle-based Save Our Wild Salmon <<http://www.wildsalmon.org/>> coalition, which had members among the lawsuit plaintiffs. “It delivers juvenile salmon to the ocean more quickly and safely.”

Federal biologists at NOAA Fisheries largely acknowledge the benefits.

But they question the need to ramp up the spill to significantly higher levels. They argue that in some circumstances more spill may not offer more help to the fish, and in their court filings they allege that the National Wildlife Federation and other plaintiffs “attempt to oversimplify a complex and dynamic system.”

In another court filing, the Bonneville Power Administration <<https://www.bpa.gov/Pages/home.aspx>> (BPA), the federal agency that markets the hydroelectric power to regional public utilities, estimated the cost of added spill as an estimated \$80 million of lost power generation over a two-year period.

The judge largely rejected the federal agencies’ arguments. In his March 27 ruling, he gave federal agencies a year to come up with spill plans for each federal dam in the Columbia River Basin.

Federal agencies, in recent decades, have spent billions of dollars to help revive the 13 runs listed for protection under the Endangered Species Act. But this was the latest in a string of rulings that over the years have faulted the federal agencies for failing to push forward aggressively enough to save these runs.

Opportunity to learn

For young salmon, downstream passage is a critical phase, and salmon advocates say this spring offers an excellent opportunity to learn more about the impacts of increased spill to aid these fish.

Unlike many years, plenty of water is available both to run the turbines at the highest levels that can be handled by the regional power grid and to push over the spillways at the levels outlined in the court order.

And this year's high water volume is expected to continue deep into the spring as warmer temperatures begin to melt a high-elevation snowpack that remains largely intact.

"The thing that is on my radar is the amount of snow still above 6,000 feet," said Steven Barton, the U.S. Army Corps of Engineers chief of water management for the Columbia Basin. "We are going to continue to have flows at levels higher than people have seen in a long time."

Bonneville, unlike some upstream dams, has no storage reservoir behind it. So all the river water must pass as it arrives. And, through the course of the day, Army Corps officials decide how to allocate the flow between powerhouse turbines and spill as they consult with the BPA, federal fishery biologists and other stakeholders.

Sometimes, these decisions get complicated by maintenance, such as with an erosion-repair project that this year put Bonneville workers below the spillway.

"They would go work for eight or 10 hours, and then we shoo them out and go spill for eight or 10 hours," said Ray Guajardo, hydroelectric power operations manager at Bonneville. "Everything is coordinated. Everything."

As the water is spilled, it increases the dissolved gases. Those gas levels are carefully monitored because – if they go too high – both sides in the legal battle agree they can injure or kill young salmon.

That's why Washington and Oregon have set total dissolved-gas limits. They are not supposed to exceed 120 percent in the water that reaches an area below the dam.

In recent weeks, due to the unavoidable need to pass so much water over the dams, the dissolved gas levels at Bonneville and other sites have often averaged above the states' limits. They often have measured in the 121 to 125 percent range, according to monitoring reported by the federally funded Fish Passage Center <<http://www.fpc.org/>> in Portland.

Michele DeHart, the center's director, said that danger zone starts somewhere above 125 percent. Sampling of this year's young salmon – known as smolts – has not detected significant health problems from the higher levels.

“We've been monitoring gas-bubble trauma under all conditions every single year – for about 20 years, and what we are seeing is consistent with all the historical data,” said DeHart.

‘Unintended consequences’

DeHart said years of research – under all different kinds of river conditions – indicate the increased flows should boost the numbers of smolt that make it to the ocean. That, in turn, should bump up the percentage of fish that return as adults to spawn in the Columbia Basin.

But some politicians are not happy with what's been happening on the Columbia this spring.

In a May 2 letter to the administrator of the BPA, four Northwest members of Congress – Washington Republican Reps. Cathy McMorris Rodgers and Dan Newhouse, and Oregon Democratic Reps. Kurt Schrader and Peter DeFazio – expressed “deep concern” with the management of the Columbia Basin dams in the aftermath of the federal judge's order.

Their letter appears to question the science behind the judge's order and the economic impact that could arise in future lean-water years as more power production is sacrificed to fish passage.

“As you know, Judge Simon is ordering a significant increase in mandatory spill in the spring of 2018,” they wrote. “... there will likely be unintended consequences that will hurt fish recovery while greatly increasing power costs ... Our constituents deserve to understand the

proposed measures, as well as the expected impacts they will have on the region.”

In their letter <<https://www.documentcloud.org/documents/3699756-LTR-to-Administrator-Elliot-Mainzer-BiOp.html>> , they ask for the BPA to answer a series of questions about the dams, fish and costs to the region’s ratepayers in carrying out the judge’s order.

Bogaard, of Save our Wild Salmon, views the letter as “an excellent example of how politics continually intervenes to distort policy for salmon and communities in the Columbia Basin.”

Bogaard wants salmon restoration based on the best science. Otherwise, he cautions, those efforts risk failing, and wasting taxpayer dollars.

Hal Bernton: [206-464-2581](tel:206-464-2581) or hbernton@seattletimes.com

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