

Fish Runs Improving: Families and Businesses Invest Billions

Pacific Northwest families and businesses are spending billions of dollars to improve conditions for salmon and steelhead in the Columbia Basin, and these efforts are bearing fruit. Fish survivals at the eight large federal hydro projects on the Columbia and Snake rivers are high, at 96 to 100 percent, depending on the project. Over the past decade we have seen a dramatic improvement in fish runs.

Record numbers of adult fish have returned to the Columbia River Basin from the Pacific Ocean to spawn in recent years.

Today, there are more fish in the Columbia River than at any time since the first dam was built at Bonneville in 1938.

Research also shows that salmon survival in the Columbia and Snake rivers is higher today than it was before the Snake River dams were built in the 1960s. And overall juvenile survival past the dams is three times higher than it was 30 years ago. Most scientists believe ocean conditions are the prime driver in run variability, not the dams.



Adult Returns at Bonneville Dam 1938-2008 (wild and hatchery)

More information on the success of survival efforts is illustrated in the [Columbia River Progress Report](#) released by the U.S. Army Corps of Engineers, Bonneville Power Administration, and the Bureau of Reclamation.

How We are Achieving Success

Since 1978, the region has spent nearly \$12 billion on solutions to help the runs. In the last decade, efforts ramped up with new massive fish slides and other structures installed at the dams to move young salmon and steelhead migrating to the ocean over and around the dams. Changes in the way dams operate – dedicating more water to fish in spring and summer versus power production – have also increased survival, as have programs to reduce predation by birds, sea lions, and other aquatic animals. Habitat projects throughout the four Northwest states are restoring spawning and rearing grounds, opening tributary channels for fish to use and providing more water in-stream.

Looking ahead, the 2008 salmon plan to help the 13 salmon and steelhead species listed under the Endangered Species Act details a comprehensive continuing effort that will cost consumers in the region some \$10 billion more in the next decade. In fact, fish and wildlife costs now make up 20 percent to 30 percent of electricity bills in the region.

Why Runs Fluctuate

Dramatic fluctuations in salmon runs occur from year to year. Yet the dams these fish traverse have been in place for over 70 years. This has led researchers to focus on complex differences in ocean conditions as the primary reason for the ups and downs in salmon runs.

Researchers have been measuring conditions in the Pacific Ocean where juvenile Columbia River salmon live and grow. They found that water temperature, the amount of food available, and the number of predators has a much greater effect on salmon and steelhead stocks than dams on the Columbia River.

The survival of juvenile salmon and steelhead passing through the Columbia River is similar to or better than that observed in other Pacific Coast river systems. NOAA Fisheries research on the entire Columbia River hydropower system showed that the estimated survival for yearling Chinook salmon was 56 percent and steelhead 40 percent in 2006. In the Fraser-Thompson River system in British Columbia, where there are no dams, estimated survival for yearling Chinook ranged from 14 percent to 34 percent, and steelhead survival ranged from 21 percent to 39 percent.

Northwest RiverPartners is a partnership of farmers, electric utilities, ports, and large and small businesses in the Pacific Northwest. We are dedicated to ensuring the Columbia and Snake remain living, working rivers to benefit families and businesses in the region.

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