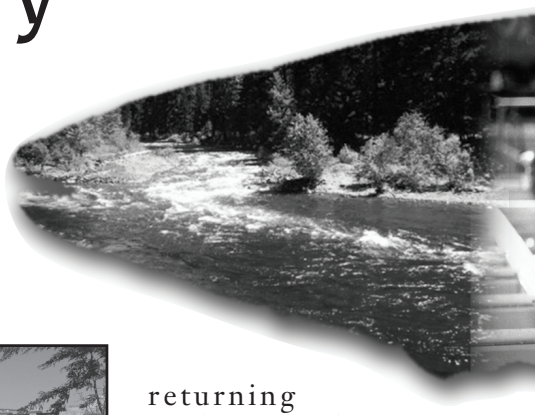
Taking a Comprehensive Approach to Northwest Fish Recovery

Although often blamed for declining runs, dams are only one of several factors that affect endangered fish

By Pam Blair



When it comes to salmon survival, dams and river operations provide an easy target.

But helping salmon get past the region's hydropower facilities is all for naught if the fish become casualties of poor habitat or end up being reeled in by fishermen.

Efforts to protect and recover salmon and other fish species require a comprehensive approach that encompasses hydro, hatcheries, harvest and habitat, said Terry Flores, director of Northwest RiverPartners—a nonprofit, non-partisan coalition of farmers, electric utilities, businesses and river users committed to protecting the Columbia and Snake rivers, and their many uses.

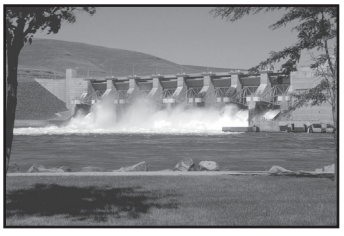
"The hydro system alone can only do so much," said Flores. "If the region is to succeed, salmon restoration efforts must rely on sound science and recognize there are many other factors besides dams that affect salmon throughout their life cycle."

Like the Clinton administration before it, the Bush administration has concluded only a truly comprehensive approach to salmon recovery—addressing all causes of mortality throughout the salmon life cycle—will lead to sustained recovery of the runs, said Scott Corwin, vice president of marketing and public affairs for PNGC Power—a Portland-based nonprofit group of 15 rural electric co-ops.

Noting that up to 60 percent of adult Snake River fall chinook are caught, James Connaughton, chairman of the White House Council on Environmental Quality, said only a strategy integrating all of the "H's" of salmon policy—habitat, hydropower, hatcheries and harvest—can succeed.

Hydropower

Nearly one-third of the Bonneville Power Administration's (BPA) cost of energy pays for salmon recovery efforts.



Little Goose Dam spills water. Photo by Tom Holt, U.S. Army Corps of Engineers.

Northwest electricity consumers spend more than $700 million a year on fish recovery efforts through BPA programs and changes to the hydro system's operations. That compares to a fishery the Power Council's Independent Economic Advisory Board has valued at less than $150 million, Flores said.

Since 1978, the BPA has contributed more than $6 billion "to mitigate, protect, enhance and recover" fish and wildlife populations and their habitat in the Columbia Basin.

More than $4 billion of that has come since 1997.

A commercial fishing vessel pulls in a net full of fish. Photo by Washington Department of Fish and Wildlife.

"A myopic focus on the dams does a disservice to those making such substantial investments in recovery, and misses the opportunity to dedicate resources to other factors limiting salmon survival," Flores said.

In 2005, U.S. Army Corps of Engineers biologists estimated November spill at The Dalles Dam benefited two to three adult chinook returning to the Columbia River, at a cost to BPA ratepayers of $900,000 to $1.036 million.

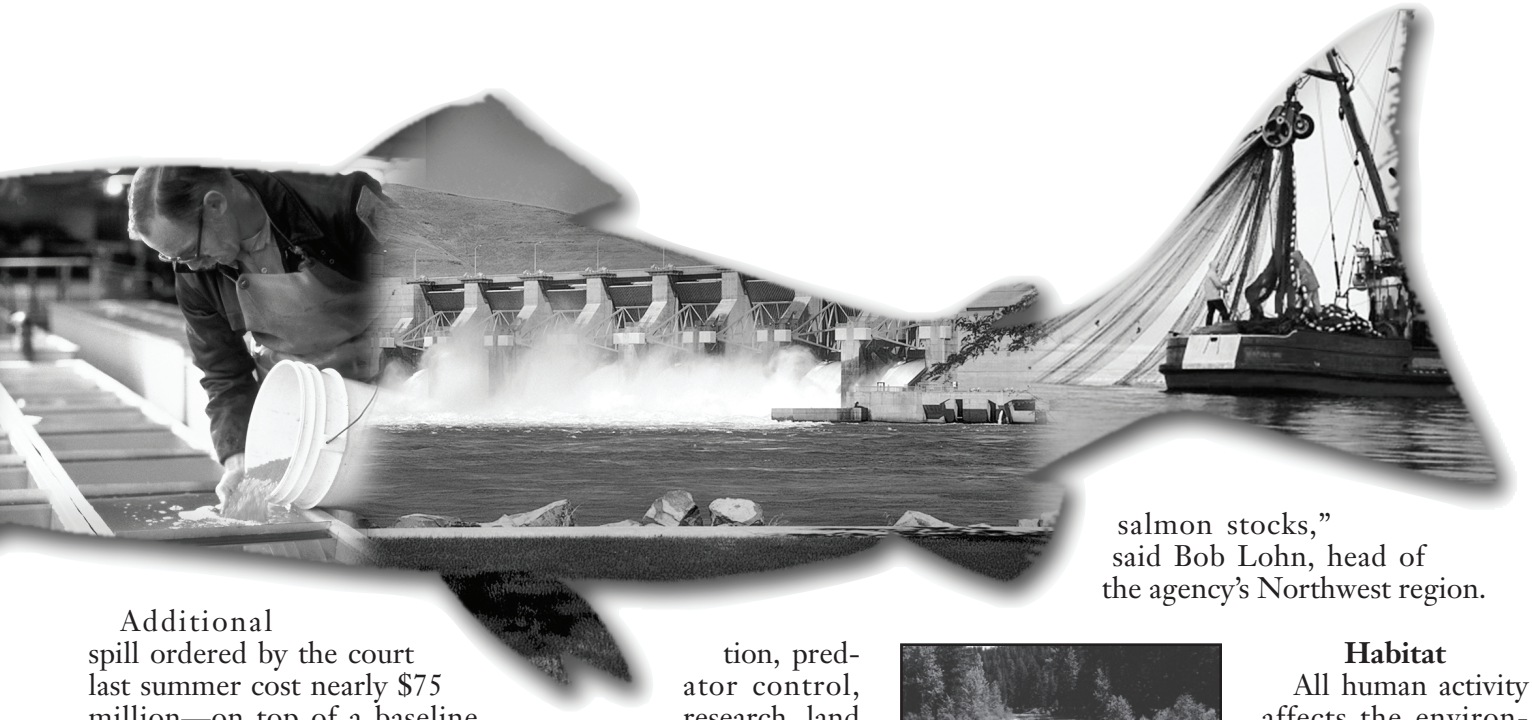
On average, from 1996 to 2005, fewer than 50 adult steelhead a day have passed Bonneville Dam from December 1 through February 28, when water is spilled adjacent to fish ladders, costing BPA ratepayers $12,000 to $14,000 a day in lost generation at current market prices, or more than $1 million during the three-month period, Flores said.

Harvest

The investment made in hydropower modifications can be undermined by what happens to fish once they pass the dams.

Adult fish returning to the Columbia "are the lottery winners in the salmon life cycle," surviving huge variations in habitat over thousands of miles, said Corwin.

"Harvest must be integrated into salmon recovery planning if the region has any hope of maintaining improvements in the runs over the long haul," Flores said. "Every endangered fish that is killed through harvest makes absolutely no contribution to the recovery effort."



Additional spill ordered by the court last summer cost nearly $75 million—on top of a baseline spill program of $80 million—to benefit a Snake River fall chinook run harvested at a 45-percent rate, Flores said, noting "it doesn't take a scientist to conclude that this is irrational."

"It makes sense to ask the tough questions about how and why endangered fish are caught right before they can spawn," Corwin said. "Calling for a review of harvest and hatchery practices does not equate to the end of fishing in the Northwest. It may only mean we get better at prioritizing when and how fishing takes place in order to minimize accidental impacts upon the specific runs of fish we are working so hard to protect."

Hatcheries

Since the 1870s, hatcheries have been used in the Columbia River Basin.

Initially, they enhanced runs severely depleted by over fishing. Today, hydro operators fund hatcheries to mitigate the impact caused by dams.

In 2005, the BPA spent $135.8 million on 350 fish and wildlife projects, encompassing hatcheries as well as habitat restoration, predator control, research, land acquisitions and culvert replacement. The agency's $89.7 million capital repayment to the U.S. Treasury also included hatchery construction.

A worker fills trays with salmon eggs at the Bonneville Dam fish hatchery. Photo by Bob Heims, Army Corps of Engineers.

Hatchery operations and maintenance costs in 2004 totaled $57,613,222. The BPA contributed more than $23 million of that.

Since the mid-1980s, 200 to 300 million salmon a year have been released into the Columbia River Basin. Today, hatcheries account for most of the salmon in the Columbia and Snake rivers.

This year, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service hired an expert to head up a team to examine how harvests and hatchery management can better contribute to recovery of federally protected salmon and steelhead.

"Our goal is to do everything we can to make sure that all the region's salmon-related activities are aiding in the recovery of our wild salmon stocks," said Bob Lohn, head of the agency's Northwest region.

The Naches River flows freely. Photo by Jim Cummins, Washington Department of Fish and Wildlife.

Habitat

All human activity affects the environment. Hydro projects result in fluctuating reservoir levels and change river conditions and the adjacent land and vegetation.

The condition of the streams and tributaries where salmon spawn is vitally important. Plant removal within a river is implemented to address issues related to nutrient loading and reduced oxygen levels, which both affect salmon.

Hydro owners also have worked with local property owners and government agencies to restore in-stream spawning structures.

A Regional Voice

Northwest RiverPartners was formed in the spring of 2005.

"Our goal is to protect salmon in a science-based, cost-effective way," said Flores. "We believe that the Northwest's salmon runs can prosper without sacrificing the Northwest's quality and way of life.

"The Columbia and Snake rivers must remain living, working rivers providing multiple benefits: clean and affordable electricity, irrigation for farmlands, healthy fish and wildlife, maritime trade and a multitude of recreational opportunities." ■