

# Toward Long-Term Salmon and Steelhead Recovery

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## Federal agencies, states and tribes work together to recover fish

**S**almon and steelhead are treasured resources and important to the culture and economy of the Pacific Northwest. Governments, landowners, businesses and industry all have a stake – and a common goal – in bringing the fish back to healthy levels.

Today, federal, state and tribal sovereigns are working together in an unprecedented collaboration on a new proposed action for Columbia River Basin fish listed under the Endangered Species Act. The proposed action will describe how the federal agencies will operate the federal dams in the Columbia River Basin to help these fish as they migrate to the ocean and back.

No single action can recover species with such complex lifecycles – spawning and rearing in freshwater rivers but spending most of their lives in the ocean. And no entity can do it alone.

Improving fish passage through the federal hydro dam system is critical. But successful recovery of the fish will also require that we agree on and integrate actions in habitat, hatcheries and harvest as well.

### The remand

In October 2005, U.S. District Court Judge James Redden directed NOAA Fisheries – the agency that oversees ESA implementation for marine species – to revise its “biological opinion” on the federal agencies’ operation of the dams for

salmon and steelhead. A biological opinion is a scientific review of what the federal agencies propose to do under ESA.

The judge told NOAA Fisheries and the federal “action agencies” – the Corps of Engineers, Bureau of Reclamation and Bonneville Power Administration – to collaborate with the states and Columbia Basin tribes to produce a new proposed action and biological opinion better linked to fish recovery.

### The collaboration

In response, the federal agencies got together with the four Northwest states and seven of the Columbia Basin tribes. Together, they formed a policy-level workgroup and several technical groups and began to work toward meeting the court’s requirements.



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*Successful recovery of the fish will require that the region agree on and integrate action in habitat, hatcheries and harvest as well as at the federal dams.*

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Since then, the federal agencies have filed two quarterly reports with the court on the progress of the collaboration. The full report and documents can be viewed at [www.salmonrecovery.gov](http://www.salmonrecovery.gov).

To help shape the new biological opinion, the group will develop scientifically based goals and agree on performance standards, including targeted survival improvements for juvenile and



adult salmon and steelhead. They will describe a 10-year suite of actions for hydro, habitat, harvest and hatcheries designed to achieve those standards.

The plan will also include research, monitoring and evaluation so that actions can be continually adapted to include those actions found to be most effective for fish.

## Action for long-term recovery

While the biological opinion will provide a solid foundation, the responsibilities for long-term



recovery go beyond what the federal action agencies alone can accomplish. An important part of this effort is the development of local recovery plans.

Local stakeholders are working with NOAA Fisheries to develop scientific, locally supported recovery plans for each of the listed salmon and steelhead stocks in the Pacific Northwest. These plans describe how local, state and federal agencies and tribes will work together to help recover the fish.

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The following recovery domains include stocks that will be addressed in the biological opinion and plans for Columbia Basin salmon.

### Middle Columbia

The Middle Columbia steelhead inhabit a vast area that includes four major basins – the Columbia Gorge, Yakima, Southeast Washington Mid-Columbia and Snake and Oregon Mid-Columbia. Recovery work is progressing in each area and will eventually be “rolled up” into a two-state recovery plan.

### Upper Columbia

The Upper Columbia chinook and steelhead plan was initially drafted by several counties and tribes, and then adopted by a larger group of stakeholders. Because this stock spawns far up the Columbia River, the fish are exposed to dam passage hazards, harvest and habitat degradation as they migrate through other basins as well. How to address these “out-of-basin” effects is a key issue.

### Snake River

The Snake River Recovery Plan will address conditions in the Lower Snake River for four listed species: sockeye, fall chinook, spring/summer chinook and steelhead. Two of these species cross three state boundaries – bringing states together to coordinate their planning.

### Willamette/Lower Columbia

This plan affects the cities of Portland and Vancouver, and thousands of acres of farm and forest lands. It includes six listed species. Washington has completed an interim plan covering the area north of the Columbia River. Oregon is working on the remainder – one for the Lower Columbia and one for the Upper Willamette chinook and steelhead.

The NOAA recovery plans for these domains will ultimately be “rolled up” to the basinwide level so that there are clear expectations about goals, priorities and actions for the entire Columbia Basin.

Three other plans, the Puget Sound Shared Strategy, the Lake Ozette Sockeye Recovery Plan and the Oregon Coastal Coho Conservation Plan, address stocks outside the Columbia Basin.

The plans and related products are in varying stages of development. Please visit [www.nwr.noaa.gov/Salmon-Recovery-Planning/Recovery-Strategy.cfm](http://www.nwr.noaa.gov/Salmon-Recovery-Planning/Recovery-Strategy.cfm) for more information about NOAA Fisheries’ Northwest salmon recovery planning.





## Investments in results

### Fish passage improved at the dams

The eight federal dams on the lower Columbia and Snake rivers already have very effective fish passage measures. Most have juvenile fish bypass channels built into the dams. Some have removable spillway weirs, or “fish slides,” to provide less stressful passage through the dam spillway.

Survival at the adult fish ladders is about 98 percent or higher at each dam for adult fish returning to their spawning grounds.

The federal action agencies also provide river flows to aid fish migration and spawning; spill for

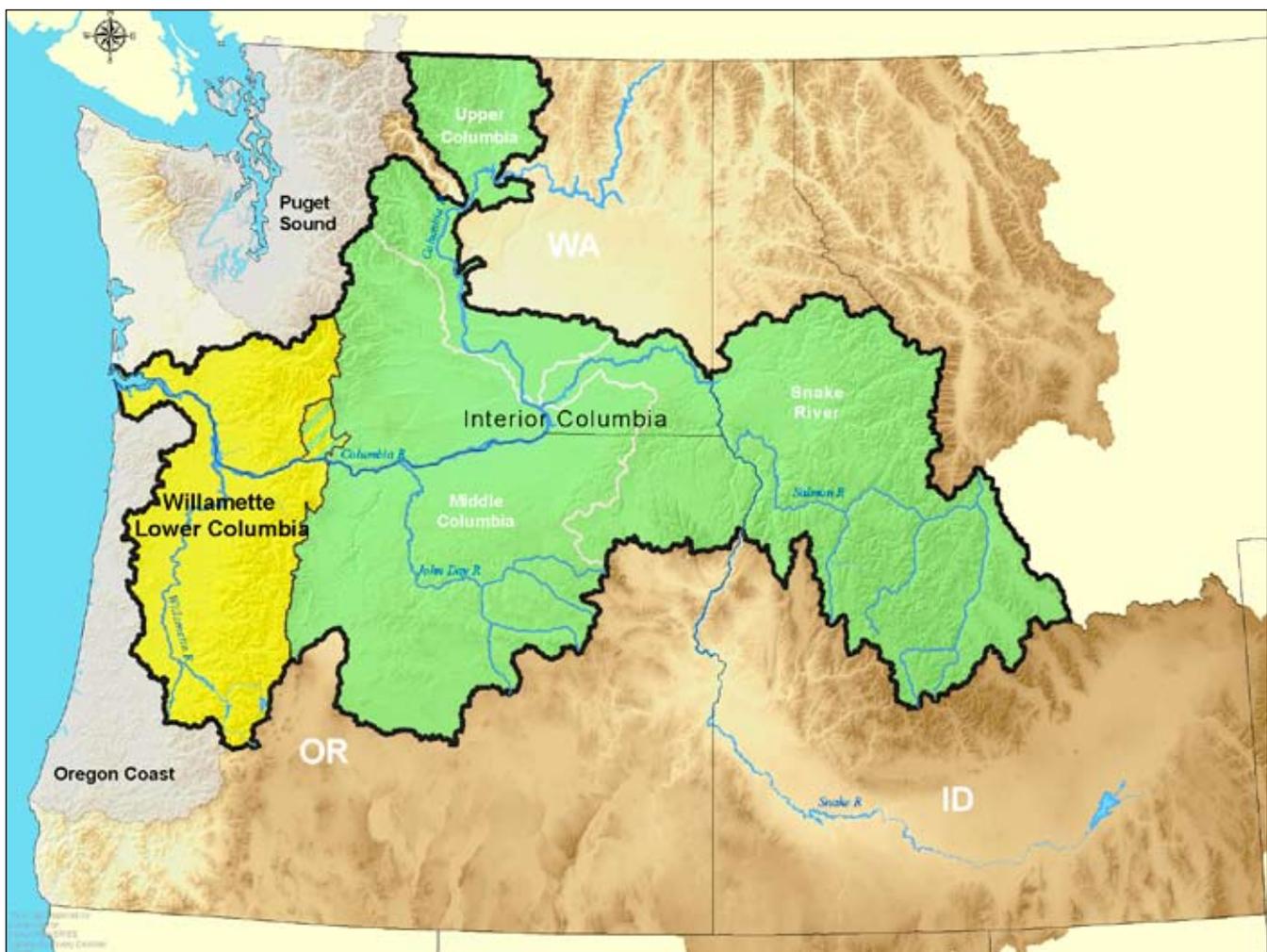
fish, where water and fish rush through the spillway and into the river below the dam; barging to move juvenile fish past the dams; and control of birds and fish that prey on young salmon.

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*Adult survival at the fish ladders is about 98 percent or higher at each dam. Survival for spring migrants through the “fish slides” at Lower Granite and Ice Harbor Dams is estimated at 97 to 99 percent.*

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## Salmon recovery domains



*The Interior Columbia and the Willamette/Lower Columbia recovery plans include Columbia Basin stocks that will be addressed by the new biological opinion. (Interior Columbia is divided into three “subdomains.”)*



## Habitat and hatchery contributions to healthy stocks

On the ground, states and tribes, in cooperation with participating landowners, are leading the work to restore and protect streams and banks to provide spawning and rearing habitat for fish.

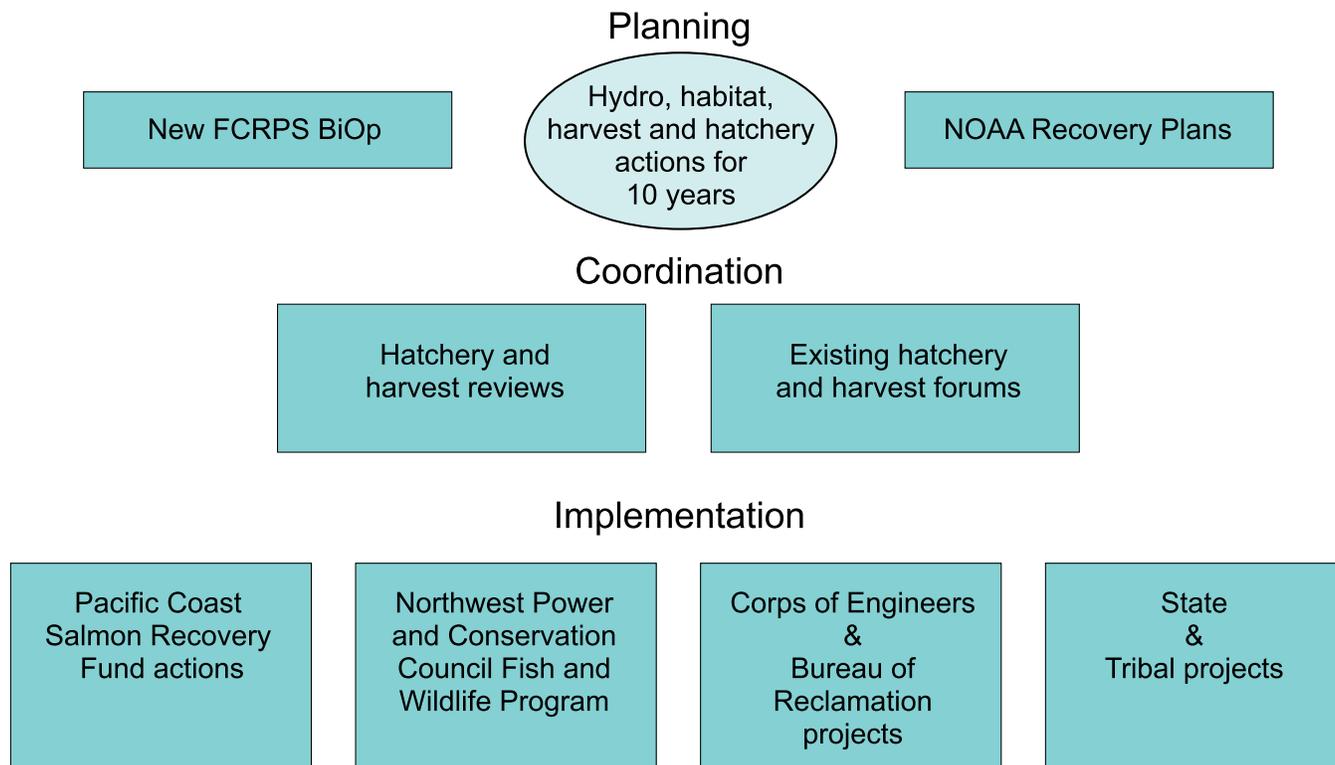
Improvements at hatcheries seek to better support the recovery of wild populations of fish. Water leasing programs help restore instream flows where irrigation and other uses have reduced the water available for fish.

## Working for results

Together with states and tribes, the action agencies have made real progress to improve conditions for fish. With this collaboration and the recovery planning, we're seeking to build on these successes. It's important that the region come together in this effort so that together we may find and follow through on the most effective ways to recover salmon and steelhead in the Pacific Northwest.

For more information on what individual federal agencies are doing for salmon, visit our websites. Links to individual websites are at [http://www.salmonrecovery.gov/about\\_us/agencies/](http://www.salmonrecovery.gov/about_us/agencies/).

## Working together for Columbia Basin fish recovery



*The new plan for listed salmon and steelhead will pull together the Federal Columbia River Power System (FCRPS) biological opinion and the NOAA Fisheries recovery plans to address priority actions for the next 10 years. The actions will be coordinated with federal reviews of hatcheries and harvest issues and the forums that make decisions on Columbia Basin hatcheries and harvest. Actions will be implemented through federal, state and tribal programs.*