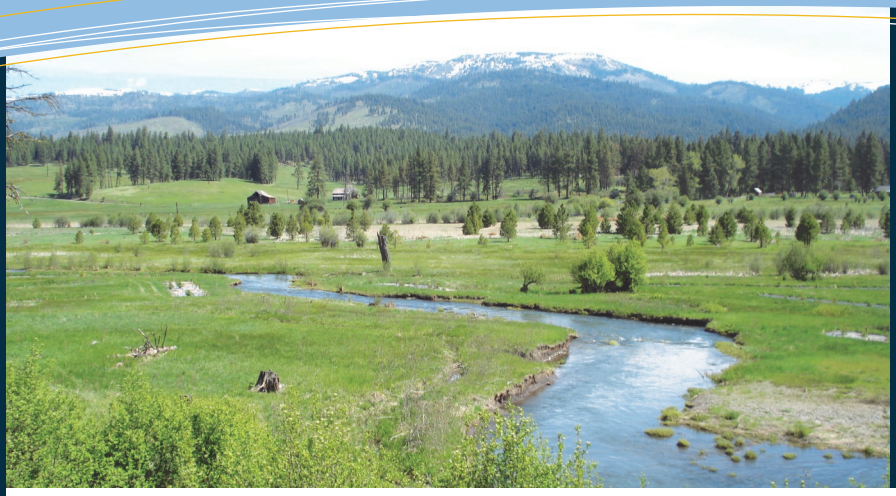
NOAA and The Upper Columbia Salmon Recovery Board



Recovery

Governance

Partnership

Funding Solutions

Upper Columbia Salmon Recovery Board

The Upper Columbia Salmon Recovery Board is facilitating a massive river restoration effort to address population declines in three federally listed fish species in four major sub-basins of Washington—the Okanogan, Methow, Entiat and Wenatchee Rivers.

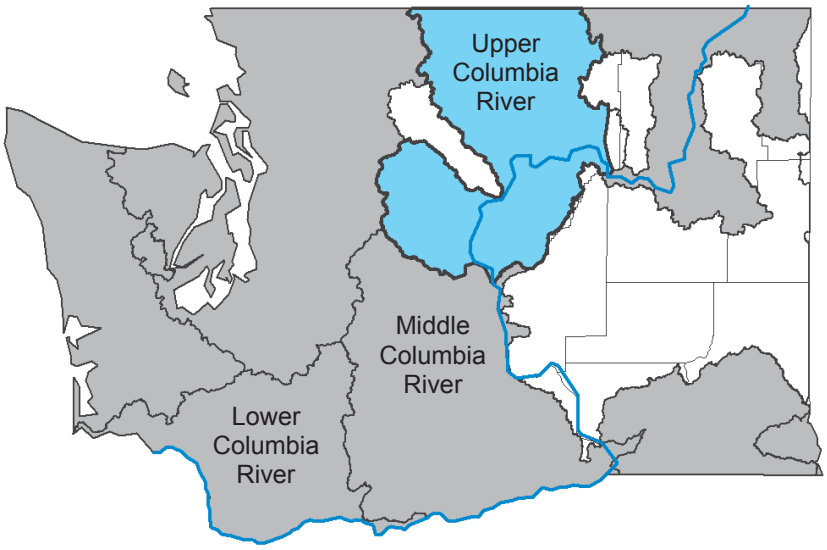
NOAA FISHERIES

NOAA Fisheries and the state of Washington support an innovative approach to recover salmon that emphasize local control and adherence to scientific principles. Using NOAA Fisheries' recovery plans as a road map, implementation is left in the hands of regional and local agencies, and community groups, to identify and provide cost-effective solutions.

Collaborative Solutions for Fish Species Recovery

The upper Columbia region is located in the heart of north-central Washington, on the east side of the Cascade Crest. Encompassing more than 10,000 square miles, the region is larger than Rhode Island, Delaware, and Connecticut, combined. Geographically, the area spans from the base of Chief Joseph Dam south to the confluence of the Yakima and Columbia rivers.

The Upper Columbia Salmon Recovery Board is a leader among the eight regional boards established by Washington across the state, with the support of NOAA Fisheries, to locally develop and implement strategies to recover federally listed salmon and steelhead. The Board includes commissioners from Chelan, Douglas, and Okanogan counties, and representatives of the Colville Confederated Tribes and the Yakama Nation. This collaborative approach led to the development of the *Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan* (2007), the plan's federal approval and overall community support. The Board uses the plan to facilitate habitat restoration, land protection, and water transactions collaboratively.



Upper Columbia Salmon Recovery Board & On-the-Ground Recovery Efforts

Local stakeholders can take the lead in designing and implementing plans to conserve and recover endangered and threatened species.

Recovery Plan Successes

Seven years into implementation of a 30-year recovery plan, the region has funding from a variety of sources to complete more than 300 restoration and protection projects resulting in:

- 2,730 acres of improved habitat
- 31,190 acre-feet of water protected for fish
- 109 miles of habitat opened to fish access
- 116 acres of upland and riparian habitat treated
- More than 30 miles of stream fully restored.

Salmon recovery efforts in the Upper Columbia also provide significant community benefits. In the Upper Columbia, the Pacific Coastal Salmon Recovery Fund (PCSRF) has directly contributed to the creation of local jobs. According to a recent study, a $1 million investment in watershed restoration results in 15-33 new or sustained jobs and $2.2-2.5 million in total economic activity (Edwards et al., 2012; Nielsen-Pincus and Moseley, 2010).

In 2003, water was at the center of local controversy regarding the Endangered Species Act. The Methow Valley in north-central Washington was one of the first testing grounds for how communities along salmon-bearing streams cope with regulations implementing the Act. NOAA Fisheries, in executing its consultation requirements under the Act, shut down irrigation districts due to the risk of water diversions impacting listed salmon and steelhead. The ensuing two-year "water war" led the state, local citizens and public leaders to take the lead in designing reasonable and prudent alternatives and implementing actions to conserve endangered and threatened species.

Over the long-term, healthy self-sustaining salmon populations will provide stable fisheries, fueling local economies and supporting cultural, ecological, and other values.

With approved NOAA Fisheries' recovery plans as a road map, implementation is in the hands of regional and local agencies and community groups, providing cost-effective and efficient solutions. NOAA Fisheries Northwest Science Center supports these local efforts with the latest scientific information and approaches to monitoring and evaluating on-the-ground results. NOAA Fisheries regional experts provide guidance to help target projects.

For over a decade, NOAA Fisheries has invested significantly in Pacific Northwest salmon through the Pacific Coastal Salmon Recovery Fund (PCSRF). The partnership between NOAA Fisheries, the State of Washington and the Upper Columbia Salmon Recovery Board, now termed the "Washington Way," provides a powerful example of meaningful progress.

Since its founding in 1999, the Board has worked with local citizens and other partners to upgrade irrigation systems, screen water diversions, and purchase or lease water rights from willing sellers. Working with over 50 different landowners and irrigation districts, the Board has helped modernize irrigation systems to improve efficiencies and ensure fish passage. It has placed unused water in trust to protect listed salmon and steelhead. Many local projects leverage NOAA's PCSRF funds allocated through the State of Washington's Salmon Recovery Funding Board. These funds are critical to supporting land and water user's actions. This locally-based effort has significantly improved water flows and habitat conditions for these species.

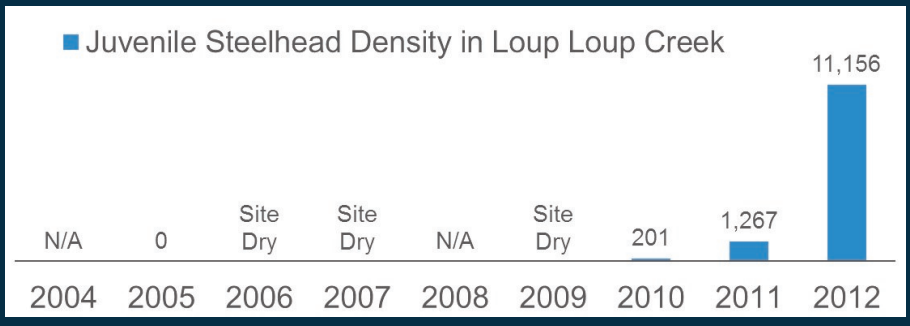
Project partners monitoring recovery efforts, and data to date indicate we are on the road to recovering spring Chinook salmon and steelhead. Recovery is a long-term endeavor encompassing many generations of fish. PCSRF funding supports recovery efforts with needed capital in rural communities during challenging economic times. The consistent support of state legislators and Congress over the last decade has paid dividends for salmon and people in the upper Columbia Basin. Through these collaborative efforts, NOAA Fisheries and the Upper Columbia Salmon Recovery Board are addressing recovery needs and local concerns through balanced solutions that recognize the needs of the environment, salmon, the community, and the local economy.

Before...

After...

PROJECT EXAMPLE: LOUP LOUP CREEK

Not unlike many tributaries of the Okanogan River, flows in Loup Loup Creek are often diverted for agricultural production, leaving the lowermost one mile of this 63 square mile watershed intermittently disconnected from the Okanogan River since the 1930's. These low flows have had a particularly adverse impact on the survival of juvenile steelhead. In addition to the lack of sufficient flow, two culverts acted as barriers to upstream passage for adults, blocking several miles of potential spawning and rearing habitat. In 2011 and 2012, as the result of a collaborative effort between the Colville Confederated Tribes, Okanogan County, land owners and the Bonneville Power box culverts were installed. Partners also negotiated a long-term lease providing additional water for Loup Loup Creek and continuous flow that benefits steelhead spawning, juvenile rearing, and egg incubation. Juvenile steelhead showed a very quick response. The observed density of steelhead juveniles per hectare increased 880 percent after the increase in flow and culvert replacements.



Pioneer Water Users Association, Trout Unlimited & the Wenatchee River

Trout Unlimited and The Pioneer Water Users Association (Pioneer) broke ground in November 2012 on a large scale irrigation efficiency and point-of-diversion change project, which permanently moves the Pioneer point of diversion from the Wenatchee River to its confluence with the Columbia River. Pioneer, organized in 1896, was the first gravity-delivered irrigation canal on the Wenatchee River and holds the oldest water right. Recently, its 107 members recognized that they were facing a number of challenges. The Wenatchee River had changed course, reducing flows into the diversion and the aging irrigation infrastructure; was in need of significant upgrades.

Trout Unlimited and Pioneer began working together in 2008 to create the solution. As a result, Pioneer now has a sophisticated, modern pump house and pressurized irrigation system, which allows over 35 cubic feet per second of flow to stay in the Wenatchee River, and protects approximately 10% of base flows in the lower Wenatchee River. Trout Unlimited secured grant funding for the estimated $3.0 million in upgrades, which included converting the open canal to the buried pressurized pipe. This project is a large scale example of collaboration and cooperation between public, private and conservation interests and as such is a keystone; representing a new standard for future irrigation water management practices in the region.

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