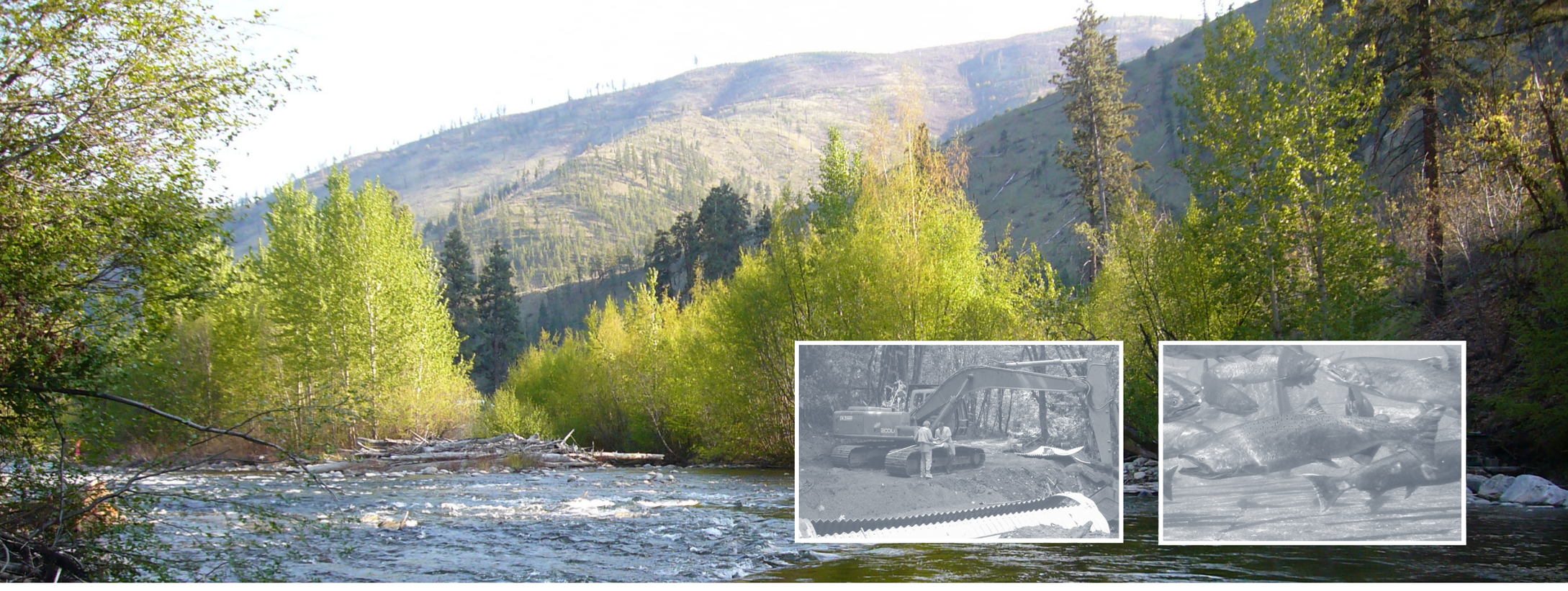


Investing in Salmon Recovery

A Report by the Washington Salmon Recovery Funding Board

2000-2008

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

Cover photograph: The Entiat River near Wenatchee is the site of a several projects to restore salmon habitat.

Left photograph insert: The South Puget Sound Salmon Enhancement Group used a Salmon Recovery Funding Board grant to replace two undersized culverts on a tributary to Skookum Creek near Shelton, opening up 1 mile of habitat for chum and coho salmon and cutthroat and steelhead trout.

Right photograph insert: Chinook salmon in the Columbia River taken by Geoffrey Michael.

WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
Salmon Recovery
Funding Board

Salmon

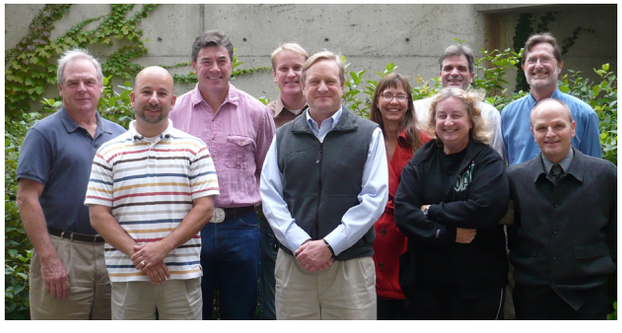
For this report, salmon will refer to all species of salmon, trout, and steelhead native to Washington.

Salmon Recovery Funding Board
Recreation and Conservation Office
Post Office Box 40917
Olympia, Washington 98504-0917

January 2009

Welcome

INVESTING IN SALMON RECOVERY



Salmon Recovery Funding Board
Back Row, from left to right:
Harry Barber, citizen from Washougal
Bud Hover, citizen from Winthrop
Scott Anderson, Department of Transportation
Melissa Gildersleeve, Department of Ecology
Tim Smith, Department of Fish and Wildlife
Craig Partridge, Department of Natural Resources

Front Row, from left to right:
David Troutt, citizen from Dupont
Steve Tharinger, citizen from Clallam County
Carol Smith, Conservation Commission
Bob Nichols, Governor's representative

Dear Reader:

When the Salmon Recovery Funding Board was formed a decade ago, the task before us was daunting. Wild salmon were disappearing. Many of us felt their decline would continue unless significant steps were taken in a new direction.

The Salmon Recovery Funding Board began work immediately by providing grants for on-the-ground projects to recover salmon. Today, we continue to fund high priority projects to protect, reconnect, and restore salmon habitat.

In 2003, we funded regional efforts to develop long-range recovery plans for salmon that had been listed by the federal government as threatened or endangered. By 2005, these recovery plans were complete and ready for acceptance by the federal government. Today, we have recovery plans being implemented in most areas of the state with endangered or threatened salmon species.

Our partners—lead entities and regional organizations, the Governor's Salmon Recovery Office and fellow state agencies, the legislature and Congress, tribes, businesses, non-profit organizations, citizens, local governments, and many others—have created a network united to save the many species of salmon that call Washington home.

As we enter our 10th year, we can be proud of how far Washington has come. Yet we know that in many ways, we are at the beginning of our journey. This problem was not created in ten years and will take a generational commitment to solve it. Tomorrow brings new challenges—how to fund salmon recovery in tight economic times, how to accommodate a growing population that continues to diminish critical salmon habitat, how to account for climate change, and how to keep our citizens engaged in salmon recovery.

Like salmon, our journey is filled with obstacles, but ultimately we all are striving for the same thing, a thriving and sustainable salmon population for future generations to enjoy.

Sincerely,

Steve Tharinger
Chair
Salmon Recovery Funding Board

Overview

INVESTING IN SALMON RECOVERY

Salmon Recovery Funding Board

Voting Members
Steve Tharinger, chair, Clallam County
Harry Barber, Washougal
Bud Hover, Winthrop
Bob Nichols, Olympia
David Troutt, Dupont

Washington State Agency Members
Conservation Commission
Department of Ecology
Department of Fish and Wildlife
Department of Natural Resources
Department of Transportation

Why We Need Salmon Recovery

In 1991, the federal government declared Snake River sockeye salmon as endangered. In the next few years, 16 more species of salmon were listed as either threatened or endangered. By the end of the decade, 75 percent of the state was covered by federal listings of at-risk salmon.

What is the Salmon Recovery Funding Board?

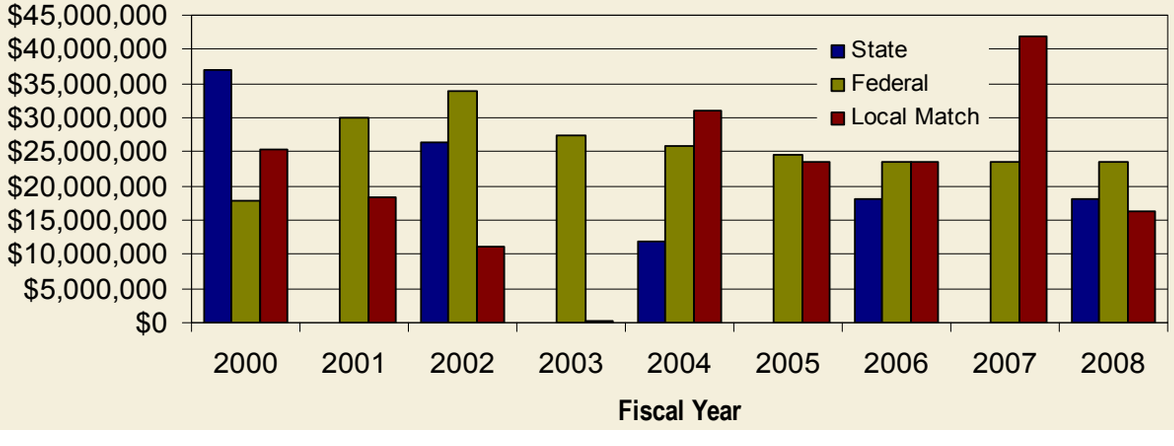
The Washington legislature created the Salmon Recovery Funding Board in 1999 to ensure wise investment of federal and state funding of salmon recovery efforts.

The Salmon Recovery Funding Board administers grants to local communities to protect and restore salmon and their habitat, and assist with a range of salmon-related activities.

What are the Funding Sources?

Funding for the Salmon Recovery Funding Board comes from the Washington legislature through the sale of state bonds and from Congress through the Pacific Coastal Salmon

Chart*: Federal, State, and Local Salmon Recovery Funding



Overview

INVESTING IN SALMON RECOVERY

Recovery Fund. These funds are matched by contributions from grant recipients.

How is the Money Spent?

From 2000-2008, the Salmon Recovery Funding Board awarded more than $358 million for 1,116 grants in 33 of the state's 39 counties. To date, about half of the projects have been completed.

What Types of Projects are Funded?

The Salmon Recovery Funding Board awards grants for the following types of projects:

- Restoration
- Acquisition
- Assessments
- Combination (acquisition and restoration)
- Monitoring
- Non-capital
- Planning and acquisition

The Salmon Recovery Funding Board believes that projects must be developed using science-based information and local citizen review. Projects must demonstrate, through an evaluation and monitoring process, that they can be implemented and sustained effectively to benefit fish.

Chart*: Completed Projects Statewide

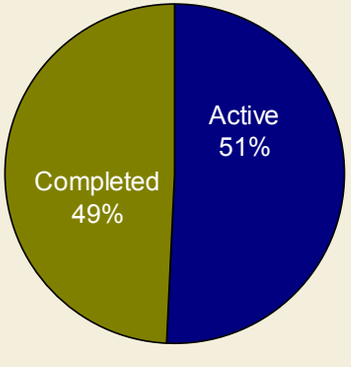


Chart*: Completed Projects Statewide by Fiscal Year in Which They Were Funded

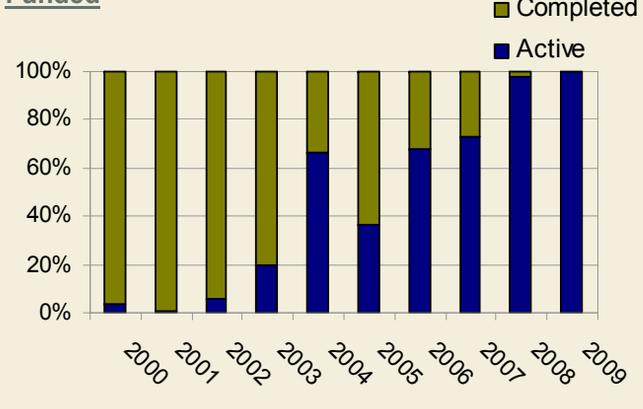
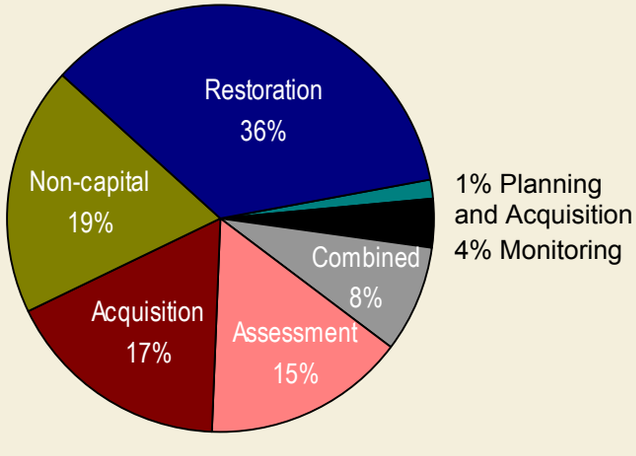


Chart*: Types of Projects Funded



**Note: Chart is based on $358 million in funding for 1,116 grants from 2000-2008.*

Overview

INVESTING IN SALMON RECOVERY

Contributions from Local Partners

The Salmon Recovery Funding Board requires a 15 percent match, but grant recipients have exceeded that by providing nearly $160 million, or 31 percent, in matching money, or donated materials and services.

Who Can Apply for Grants?

- Conservation Districts
- Landowners
- Local governments, including special districts
- Nonprofit organizations
- Regional fisheries enhancement groups
- State agencies
- Tribes

Chart*: Funding Recipients
Percentage of $358 Million in Statewide Funding

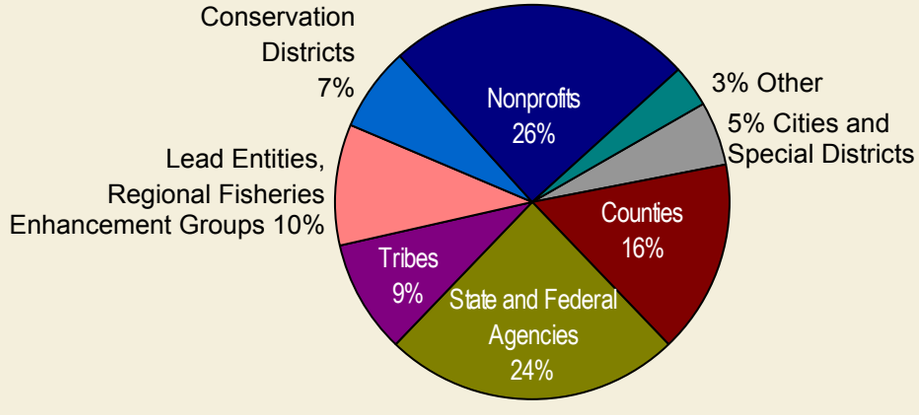
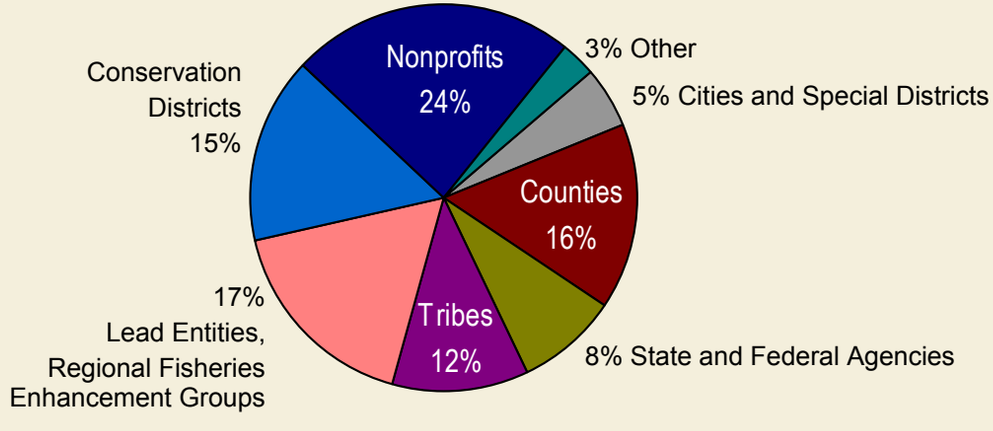


Chart*: Funding Recipients
Percentage of 1,116 Statewide Grants



**Note: Chart is based on $358 million in funding for 1,116 grants from 2000-2008.*

Purpose

INVESTING IN SALMON RECOVERY

Duwamish River
Photograph courtesy of Washington Department of Ecology.

What is the Need?

Salmon are an integral part of Washington's identity, economy, recreation, culture, and history.

From our dinner tables, to our ceremonies, to our jobs, to our shared environments, many Washingtonians rely on salmon. For example, the U.S. Department of Commerce estimates that in 2006 sport fishing contributed more than $906 million to Washington's economy.

Salmon are a treasured state icon, whose loss would have far-reaching effects on all Washingtonians.

How Did We Get Here?

There are many things that have contributed to the decline of salmon populations. In 1991, the first species of salmon in Washington was declared endangered. By 1999, wild salmon had disappeared from 40 percent of their historic spawning grounds in Washington, Oregon, Idaho, and California.

The decline has many causes but two major categories include:

Human influences

- Loss, fragmentation, and destruction of salmon habitat
- Land uses that pollute waterways and degrade habitat
- Dam construction
- Over fishing
- Hatcheries

Changes to the natural environment

- Worsening marine conditions
- Climate change
- Increases in predators

Process

INVESTING IN SALMON RECOVERY

Salmon Recovery Funding Board tour of Walla Walla area projects.

Recovering salmon from the brink of extinction is not work that can be done in isolation. The Salmon Recovery Funding Board works with a network of individuals and organizations that have dedicated themselves to this effort.

27 Lead Entities

Key players in salmon recovery are local lead entities, which were authorized by the legislature in 1998 to develop habitat restoration and protection strategies, and identify projects to meet those strategies.

To create a lead entity, cities, counties, and tribes within one or more watersheds select an administrative organization, citizen committee and technical advisory committee.

Lead entities assess the needs of salmon, develop recovery strategies for their area, and garner community support for salmon recovery. They then seek and prioritize projects that will implement their recovery strategies. The projects are reviewed by their technical advisory committees, ranked by their citizen committees, and then submitted to the Salmon Recovery Funding Board for funding.

Eight Salmon Recovery Areas

State law directed development of a statewide strategy to recover salmon. Based on this, the Governor's Salmon Recovery Office, together with other state and federal agencies, defined eight salmon recovery regions.

Seven regional organizations formed to coordinate planning and implementation of recovery plans. Work in the eighth region is being done by a lead entity and the federal government. Each region encompasses one or more lead entities. Six of the seven have written regional recovery plans that have been approved by the federal government.

In writing their recovery plans, regional recovery organizations combined plans for multiple watersheds into one regional plan. They gained regional consensus on measurable results, developed a series of actions, and gained commitments to achieve the results.

Recovery plans or, in their absence, lead entity strategies, form the basis for Salmon Recovery Funding Board grants. Applicants requesting funding must demonstrate how their projects address regional recovery plans or lead entity strategies.

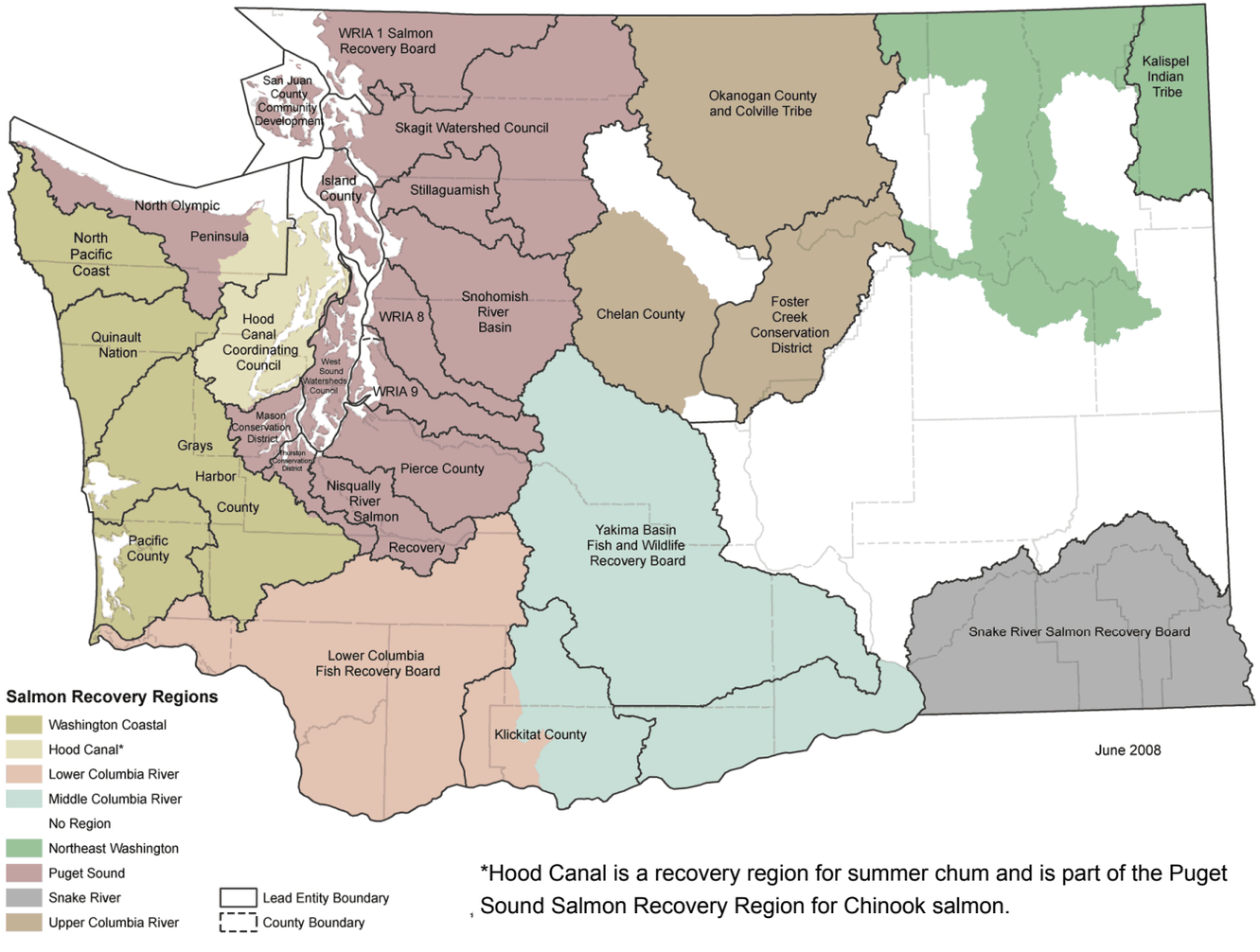
Process

INVESTING IN SALMON RECOVERY

Salmon Recovery Funding Board Review Panel

The Salmon Recovery Funding Board's statewide Review Panel reviews projects early in the application process to provide technical feedback to grant applicants so they can improve their projects. The Salmon Recovery Funding Board relies on the review panel to provide statewide consistency and ensure only the best projects are funded.

Map: Salmon Recovery Regions and Lead Entities



*Hood Canal is a recovery region for summer chum and is part of the Puget Sound Salmon Recovery Region for Chinook salmon.

Projects

INVESTING IN SALMON RECOVERY

Whitman College volunteers plant trees along Mill Creek near Walla Walla.

The Salmon Recovery Funding Board awards grants for a variety of project types and activities. Following are highlights of the Salmon Recovery Funding Board accomplishments.

Improving Salmon Habitat

For salmon populations to thrive, they need good habitat—rivers with clean water with places where salmon can rest, feed, spawn, and hide from predators; estuaries that allow them to transition from freshwater to saltwater and back again on their way to and from the ocean; and healthy riverbanks and beaches that provide the food that salmon need to survive. The Salmon Recovery Funding Board provides grants to restore salmon habitat, and since 2000 has funded:

- 519 restoration projects, totaling nearly $127 million.
- 280 assessment projects, totaling nearly $55 million.
- 161 acquisition projects, totaling nearly $62 million.
- 67 combination projects, totaling more than $28 million.
- 56 non-capital projects, totaling more than $68 million.
- 23 monitoring projects, totaling more than $13 million.
- 10 planning and acquisition projects totaling more than $5 million.

Monitoring: Ensuring Projects are Working

To ensure that projects are making a difference to fish, the Salmon Recovery Funding Board supports monitoring in several ways. Selected projects across the state are being studied to see which kinds of protection and restoration actions are the most effective. More intensive monitoring in selected watersheds also is being done to quantify resulting changes in salmon populations. Local, state, and federal agencies and tribes are working together through the Forum on Monitoring Salmon Recovery and Watershed Health to ensure that monitoring of salmon recovery actions is well coordinated.

Projects

INVESTING IN SALMON RECOVERY

The Wild Fish Conservancy received a grant to monitor the effects of logjams on the north fork of the Stillaguamish River in Snohomish County.

Supporting the Grass-Roots Network of Salmon Recovery

The Salmon Recovery Funding Board has supported on-the-ground organizations that are planning for and implementing salmon recovery—lead entities and salmon recovery regional organizations.

Centralizing Information about Salmon Recovery

The Salmon Recovery Funding Board supports an online data portal that allows citizens and project managers access to salmon information held by 12 state agencies. Citizens can find out what type of salmon exist in their rivers and where the streams, dams, and toxic waste sites are, all with a few clicks of their computer mouse button. Visit: www.swim.wa.gov.

In addition, the Salmon Recovery Funding Board uses a state-of-the-art project information system (PRISM) for grant management that allows staff to quickly answer questions about projects and expenditures. PRISM allows much of the application process to be done online, saving time and resources. Visit: www.rco.wa.gov.

Other Activities

The Salmon Recovery Funding Board also:

- Supported the Department of Ecology's efforts to save water to benefit salmon.
- Supported the Department of Natural Resources' efforts to work with landowners to implement logging rules aimed at protecting fish resources.
- Supported the Washington Department of Fish and Wildlife's efforts to mark hatchery salmon and develop guidelines for protecting and restoring salmon habitat in streams and along marine shorelines.

Project Case Study: In-stream Habitat

Crews lower logs into place in Hyas Creek to create salmon habitat.

Restoring Salmon Habitat on the Olympic Peninsula

The summer of 1951 was drier than most on the Olympic Peninsula. In August, sparks from a logging train ignited a fire near Forks, which burned for several days before being subdued by firefighters. Spot fires continued to burst out for several weeks. In the wee morning hours of September 20, a hot spot erupted in the Olympic National Forest. Blown by strong winds, the fire ran 18 miles by noon, burning a path nearly 3 miles wide and covering 38,000 acres in the Calawah River valley and the community of Forks.

The fire charred 620 million board feet of timber. When the flames died down, timber companies jumped in to salvage the burned trees before pests could ruin their value. For the next six years, the town of Forks exploded with logging activity.

The combination of the fire and salvage logging left Hyas Creek, a tributary to the south fork of the Calawah River, and its riparian area virtually void of large trees. Trees near rivers and streams create salmon habitat. Trees shade the water, giving salmon the cooler temperatures they like. Trees also fall into the water, creating pools and calm places where salmon can rest and hide from predators.

The shortage of wood in Hyas Creek meant the water ran faster, eroded more of the river banks, and washed away small gravel used by salmon for laying eggs. The creek is home to Chinook, coho, and chum salmon and cutthroat and steelhead trout.

“The Quileute Indian Tribe had been aware of the problem for some time. A sister drainage of the south fork of the Calawah River, Lost Creek, was not damaged by the fire and has all the large wood material that Hyas Creek should have had,” said Katie Krueger, staff attorney with the tribe’s Natural Resources Department. “We did a major assessment of restoration needs with all the stakeholders in the Quillayute basin. This project was made a top priority by the agencies and landowners who helped with the assessment, as well as the tribe. It was a combined effort funded by a Bureau of Indian Affairs grant, and completed in the fall of 2006.”

The U.S. Forest Service, which had access to about 200 pieces of large wood, approached

INVESTING IN SALMON RECOVERY

the Quileute Indian Tribe about a project to restore the creek. The project long had been on a list of priorities for the area and the availability of nearby wood made it significantly cheaper.

In 2006, the Quileute Indian Tribe, in partnership with the U.S. Forest Service, and with cooperation of Rayonier Inc., a landowner in the project area, received a $197,000 grant from the Salmon Recovery Funding Board to put the large wood materials back into the creek. For the next two years, the tribe developed designs, got permits, and developed partner agreements.

In 2008, the tribe hired local contractors to cut and prepare trees donated by the U.S. Forest Service. A helicopter contractor lifted the trees and root wads and strategically placed more than 200 pieces of large woody material in Hyas Creek. The placement took two days and covered 1.5 miles of stream. The tribe contributed $57,000 in federal funding and donations of labor and materials.

"This project restores habitat capacity to a stream that has great potential to produce more redds for the salmonid runs that use it," Krueger said.

"This project was important because it provided a tremendous, cost-effective opportunity to help restore some of the lost function within Hyas Creek," said Frank Geyer, a timber, fish and wildlife biologist for the Quileute Indian Tribe. "This is an important creek for spawning and rearing. Tributary habitats play an important role in the ability of salmon species to survive, particularly during the winter."

Logs are placed in Hyas Creek.

Today, the Quileute Indian Tribe continues to count salmon and steelhead redds and monitor the wood placement in Hyas Creek. The tribe and forest service already have seen changes with the first few high flows, including the accumulation of gravel. It looks like some alder wood is accumulating at the logjams as well, improving the situation even more.

Information about the fire was taken from the Web site of the Olympic Peninsula Community Museum, http://content.lib.washington.edu/cmpweb/exhibits/forksfire/index.html#nogo

Project Case Study: Acquisition

Skagit River

Protecting Valuable Salmon Habitat along the Skagit River

The 150-mile-long Skagit River flows from the Cascade Mountains in Canada, south to Washington, where it empties into Puget Sound near Mount Vernon. The Skagit River is unique in that it is the only large river system in Washington that is home to populations of five salmon species (Chinook, chum, coho, pink, and sockeye) and three species of trout (bull trout, cutthroat, and steelhead). Key in the recovery of salmon, the Skagit River supports 25 percent of the stocks of Puget Sound Chinook, which are threatened with extinction, and the largest bull trout and steelhead populations in Puget Sound.

One of the most important steps to ensuring the watershed can be a healthy place for salmon to spawn, grow, and migrate to is to protect the habitat. In a watershed as large as the Skagit, accomplishing that requires long-term persistence, good science, sufficient funding, and an ability to become a trusted member of a skeptical community. For the past decade, Skagit Land Trust and The Nature Conservancy, in cooperation with the Skagit Watershed Council and other partners, have been doing just that.

In 1998, the Skagit Watershed Council created a habitat protection committee, appointed The Nature Conservancy as chair, and the following year adopted a science-based method for assessing and prioritizing the cost-effectiveness of habitat protection actions. The prioritization formula rates parcels based on the quality and quantity of functioning fish habitat, their adjacency to protected areas, their threat of development, and their costs to acquire. Since 2000, Skagit Land Trust and The Nature Conservancy together have used this systematic approach to secure 13 Salmon Recovery Funding Board grants, totaling $5.6 million, to inventory, prioritize, and protect more than 2,600 acres along the Skagit River, its tributaries and wetlands. Skagit Land Trust and The Nature Conservancy have contributed more than $1.2 million in matching resources, bringing the total investment to more than $6.8 million.

Middle Skagit River

Skagit Land Trust has focused its effort on acquiring high priority floodplain acres in the middle Skagit River, which is the section of the river from the towns of Sedro-Woolley to Concrete. In 2001, the land trust received a grant to inventory and prioritize privately held properties along the main stem of the Skagit River using the Skagit Watershed Council's prioritization methodology. The local committee narrowed the 9,500 tax parcels down to about 1,000 and then scored each of those properties, which led to a prioritized list of 197 properties. The land trust and its partners began contacting landowners at the top of the list to gauge their willingness to sell.

The side-channels, sloughs, and tributaries in this section of the Skagit River are immediately

INVESTING IN SALMON RECOVERY

upstream of the most populated reaches of the watershed. They provide the last opportunities for coho and Chinook to rest and grow before they enter the urban and agricultural zones of the lower Skagit River.

To date, the land trust has protected about 784 acres to date with funding from the Salmon Recovery Funding Board. Other land trust acquisitions and assisted projects have protected an additional 930 acres for a total of more than 1,700 acres protected in the middle Skagit River.

Upper Skagit River

The Nature Conservancy has done a similar inventory and assessment in the upper Skagit River, which is the section of the river above the town of Concrete. The upper Skagit area extends upstream to North Cascades National Park. This reach of the river is home to the majority of salmon spawning in the basin.

The Nature Conservancy, in collaboration with the Skagit Watershed Council, expanded the assessment to the Sauk and Suiattle Rivers—two of the Skagit's main tributaries. The free-flowing nature of these river systems make them two of the wildest and most dynamic rivers in the watershed.

These projects have resulted in the permanent protection of the highest-quality Chinook and coho rearing and spawning habitat remaining in the upper Skagit River. To date, the conservancy has protected 250 acres of habitat with Salmon Recovery Funding Board grants. Working with partners such as Seattle City Light, U.S. Forest Service, and Skagit County, The Nature Conservancy has helped bring many hundreds of additional acres into protection.

Today, the jigsaw puzzle of protected lands along the Skagit River shows habitat gradually being reunited. This increasingly connected puzzle is the product of collaboration at its best – Skagit Watershed Council, Skagit Land Trust, Skagit County, U.S. Forest Service, Seattle City Light, The Nature Conservancy, Washington Department of Fish and Wildlife, and others working together toward a common goal.

"Each organization offers what it does best and supports the others' efforts," said Martha Bray, conservation director for the Skagit Land Trust. "They are working without concern for turf or receiving credit. And private landowners, who have been the stewards of land they love, often have made the difficult choice to sell or grant a permanent conservation easement that limits the use of their land. It's wonderful to see this many people pulling together to recover salmon."

From left: Perry Welch, a project manager for the Skagit Fisheries Enhancement Group, talks with Roger Nichols, a geologist with the U.S. Forest Service, along the shore of the Skagit River. They are walking on property that is protected with a conservation easement held by Skagit Land Trust and was purchased using a Salmon Recovery Funding Board grant and a significant donation by the landowners.

Project Case Study: Restoration

Cleaning up an Estuary for Salmon

Beautiful and historic Discovery Bay is about 6 miles long and home to the biggest Hood Canal summer chum spawning population in the Strait of Juan de Fuca.

The southwest corner of the bay used to be the site of the famous Maynard mill, which operated until the 1970s.

Local organizations and government agencies working in east Jefferson County are trying to restore the summer chum population, which is threatened with extinction. During a 12-year program of stocking Salmon Creek with chum fry, the group started looking at longer term solutions to improve conditions for wild fish production. They looked toward the abandoned mill site, where more than 20,000 cubic yards of wood waste was left in the bay's salt marsh, displacing valuable rearing habitat and limiting the growth of chum populations.

In 2004, the Hood Canal Coordinating Council, which is the local lead entity, identified removal of the wood waste as a priority and encouraged the North Olympic Salmon Coalition to apply for a Salmon Recovery Funding Board grant. The coalition was awarded a $842,579 grant.

When the coalition began work, it discovered the extent of wood waste was far greater than earlier believed. Not only was the waste pile deeper, but the waste was leaching toxic sulfur and ammonia in levels high enough to be killing both the prey young salmon eat and the young salmon themselves.

Site of wood waste pile in Discovery Bay before restoration.

The coalition realized the scope of the project needed to increase and more funding must be found. Grant writing efforts resulted in another Salmon Recovery Funding Board grant of $642,243 through the Puget Sound Acquisition and Restoration program, as well as two federal grants and two other state grants. In all, the coalition provided $293,370 in matching resources for the two Salmon Recovery Funding Board grants.

State and local experts, biologists, engineers and academics reviewed the engineering plans and staff reviewed research on projects as far away as San Francisco and as close as

INVESTING IN SALMON RECOVERY

Restored area

10 miles away for best management practices and lessons learned. State universities were contacted to help find national experts. Four years of planning resulted in a project that not only removed the wood waste but cleaned up the water and created new salt marsh areas.

“We thought it was just a physical impairment but when we did water quality measurements, we found that the wood waste was decomposing and putting toxic leachates in the water,” said Richard Brocksmith, coordinator of the Hood Canal Coordinating Council. “The level of toxicity coming off the wood waste pile was way off the charts. It no longer was just a physical problem with the salt marsh, it was a chemical problem and a human health problem.”

The North Olympic Salmon Coalition used the grants to remove the abandoned mill, remove 61,000 cubic yards of wood waste and fill, and create 11 acres of shallow estuary and channels.

“We’re excited to see what happens this winter during storms and high tides and in the early spring when the chum start migrating to sea and using the area,” Brocksmith said.

“The estuary restoration at Salmon Creek was critical in rounding out the multi-year efforts to acquire lands, restore the creek, and boost the summer chum stocks in the watershed,” said Rebecca Benjamin, director of the North Olympic Salmon Coalition. “No one component alone is enough. It takes a watershed-wide approach to improve habitat. Water quality, upland conditions, and community stewardship must all be components of a successful restoration effort. Community members have been involved in project planning, implementation, and monitoring. Volunteers have donated hundreds of hours in this watershed and interest continues to grow now that the estuary construction is complete.”

Project Case Study: Fish Passage

Helping Steelhead in the Touchet River

Originating in the Blue Mountains, the 85-mile-long Touchet River is the largest tributary of the Walla Walla River in southeastern Washington, draining about 740 square miles of prairie, farms, and forests. It is home to middle Columbia River steelhead and bull trout, both of which are considered threatened with extinction under the federal Endangered Species Act.

In a 1-mile stretch of the Touchet River near Dayton, water was diverted in three locations – two to supply water for irrigation and one at the Dayton Intake Dam where water was redirected to a pond for hatchery steelhead. Steelhead are placed in the pond to acclimate to local stream conditions.

Although adult steelhead could migrate over the Dayton Intake Dam, the dam blocked juvenile steelhead, bull trout, mountain whitefish, bridgelip suckers, and other native fish.

The two irrigation diversions used temporary gravel and cobble berms, called “sugar dikes” to divert water to their intakes during the irrigation season. Winter’s high flows washed the sugar dikes away, depositing their material at the U.S. Highway 12 bridge, forcing the City of Dayton to dredge to prevent flooding near the bridge. The annual berm construction and dredging at the bridge disturbed local stream habitat and aquatic life.

To remedy all of the local and environmental concerns, the Washington Department of Fish and Wildlife met with the Columbia Conservation District and local irrigators to develop a restoration plan. The team decided to consolidate all three diversions into one diversion at the Dayton Intake Dam, which would eliminate the two annual gravel berms. The new intake would be equipped with new fish screens and a bypass system to allow for safe passage of juvenile fish through the diversion intake. A pipeline would be built to connect the new diversion point to the existing irrigation ditches. Additionally, a pool and chute fish ladder with an improved fish trapping facility would be constructed to improve fish passage over the dam and provide improved opportunity for monitoring the threatened fish populations on the Touchet River.

In 2005, the Washington Department of Fish and Wildlife received a Salmon Recovery

Temporary dikes damage habitat and can destroy nests where steelhead fry have yet to emerge. Dikes like this one on the Touchet River are constructed in May or June when fish fry have not yet emerged. The irrigators have a right to irrigation water for their crops; however, the Washington Department of Fish and Wildlife is working to correct these outdated practices to ones that are more fish friendly.

INVESTING IN SALMON RECOVERY

Funding Board grant of $568,042 to make the improvements. The Department of Fish and Wildlife contributed more than $1 million in matching resources for the project. In addition, the project received funding from a half dozen sources: U.S. Fish and Wildlife Service's Fisheries Restoration and Irrigation Mitigation Program and its Lower Snake River Compensation Program, Tri-State Steelheaders Inc., Washington Department of Ecology, Confederated Tribes of the Umatilla Indian Reservation, and Bonneville Power Administration.

Construction began in September 2007 and finished in April 2008. Benefits for this project include restored fish passage, better stream habitat conditions, reduced fish mortality, more efficient irrigation, more efficient resource management, better flood control, and reduced impact on threatened steelhead and bull trout in the Touchet River.

A tour of Touchet River projects in Walla Walla County.

Project Case Study: Removing Barriers

Crews inventory fish passage barriers.

Removing Barriers to Fish Migration in Mason County

Mason County is a mostly rural community whose eastern edge touches the lower fingers of Puget Sound, including Hood Canal. Home to chum and coho salmon and steelhead and cutthroat trout, the county is characterized by modest waterfront homes, small logging communities, and natural areas.

A key to ensuring the relatively healthy populations of fish stay healthy is to remove barriers that prevent salmon from using healthy habitats.

In 2001, the South Puget Sound Salmon Enhancement Group received a $108,960 grant from the Salmon Recovery Funding Board to inventory in-stream structures, such as culverts and dams that might be blocking salmon migration on public and private lands in the county. The salmon enhancement group provided about $9,500 in matching resources.

Improperly placed or failed water passage structures block salmon from migrating to important spawning and rearing habitat. Often these structures not only block migration, but choke flow, meaning there is less water for fish, and prevent gravel and woody materials from depositing throughout rivers and streams. Gravel and woody materials are important components for salmon habitat because they provide places for salmon to lay eggs and to rest and hide from predators.

The South Puget Sound Salmon Enhancement Group used the Washington Department of Fish and Wildlife barrier evaluation criteria when surveying all the in-stream structures, such as culverts, dams, and fishways. The group hoped to determine the extent of habitat loss due to impassable structures, identify structures that might fail, and provide a way of prioritizing replacements of impassable structures. This inventory gave the group an opportunity to identify “high priority” projects, work with private landowners, and in some cases, replace fish passage barriers.

During two years of field work, the group evaluated nearly 350 structures. Of those, 89 percent were considered to be either partial, severe, or total fish passage barriers. The group was able to use the comprehensive inventory and the consistency of the data to prioritize fish passage barriers for replacement.

INVESTING IN SALMON RECOVERY

In 2002, the South Puget Sound Salmon Enhancement Group received a $60,216 grant from the Salmon Recovery Funding Board to prioritize and complete engineering designs on the ten most egregious barriers to fish passage. The group provided $19,500 in matching resources. To date, six of the ten projects identified during this process have been corrected and one other project has been funded, opening several miles of spawning and rearing habitat.

"This was a great project because it enabled us to identify and strategically pursue fish passage barriers in local watersheds," said Lance Winecka, executive director of the South Puget Sound Salmon Enhancement Group.

Perry Creek culvert before

After, chum salmon swim through the culvert.

Progress: Statewide Results

Crew member takes measurements to replace a culvert in Ten Mile Creek in Whatcom County.

The Status of Salmon Today

With nearly a decade of work to recover salmon, involving all levels of government, tribes, businesses, and people working in their communities, progress is being made. According to Salmon Recovery Funding Board statistics, grant recipients have:

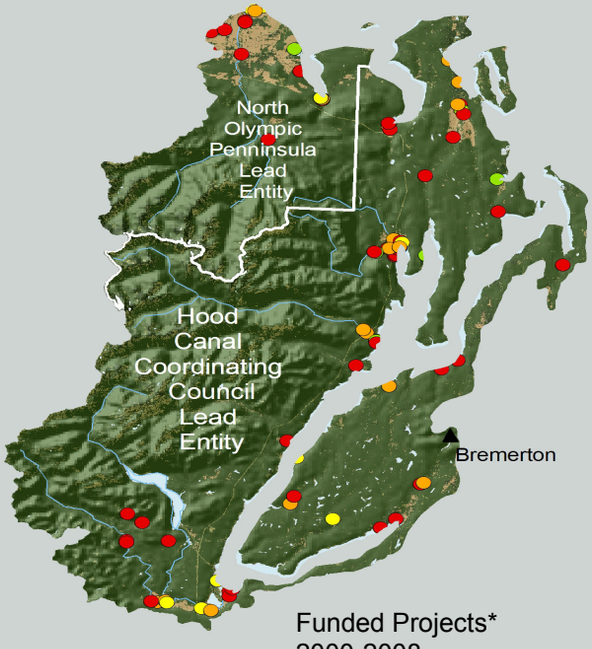
- Removed 220 barriers to fish migration, opening up more than 1,014 miles of habitat.
- Restored 543 acres of wetlands, nearly 6,000 acres of estuaries, 2,521 acres of riparian areas, and 11,526 acres of uplands.
- Protected 28,408 acres and 348 miles of stream habitat.
- Restored habitat in 188 miles of stream.
- Removed invasive plants from more than 3,700 acres of land along rivers and in wetlands and estuaries.
- Installed 456 fish screens to keep fish in rivers and out of irrigation ditches.

According to the Governor's Salmon Recovery Office's *2009 State of Salmon in Watersheds* report:

- Of 43 stocks sampled of all species statewide, 44 percent showed an increase in the production of wild juvenile salmon, up from 34 percent in 2002.
- Most hatchery fish are marked before being released into rivers so that anglers can distinguish them from wild fish and return wild fish to the rivers.
- Hatcheries are designed and increasingly operated according to guidelines that protect wild fish.
- Significant progress has been made in making 14 of 22 dams more "fish friendly" in their operations.
- Volunteers have contributed nearly 962,000 hours participating in salmon recovery efforts, as reported by the Washington Departments of Ecology and Fish and Wildlife, the Washington Conservation Commission, regional fish enhancement groups, and planning organizations.

Hood Canal

INVESTING IN SALMON RECOVERY



Funded Projects*
2000-2008

- Acquisition
- Combined
- Non-Capital
- Planning/Acquisition
- Restoration

Regional Recovery Organization

Hood Canal Coordinating Council
17791 Fjord Drive N.E.
Poulsbo, WA 98370-8481
www.hccc.wa.gov

HOOD CANAL SALMON RECOVERY REGION

The Hood Canal Coordinating Council is the regional organization for summer chum in Hood Canal and the eastern Strait of Juan de Fuca. The Hood Canal area also is in the Puget Sound Salmon Recovery Region for Chinook, bull trout, and steelhead. The Hood Canal Coordinating Council is one of two lead entities in the region, along with the North Olympic Peninsula Lead Entity. The recovery region includes parts of Jefferson, Mason, Clallam, and Kitsap Counties.

Listed Species

- Bull trout
- Puget Sound Chinook
- Puget Sound steelhead
- Hood Canal summer chum

Recovery Plan Status

The National Oceanic and Atmospheric Administration-Fisheries adopted the recovery plan for Hood Canal summer chum in 2007.

Grant Funding

Since 2000, the Salmon Recovery Funding Board has funded 80 projects in the region, totaling nearly $24 million. Grant recipients have provided nearly $19 million in matching resources for a total investment of $42.3 million.

Chart: Project Types Funded Percent of $24 Million

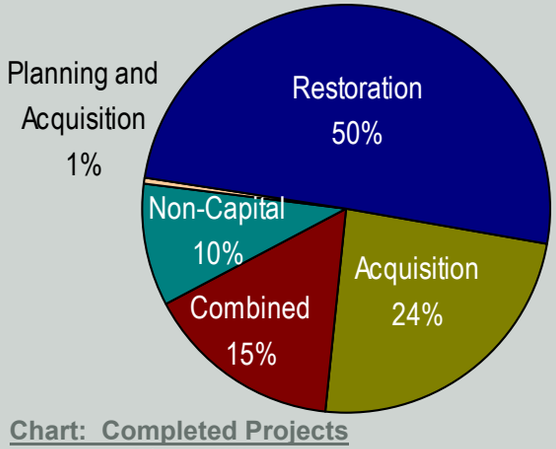
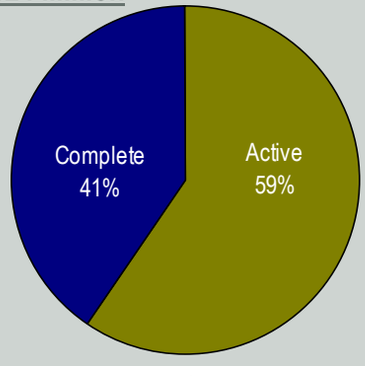


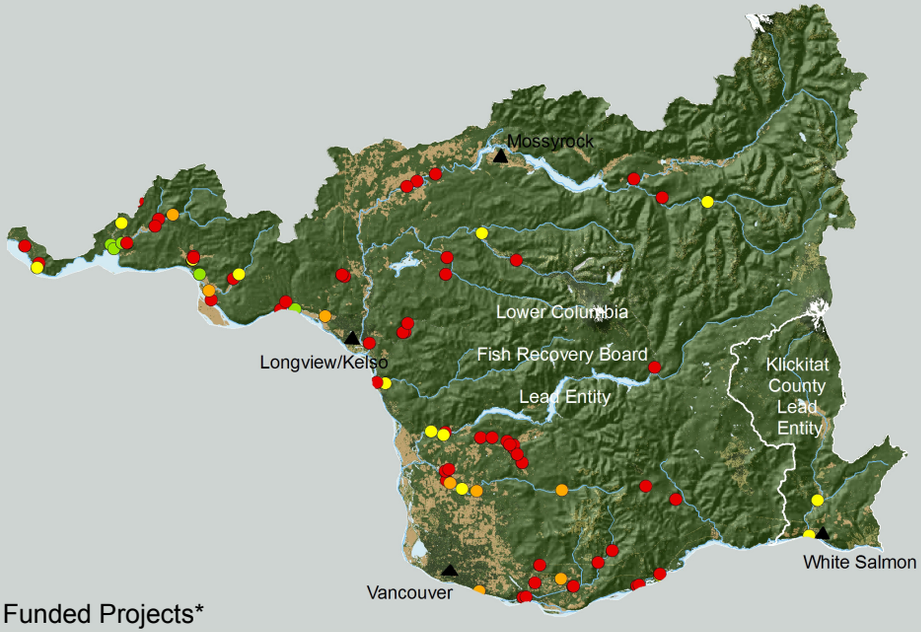
Chart: Completed Projects Percent of $24 Million



**Many non-capital projects are region-wide and are not reflected on the map.*

Lower Columbia River

INVESTING IN SALMON RECOVERY



Funded Projects*
2000-2008

- Acquisition
- Combined
- Non-Capital
- Planning/Acquisition
- Restoration

Regional Recovery Organization

Lower Columbia Fish Recovery Board
2127 8th Avenue
Longview, WA 98632
www.lcfrb.gen.wa.us

LOWER COLUMBIA RIVER SALMON RECOVERY REGION

The Lower Columbia Fish Recovery Board is both the lead entity and the regional organization for the Lower Columbia River Salmon Recovery Region. The region encompasses Clark, Cowlitz, Skamania, Wahkiakum, and parts of Lewis, Pacific, and Klickitat Counties.

Listed Species

- Lower Columbia River Chinook
- Lower Columbia River coho
- Lower Columbia River steelhead
- Columbia River chum
- Bull trout

Recovery Plan Status

The National Oceanic and Atmospheric Administration-Fisheries approved an interim recovery plan for listed populations in the region in 2006 and for coho in 2007.

Grant Funding

Since 2000, the Salmon Recovery Funding Board has funded 83 projects in the region, totaling $16.8 million. Grant recipients have provided $10.9 million for a total investment of $27.7 million.

Chart: Project Types Funded Percent of $16.8 Million

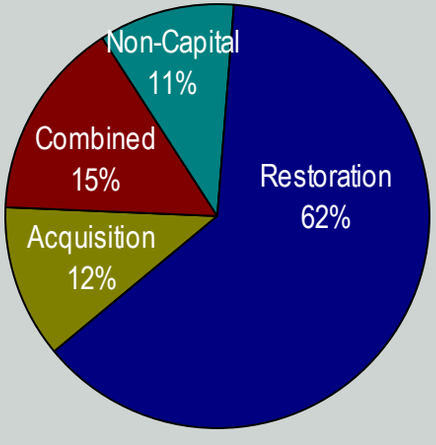
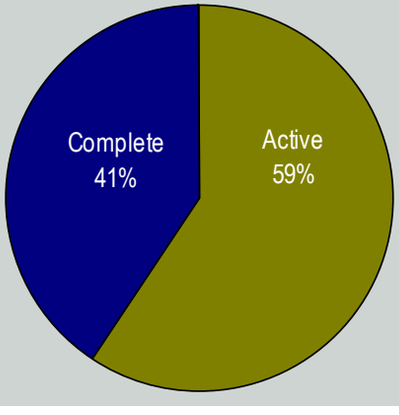


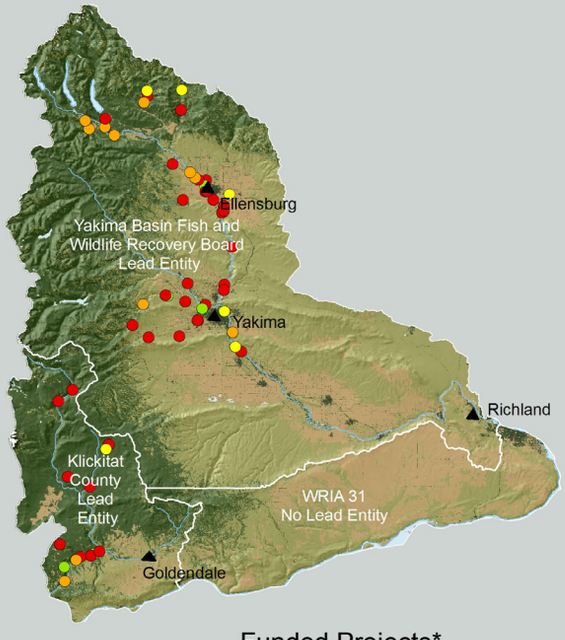
Chart: Completed Projects Percent of $16.8 Million



Many non-capital projects are region-wide and are not reflected on the map.

Middle Columbia River

INVESTING IN SALMON RECOVERY



Funded Projects*
2000-2008

- Acquisition
- Combined
- Non-Capital
- Planning/Acquisition
- Restoration

Regional Recovery Organization

Yakima Basin Fish and Wildlife Recovery Board
P.O. Box 2662
Yakima, WA 98907
www.ybfwrb.org

MIDDLE COLUMBIA RIVER SALMON RECOVERY REGION

The Yakima Basin Fish and Wildlife Recovery Board is both a lead entity and the regional organization for the Middle Columbia River Salmon Recovery Region. The region also includes the Klickitat County lead entity and encompasses Benton, Kittitas, Yakima, and parts of Chelan and Klickitat Counties.

Listed Species

- Bull trout
- Steelhead

Recovery Plan Status

The National Oceanic and Atmospheric Administration (NOAA)-Fisheries approved an interim recovery plan for listed populations in the Yakima River basin in March 2006. An updated Yakima steelhead recovery plan was released in August 2008 and is included in NOAA's draft middle Columbia River steelhead recovery plan. A complete recovery plan for the middle Columbia River steelhead Distinct Population Segment in Washington and Oregon is expected in 2009.

Grant Funding

Since 2000, the Salmon Recovery Funding Board has funded 65 projects in the region, totaling $14.7 million. Grant recipients have provided $10 million, for a total investment of $24.7 million.

Chart: Project Types Funded Percent of $14.7 Million

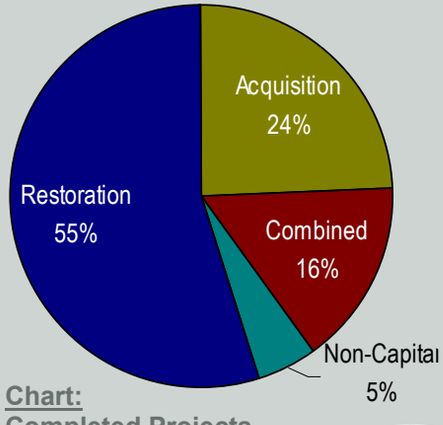
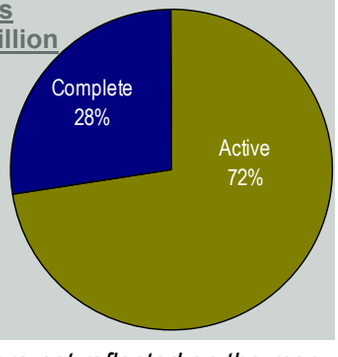


Chart: Completed Projects Percent of $14.7 Million



Many non-capital projects are region-wide and are not reflected on the map.

Northeast Washington

INVESTING IN SALMON RECOVERY

Funded Projects*
2000-2008

- Acquisition
- Combined
- Non-Capital
- Planning/Acquisition
- Restoration

Lead Entity
Kalispel Tribe
P.O. Box 39
Usk, WA 99180

NORTHEAST WASHINGTON SALMON RECOVERY REGION

There is no regional recovery organization for the Northeast Washington Salmon Recovery Region. The Kalispel Indian Tribe is the lead entity in the region. The region includes Ferry, Lincoln, Pend Oreille, Spokane, and Stevens Counties.

Species Listed

- Bull trout

Recovery Plan Status

A draft bull trout recovery plan has been developed by the U.S. Fish and Wildlife Service. The lead entity for Pend Oreille County has developed a habitat strategy that is used for directing salmon recovery projects.

Grant Funding

Since 2000, the Salmon Recovery Funding Board has funded 20 projects in the region, totaling $3.3 million. Grant recipients have provided $.74 million for a total investment of more than $4 million.

Chart: Project Types Funded
Percent of $3.3 Million

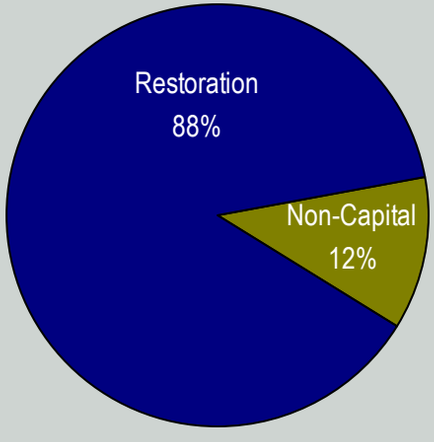
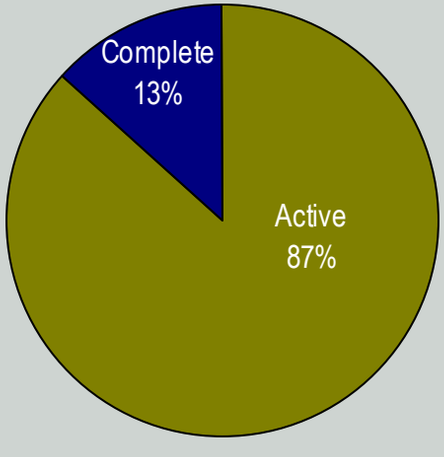


Chart: Completed Projects
Percent of $3.3 Million

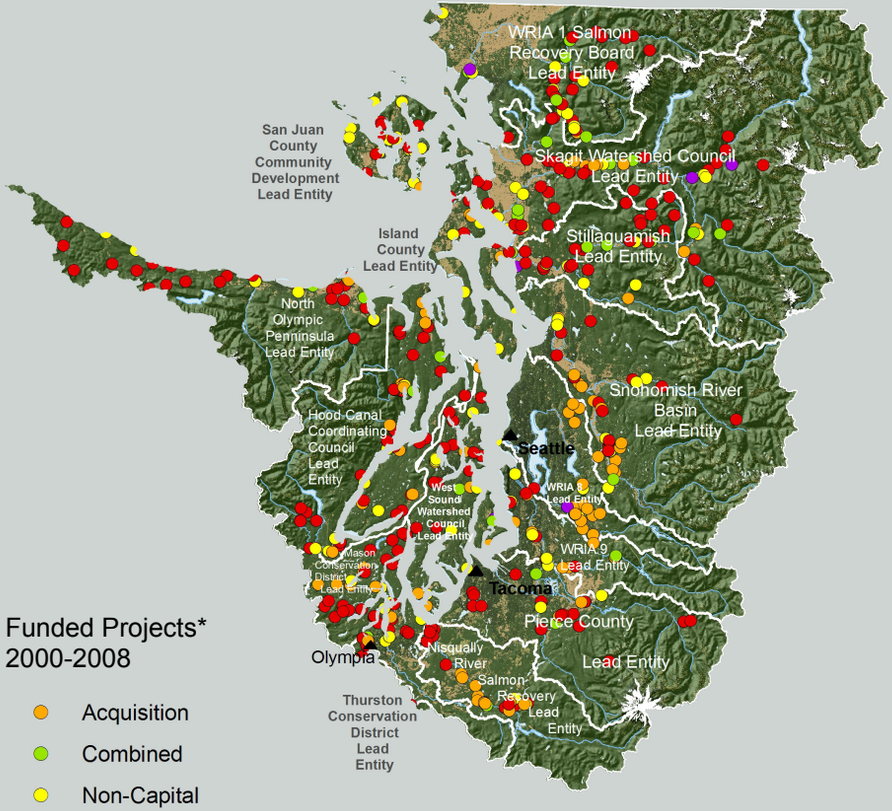


**Many non-capital projects are region-wide and are not reflected on the map.*

PROGRESS BY REGION

Puget Sound

INVESTING IN SALMON RECOVERY



Funded Projects*
2000-2008

- Acquisition
- Combined
- Non-Capital
- Planning/Acquisition
- Restoration

Regional Recovery Organization

Puget Sound Partnership
P.O. Box 40900
Olympia, WA 98504-0900
www.psp.wa.gov

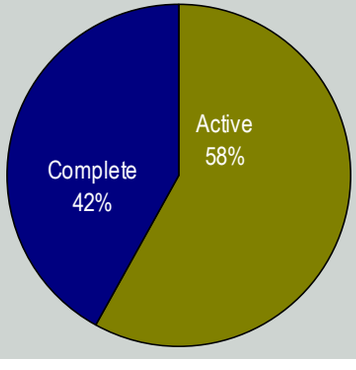
PUGET SOUND SALMON RECOVERY REGION

The Puget Sound Partnership is the regional organization for the Puget Sound Salmon Recovery Region. The region has 15 lead entities and is comprised of all or part of Clallam, Island, Jefferson, King, Kitsap, Mason, Pierce, San Juan, Snohomish, Thurston, Skagit, and Whatcom Counties.

Species Listed

- Bull trout
- Chinook
- Steelhead

Chart: Completed Projects Percent of $131 Million



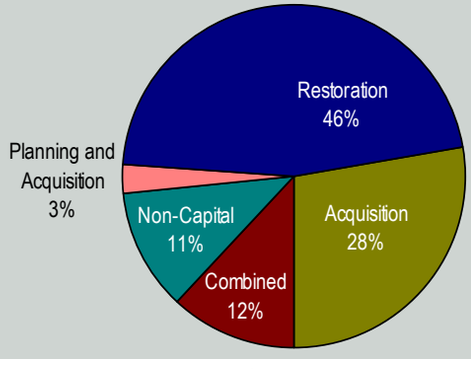
Recovery Plan Status

The National Oceanic and Atmospheric Administration-Fisheries adopted the recovery plan for Puget Sound Chinook in 2007. Recovery planning for Puget Sound steelhead is ongoing.

Grant Funding

Since 2000, the Salmon Recovery Funding Board has funded 430 projects in the region, totaling more than $131 million. Grant recipients have provided nearly $84 million, for a total investment of more than $215 million.

Chart: Project Types Funded Percent of $131 Million

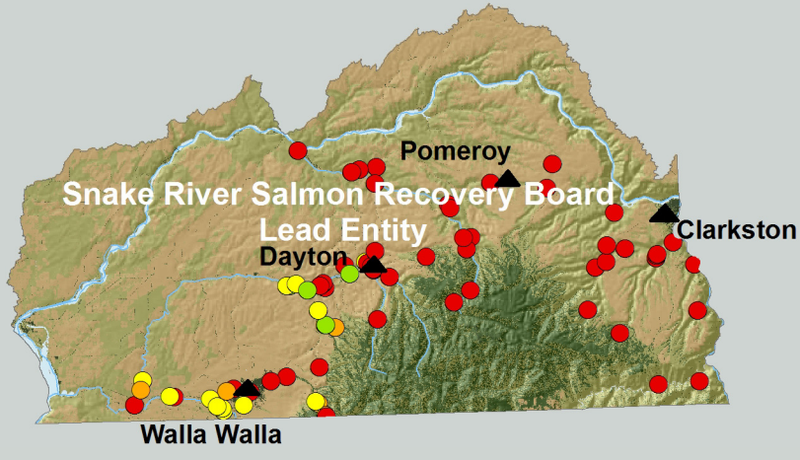


Many non-capital projects are region-wide and are not reflected on the map.

Progress by Region

Snake River

INVESTING IN SALMON RECOVERY



Funded Projects*
2000-2008

- Acquisition
- Combined
- Non-Capital
- Planning/Acquisition
- Restoration

Regional Recovery Organization

Snake River Salmon Recovery Board
410B E. Main Street
Dayton, WA 99328
www.snakeriverboard.org

Snake River Salmon Recovery Region

The Snake River Salmon Recovery Board is both the regional organization and lead entity for the Snake River Salmon Recovery Region. The region encompasses Walla Walla, Columbia, Garfield, Asotin, and parts of Franklin and Whitman counties.

Listed Species

- Bull trout
- Middle Columbia River steelhead
- Snake River spring, summer, and fall Chinook
- Snake River sockeye
- Snake River steelhead

Recovery Plan Status

In 2006, the National Oceanic and Atmospheric Administration (NOAA)-Fisheries approved an interim recovery plan for listed populations in the Snake River region in Washington. Adoption by NOAA of a complete recovery plan for the middle Columbia River steelhead in Washington and Oregon is expected in 2009 and for spring, summer, and fall Chinook and Snake River steelhead in Washington, Oregon, and Idaho by 2010.

Grant Funding

Since 2000, the Salmon Recovery Funding Board has funded 78 projects in the region, totaling $8.9 million. Grant recipients have provided $4.3 million for a total investment of $13.2 million.

Chart: Project Types Funded, Percent of $8.9 Million

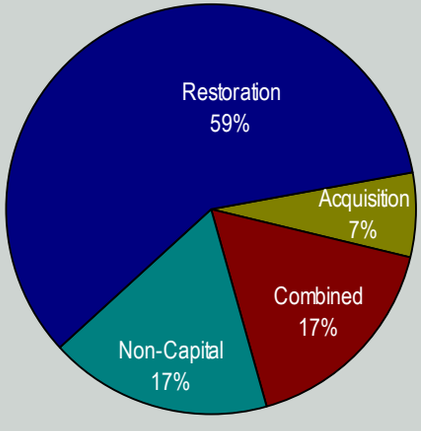
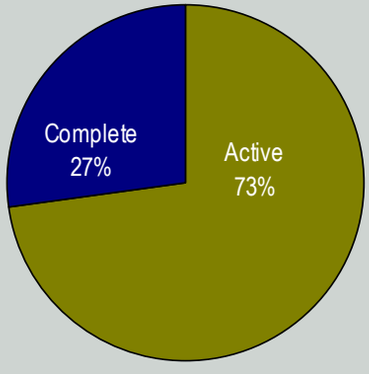


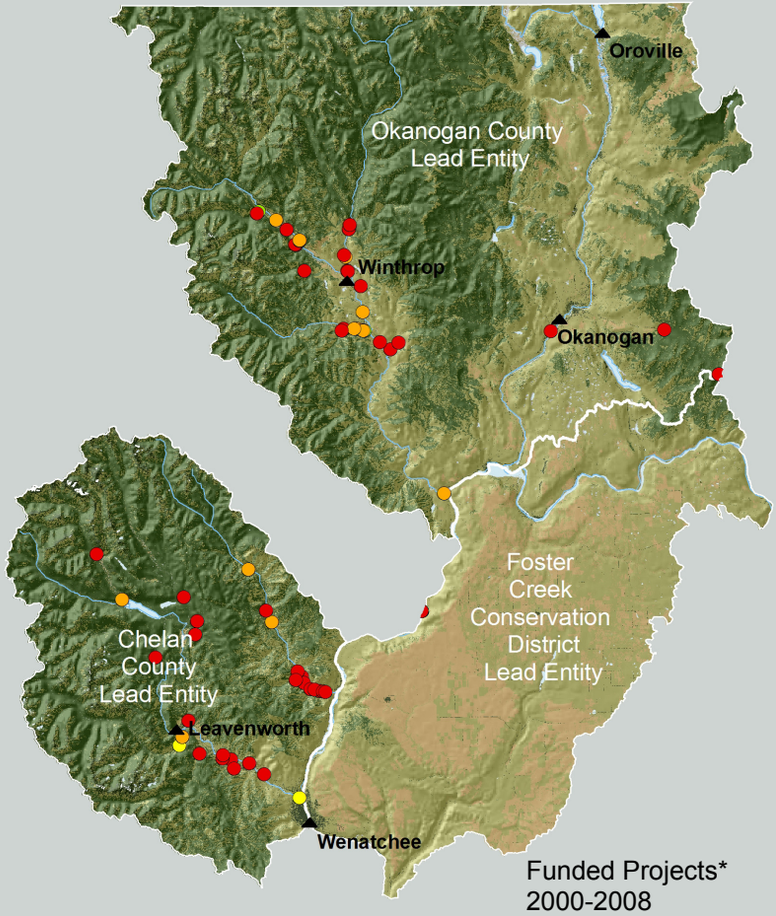
Chart: Completed Projects Percent of $8.9 Million



Many non-capital projects are region-wide and are not reflected on the map.

Upper Columbia River

INVESTING IN SALMON RECOVERY



Funded Projects*
2000-2008

- Acquisition
- Combined
- Non-Capital
- Planning/Acquisition
- Restoration

Regional Recovery Organization

Upper Columbia Salmon Recovery Board
415 King Street
Wenatchee, WA 98801
www.ucsrb.com

UPPER COLUMBIA RIVER SALMON RECOVERY REGION

The Upper Columbia Salmon Recovery Board serves as the regional organization for the Upper Columbia River Salmon Recovery Region. There are three lead entities in the region, which includes Chelan, Douglas, and Okanogan Counties.

Listed Species

- Bull Trout
- Upper Columbia River spring Chinook
- Upper Columbia River steelhead

Recovery Plan Status

National Oceanic and Atmospheric Administration-Fisheries adopted the recovery plan for Upper Columbia River spring Chinook and steelhead in 2007.

Grant Funding

Since 2000, the Salmon Recovery Funding Board has funded 60 projects in the region, totaling $16.6 million. Grant recipients have provided $9 million for a total investment of $25.7 million.

Chart: Project Types Funded Percent of $16.6 Million

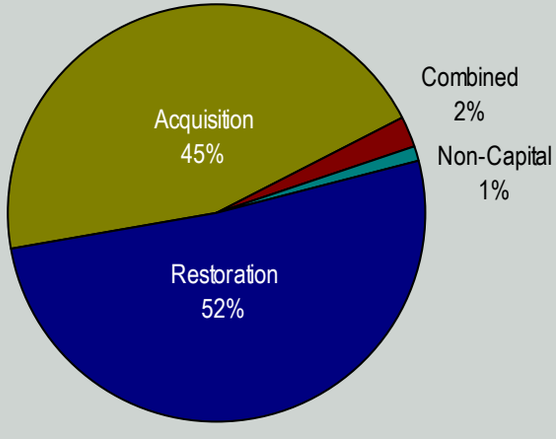
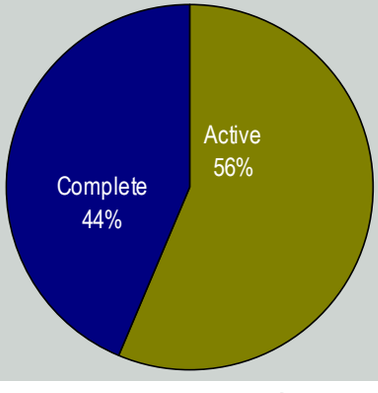


Chart: Completed Projects Percent of $16.6 Million

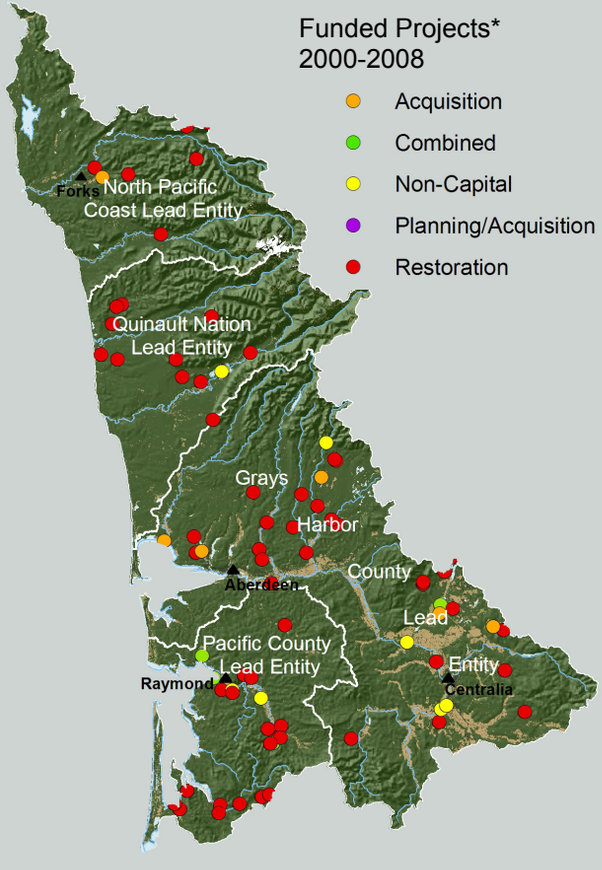


Many non-capital projects are region-wide and are not reflected on the map.

Progress by Region

Washington Coastal

INVESTING IN SALMON RECOVERY



Regional Recovery Organization

Washington Coast Sustainable Salmon Partnership
P.O. Box 3092
Ocean Shores, WA 98569

Washington Coastal Salmon Recovery Region

The Washington Coast Sustainable Salmon Partnership is the recovery organization for the Washington Coastal Salmon Recovery Region. The region has four lead entities and includes all or parts of Clallam, Jefferson, Grays Harbor, Mason, Thurston, Pacific, and Lewis Counties.

Listed Species

- Bull trout
- Lake Ozette sockeye

Recovery Plan Status

National Oceanic and Atmospheric Administration-Fisheries, working with a Lake Ozette Sockeye Recovery Planning Steering Committee, has published a draft recovery plan for Lake Ozette sockeye and adoption is expected early 2009.

Grant Funding

Since 2000, the Salmon Recovery Funding Board has funded 77 projects in the region, totaling $13.5 million. Grant recipients have provided $5.8 million, for a total investment of $19.3 million.

Chart: Project Types Funded
Percent of $13.5 Million

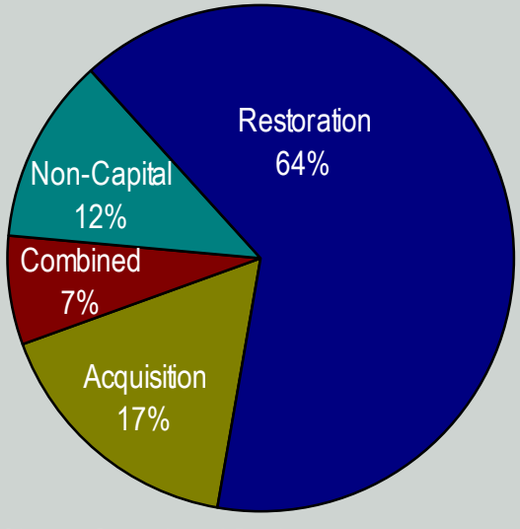
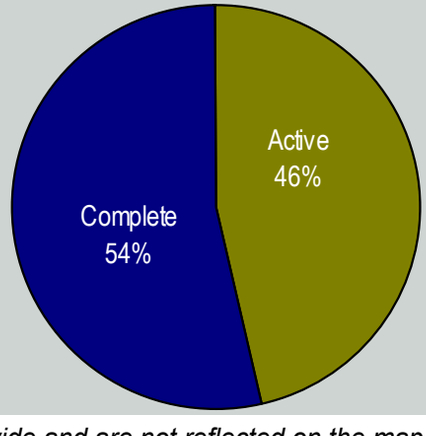


Chart: Completed Projects
Percent of $13.5 Million



**Many non-capital projects are region-wide and are not reflected on the map.*

Partners in Salmon Recovery

INVESTING IN SALMON RECOVERY

Adopt A Stream Foundation
Agnew Irrigation District
Arlington
Asotin County Conservation District
Auburn
A World Institute for a Sustainable Humanity
Bainbridge Island
Bainbridge Island Park District
Bellingham
Benton County Conservation District
Blue Mountain Land Trust
Bremerton
Broughton Land Company
Buckley
Burien
Capitol Land Trust
Cascade Land Conservancy
Cascadia Conservation District
Centralia
Chehalis Basin Fisheries Task Force
Chelan County
Chelan County Conservation District
Chelan County Public Utility District
Chelan-Douglas Land Trust
Chewuch Basin Council
Chewuch Canal-Fulton Ditch Company
Clallam Conservation District
Clallam County
Clark Conservation District
Clark County
Clark Public Utilities
Coastal Resources Alliance
Columbia Conservation District
Columbia County
Columbia County Noxious Weed Control Board
Columbia Land Trust
Columbia River Estuary Study Taskforce
Columbia-Pacific Resource Conservation and Economic Development District
Concurrent Technologies Corporation
Confederated Tribes of the Colville Reservation
Confederated Tribes of the Umatilla Indian Reservation
Cowiche Canyon Conservancy
Cowlitz Conservation District
Cowlitz County
Cowlitz Game and Anglers
Cowlitz Indian Tribe
Davaz, Leonard
Ducks Unlimited Inc.
Eco Logical Research Inc.
Elwha Klallam Tribe
Everett
Fish First
Fletcher, Mike
Friends of the East Fork Lewis River
Friends of the San Juans
Gardena Farms Irrigation District #13
Gary Smith Company, LLC
Grays Harbor County
Grays River Habitat Enhancement District
Great Peninsula Conservancy
Heernett Environmental Foundation
Hood Canal Coordinating Council Lead Entity
Hood Canal Salmon Enhancement Group
Hoquiam
Inland Empire Action Coalition
Ione
Island County
Issaquah
Jamestown S'Klallam Tribe
Jefferson County
Jefferson County Conservation District
Jefferson Land Trust
Kalispel Tribe of Indians
Kent
Key Peninsula Metropolitan Park District
King County
Kitsap Conservation District
Kitsap County
Kittitas Conservation Trust
Kittitas County Conservation District
Lake Chelan Sportsman Association
Lewis County
Lewis County Conservation District
Liberty Bay Foundation
Lower Columbia Fish Enhancement Group
Lower Columbia Fish Recovery Board
Lummi Indian Business Council
Makah Tribe
Mason Conservation District
Mason County
Merrill & Ring
Methow Conservancy
Methow Salmon Recovery Foundation
Mid-Columbia Fisheries Enhancement Group
Mid Puget Sound Fisheries Enhancement Group
Mount Vernon
National Fish and Wildlife Foundation
Nisqually Indian Tribe
Nisqually River Land Trust
Nooksack Indian Tribe
Nooksack Salmon Enhance Association
Nordheim Family
North Central Washington Resource Conservation & Development Council
North Olympic Land Trust

Partners in Salmon Recovery

INVESTING IN SALMON RECOVERY

North Olympic Salmon Coalition
North Yakima Conservation District
Northwest Indian Fisheries Commission
Northwest Marine Technology Inc.
Northwest Service Academy
Northwest Straits Marine Conservation Foundation
Northwest Watershed Institute
Okanogan Conservation District
Okanogan County
Okanogan Irrigation District
Olympia
Pacific Coast Salmon Coalition
Pacific Conservation District
Pacific Watershed Institute
Pend Oreille Conservation District
Pend Oreille County
People for Puget Sound
Pierce Conservation District
Pierce County
Point No Point Treaty Council
Pomeroy Conservation District
Port of Bremerton
Poulsbo
Puget Sound Partnership
Puget Sound Salmon Forum
Puyallup Tribe of Indians
Quileute Tribe
Quinault Indian Nation
Renton Lions Club
Samish Indian Nation
Sampsel, Roy
San Juan County
San Juan County Land Bank
Sea Resources
Seattle
Sequim Prairie Tri-Irrigation
Shared Strategy
Shelton
Skagit Conservation District
Skagit County
Skagit County Dike District #3
Skagit Fish Enhancement Group
Skagit Land Trust
Skagit River System Cooperative
Skagit Watershed Council
Skamania Land Owners Association
Skokomish Indian Tribe
Snohomish Conservation District
Snohomish County
Snohomish County Lead Entity
South Central Washington Resource Conservation and Development
South Puget Sound Salmon Enhancement Group
Spring Rise Restoration
Sportsmens Land Trust, Washington Chapter
Squaxin Island Tribe
Stewardship Partners
Stillaguamish Flood Control District
Stillaguamish Tribe of Indians
Stilly-Snohomish Fisheries Enhancement Task Force
Suquamish Tribe
Surfrider Foundation - Washington
Swinomish Indian Tribe
Tacoma Water
Tetra Tech EC Inc.
The Nature Conservancy
Thurston Conservation District
Thurston County
Thurston Regional Planning Council
Tree Top Inc.
Tri-State Steelheaders Inc.
Trout Unlimited - Icicle Valley
Tukwila
Tulalip Tribes
Underwood Conservation District
University Place
Upper Columbia Regional Fisheries Enhancement Group
Upper Columbia Salmon Recovery Board
Upper Skagit Tribe
U.S. Fish and Wildlife Service
Wahkiakum Conservation District
Wahkiakum County
Walla Walla Community College
Walla Walla County
Walla Walla County Conservation District
Washington Conservation Commission
Washington Department of Ecology
Washington Department of Fish and Wildlife
Washington Department of Natural Resources
Washington State Parks and Recreation Commission
Whatcom County
Whatcom Land Trust
Whidbey Camano Land Trust
Whidbey Watershed Stewards
Wild Fish Conservancy
Wild Salmon Center
Willapa Bay Fisheries Enhancement Group
Wolf Creek Reclamation District
Yakama Nation
Yakima
Yakima Basin Fish and Wildlife Recovery Board
Yakima County
Yakima Greenway Foundation
Yakima Valley Restitution Center

People

INVESTING IN SALMON RECOVERY

Salmon Recovery Funding Board Staff
Back row, from left: Mike Ramsey, Marc Duboiski, Jason Lundgren, Brian Abbott
Front row, from left: Barb McIntosh, Moriah Blake, Kay Caromile, Tara Galuska, Dave Caudill

Salmon Recovery Funding Board

The Salmon Recovery Funding Board is supported by the staff in the Recreation and Conservation Office.

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Salmon Recovery Funding Board
Mission

The Board supports salmon recovery by funding habitat protection and restoration projects. It also supports related programs and activities that produce sustainable and measurable benefits for fish and their habitats.

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