State of Washington
Governor's
Salmon Recovery
Office

2002 State of Salmon Staff Summary Report

Part Two

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Cover Photos Left to Right

Flett Creek / Salmon Recovery Funding Board
Pink male salmon / Manu Esteve
Stream restoration / Salmon Recovery Funding Board
Fisherman / Washington State Archives
Volunteers stream sampling / Dick Knight, Skagit Fisheries Enhancement Group
Stream bank restoration / Salmon Recovery Funding Board

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Contents

"Saving salmon is a stunningly ambitious goal, full of risks and replete with consequences we barely understand. But extinction is not an option, and it's up to us to make the history we want for our children and our grandchildren."

GOVERNOR GARY LOCKE
OCTOBER 9, 1998

Introduction

As a first step to restore salmon, in 1999 the Joint Natural Resources Cabinet developed the Statewide Strategy to Recover Salmon: Extinction is Not an Option. The next year, state agencies developed detailed action plans describing their salmon recovery efforts to implement the Strategy. A Salmon Recovery Scorecard for monitoring agency progress in these areas also was published.

Shortly after the Statewide Strategy was released, the Independent Science Panel reviewed it, calling it a good first step that should steer a course toward recovery. The Panel also recommended many improvements the state should address, including more clearly integrating agency recovery activities with our strategy and monitoring the results.

This 2002 publication is meant to report progress we have made in our efforts to recover salmon. It also responds to the legislature, federal review, public comment, the Independent Science Panel, and what we have learned from our own experience. In one concise document, we show the conceptual framework for recovery—the goals and strategies from the 1999 Statewide Strategy—and give examples of actions we are taking to implement our strategy. And, we report the first data from the Salmon Recovery Scorecard.

The urgency to save wild salmon is tempered by how long it takes to see progress. The life cycle of salmon from freshwater to saltwater and back generally is three to five years; it may take our commitment through several salmon generations to know if we are doing the right things for enduring results. The challenge we all face is making this complex and potentially confusing situation clear enough so that we may make wise choices about the future of salmon.

While our work to recover salmon is far from finished, we continue to stand firm behind our vision: *To restore salmon, steelhead, and trout to healthy harvestable levels and improve habitats on which fish rely.*

MALE SOCKEYE SALMON ON THE SPAWNING GROUNDS / PHOTOGRAPH © MANU ESTEVE

Salmon Recovery Milestones 1990-2002

1990 | 1991 | 1992 | 1993 | 1994 | 1995

1990 Ocean and Puget Sound marine fishing restrictions are underway to address coho population declines coast-wide. Terminal and freshwater net fisheries directed at chinook salmon have been restricted or curtailed since the mid-1980s.

Regional Fisheries Enhancement Groups are created by the legislature. They work under guidance of the Washington Department of Fish and Wildlife. Today, fourteen of these non-profit groups develop fish protection and enhancement projects in partnership with tribes, sports fishers, private landowners and local, state and federal agencies.

1991 Federal government lists Snake River sockeye salmon as endangered.

1992 Federal government lists Snake River summer and fall chinook salmon as threatened.

1993 **Wild Stock Restoration Initiative and Wild Salmonid Policy** adopted by Department of Fish and Wildlife.

The Columbia River hydropower **biological opinion (BiOp)** is issued by federal agencies. It contains the federal government's recommendations for actions needed to recover threatened and endangered salmon in the Columbia River Basin.

1994 Federal government adopts the **Northwest Forest Plan**, setting out salmon habitat protection measures for lands managed by the USDA Forest Service and the USDI Bureau of Land Management within the range of the northern spotted owl.

A federal court rejects the 1993 BiOp saying the "system was crying out for a major overhaul."

1995 Federal government initiates overhaul of the way the federal power system is to be operated on the Columbia River, placing needs of fish on equal footing with power generation, flood control, navigation, and irrigation.

1996 Department of Natural Resources adopts a **Habitat Conservation Plan** for 1.4 million acres of state-owned forestland.

1997 Governor Locke brings together the state agencies that most affect salmon management in a forum called the **Joint Natural Resources Cabinet**. This cabinet of 12 agency directors creates the guidance and accountability tools used in Washington and provides an ongoing avenue for interagency progress.

Federal government lists Snake River steelhead as threatened and Upper Columbia steelhead as endangered.

1998 Governor Locke and Canadian Fisheries and Ocean Minister Anderson reach agreement to reduce fisheries that has the effect of increasing by 30% the number of Puget Sound chinook that return to our streams to spawn.

The legislature establishes the **Governor's Salmon Recovery Office** within the Governor's Office to coordinate the state's strategy for salmon recovery and assist in development of a broad range of recovery activities.

The **Independent Science Panel**, also established by the legislature and appointed by the Governor from recommendations by the American Fisheries Society, is tasked with providing advice on monitoring, data, and recovery activities.

Created by the Watershed Planning Act, **Watershed Planning Units** are bodies that include county and city governments, water purveyors, tribal representatives, and private citizens. Their task is to decide what actions need to be taken in their watersheds to provide adequate water for people and fish. Presently, there are 32 Planning Units covering 41 Water Resource Inventory Areas (WRIAs).

In the Salmon Recovery Planning Act, the legislature focused on the need to coordinate local action to restore habitat conditions necessary for salmon recovery. **Lead Entities** spearhead these local efforts and are responsible for recommending projects to the Salmon Recovery Funding Board for approval. There are 26 Lead Entities covering 45 WRIAs.

> **"I am firmly committed to seeing that the state does everything it can to protect our salmon runs, and doing so in a manner that gains the support of both citizens and businesses."**
>
> **GOVERNOR GARY LOCKE**
> MAY 2002

1996	1997	1998	1999	2000	2001	2002

The **Forests and Fish Agreement**, a voluntary pact negotiated by small and large forest landowners, federal, state, tribal and county governments, is announced. It covers 8 million acres of private forestland, protecting 60,000 miles of streams.

A pilot program for steelhead recovery is established by the legislature in Clark, Cowlitz, Lewis, Skamania, and Wahkiakum counties. Now called the **Lower Columbia Fish Recovery Board**, this group serves as a model for other regional recovery organizations now operating in the state.

Federal government lists Lower Columbia River steelhead, and Upper Columbia, Northeast Washington, Lower Columbia, and Snake River bull trout as threatened.

1999 Locke/Anderson re-negotiate a critical component of the landmark **Pacific Salmon Treaty**, reducing Canadian catch of chinook and coho whose home streams are in Washington. It also provides a federal fund from which salmon restoration activities are to be paid.

ESA listings of chinook, coho, chum, and steelhead stocks in Washington now cover over 75% of the state.

The Forests and Fish Agreement becomes state law.

The **Salmon Recovery Funding Board**, a five-member citizen board appointed by the Governor and chaired by William Ruckelshaus, is established by the legislature. This board supports salmon recovery by distributing state and federal funds for local habitat protection and restoration projects and related programs and activities that produce sustainable and measurable benefits for fish and their habitat. The directors of five state agencies assist them.

The **Statewide Strategy to Recover Salmon: Extinction is Not an Option** is completed in September and is our guide for what needs to be done over the long-term to recover salmon.

Washington, Oregon, four Columbia River Treaty Tribes, and the federal government sign the **Columbia River Accord**, a multi-year plan that establishes conservation goals for depressed wild salmon stocks on the Columbia and Snake rivers.

Federal government lists Puget Sound chinook, Hood Canal summer chum, Washington Coastal Lake Ozette sockeye, Lower Columbia River chinook, Lower Columbia River chum, and Middle Columbia River steelhead as threatened. In addition, Upper Columbia spring chinook is listed as endangered.

2000 Congress creates a federal hatchery reform initiative and establishes an independent **Hatchery Science Review Group** to evaluate effects of hatchery facilities and programs on wild fish.

National Marine Fisheries Service and US Fish and Wildlife Service re-issue Biological Opinions for Federal Columbia River Power System operations.

The first biennial implementation plan for the Strategy is published. These **State Agency Action Plans**, produced for each biennium, detail specific salmon recovery activities undertaken by state agencies (and can be found in Part Three).

The state's performance management system—**Salmon Recovery Scorecard**—is published. It contains a mix of natural environment and human-focused indicators that are intended to measure our progress.

The first **State of Salmon Report** is published. This document is intended for a broad public audience and designed to provide an introduction to salmon recovery activities in Washington.

2001 The legislature mandates development, by December 2002, of a **Comprehensive Monitoring Strategy** and action plan for watershed health with a focus on salmon recovery

2002 **Recovery Plan Model**, developed under the guidance of the Department of Fish and Wildlife, identifies essential elements of a recovery plan, a document that will comprehensively define actions necessary to recover one or more salmon populations within a region.

The Governor's Salmon Recovery Office produces the 2002 State of Salmon Reports.

The Comprehensive Monitoring Strategy is developed for consideration by the Governor and legislature in 2003.

Scorecard Reports

Monitoring is the collection of information in a systematic and scientific manner that allows us to answer important questions and make better decisions: Are our actions making a difference? What is the best action to take in which place? Unfortunately, there is no quick fix in salmon recovery and seeing the benefit of our actions will take many years. For example, improvements we make to streamside habitats—such as planting trees—will take decades to provide functions such as shade and large woody debris. Nevertheless, if we pay attention to the results of our decisions, we can guide our future actions so as to best meet our salmon recovery goals.

The Salmon Recovery Scorecard was developed to begin to measure progress towards salmon recovery. After considerable discussion with stakeholders, the Joint Natural Resources Cabinet selected thirty-six indicators that represented a "balanced" evaluation of the parameters that are important contributors to the recovery puzzle. Budget reductions resulted in only 16 of the indicators being implemented; data for this report were available for 14. Various agencies were assigned responsibility for each indicator. Data reports were submitted by agencies to the Governor's Salmon Recovery Office where they were organized for presentation here.

These indicators are connected to the vision, goals, and strategies presented in the Statewide Strategy to Recover Salmon as well as the State Agency Action Plan that implements the state agency part of the Strategy. Highlights of Action Plan accomplishments are presented beginning on page 19, and the full text of accomplishments is in Part Three. Additional supporting material for the indicators may be found in Part Three.

FEMALE SOCKEYE SALMON BUILDS ITS REDD (NEST) WHILE A MALE WAITS NEARBY / PHOTOGRAPH © MANU ESTEVE

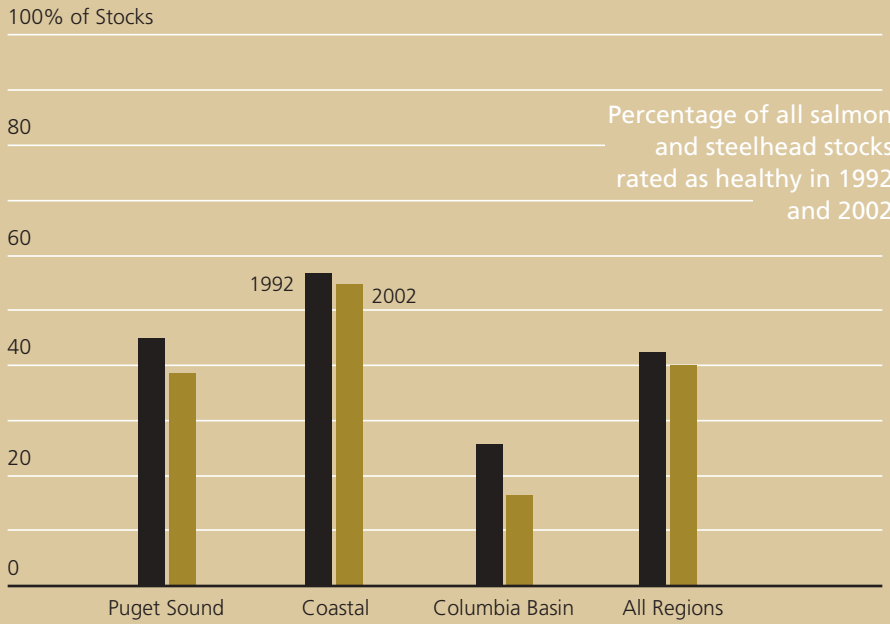
"Restore salmon, steelhead, and trout to healthy harvestable levels and improve habitats on which fish rely."

STATEWIDE STRATEGY TO RECOVER SALMON
EXTINCTION IS NOT AN OPTION
SEPTEMBER 1999

GOAL

Wild salmon populations will be productive and diverse.

The majority of wild stocks in Washington are not healthy, and there has been little real change since 1992.



DATA SOURCE: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE, SALMON AND STEELHEAD INVENTORY (SaSI).

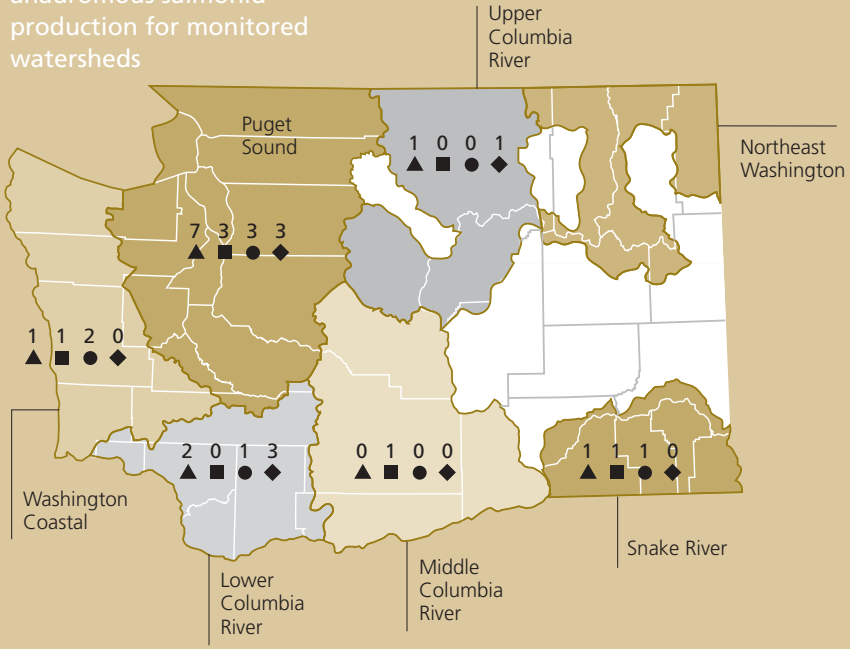
- **Healthy stocks** are defined in SaSI as those currently experiencing stable escapement, survival, and production trends and not displaying a pattern of chronically low abundance.
- A stock may be considered healthy by absence of declining trends, but still may not be considered healthy by ESA or other recovery standards.
- First comprehensive status update since 1992 is underway but not complete.
- Status ratings are draft because they do not yet have tribal agreement.
- Status changes from 1992-2002 are largely a reflection of changes in methods of counting and analyzing data—overall, what little real change that has occurred in status from 1992 is negative.

GOAL

Wild salmon populations will be productive and diverse.

Trends in sampled wild juvenile production appear to be stable or increasing in 18 of 32 cases.

Trends in wild juvenile anadromous salmonid production for monitored watersheds



- ▲ Increase
- ■ No Change
- ● Decrease
- ◆ Can't Tell

Numbers with symbols represent sampled wild juvenile populations.

DATA SOURCE: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE.

- **Production** is the number of juvenile salmon produced on an annual basis.
- Trends should not be interpreted as broadly representative within or between regions.

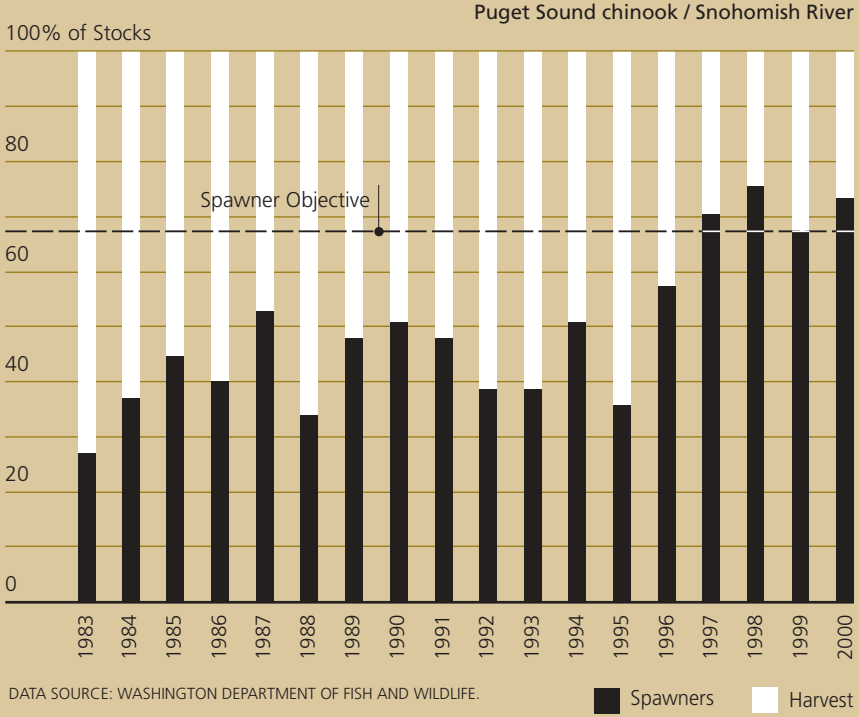
GOAL

Wild salmon populations will be productive and diverse.

Over the last few years, fishery harvest has not limited attainment of wild spawner objectives for measured stocks.

Percentage of wild stocks where harvest protection goals have been met

Puget Sound chinook / Snohomish River



DATA SOURCE: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE.

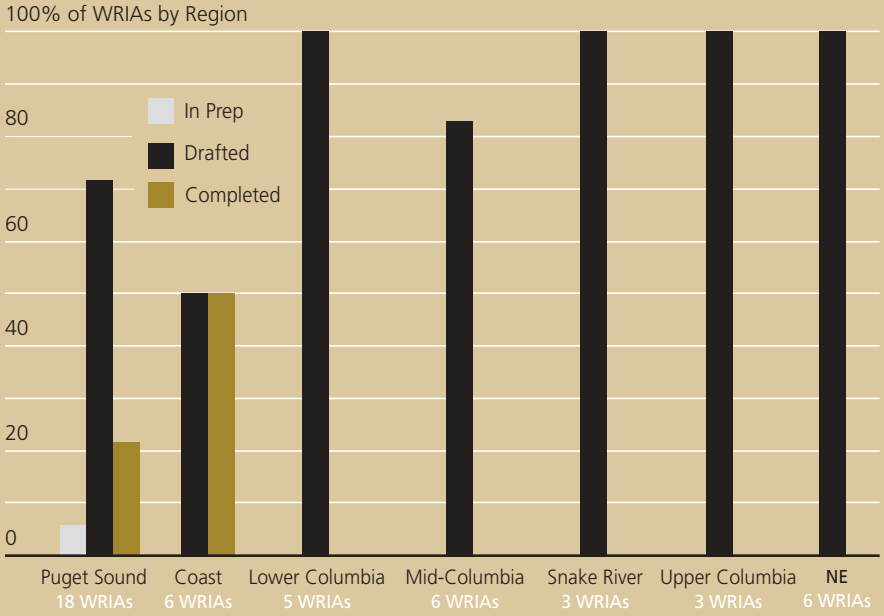
- Data shown are an example for wild Puget Sound chinook; other Puget Sound chinook examples show similar trends.
- A **harvest protection goal** is a level of fishing that is consistent with management goals, federal permits, recovery plans, etc.
- A **spawner objective** is the number or proportion of fish harvest managers allow, consistent with harvest protection goals.

GOAL

We have coordinated, science-based salmon recovery efforts.

Lead Entity strategies have been drafted that when aggregated, cover several regions.

State salmon recovery regions with a coordinated and science-based process for identifying and evaluating, and then setting priorities for salmon recovery projects within those regions



DATA SOURCE: INTERAGENCY COMMITTEE FOR OUTDOOR RECREATION.

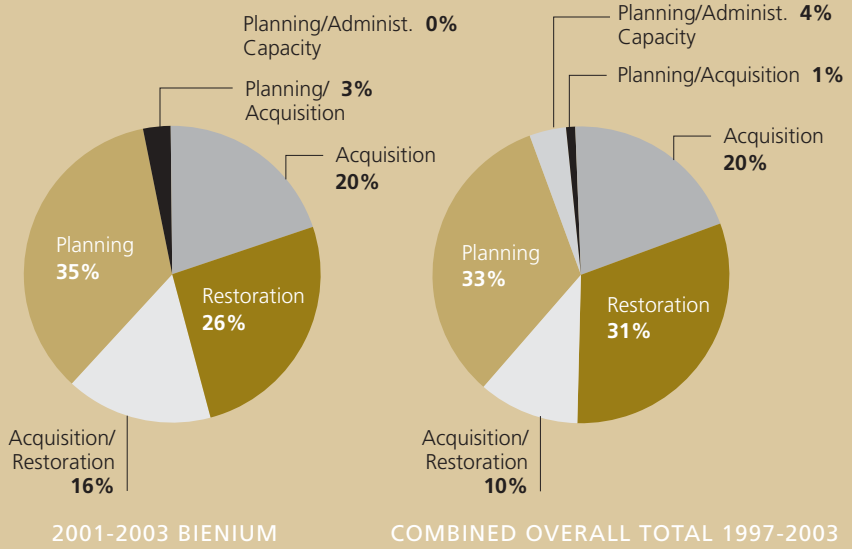
- Two expressions of the indicator were chosen to track: The number of WRIAs with baseline assessments completed; and the status of Lead Entity strategies for habitat protection and restoration projects.
- Regionally integrated assessment/ strategies exist only for the Lower and Upper Columbia Regions.
- No analysis has been done to determine the quality of assessments or Lead Entity strategies, at either a WRIA scale or regional scale.

GOAL

We have coordinated, science-based salmon recovery efforts.

Almost 62% of the salmon money has been spent on habitat restoration and preservation (acquisition).

Percentage of salmon recovery funds spent on restoration, preservation, assessments, separate monitoring and evaluation, separate planning, and administration



DATA SOURCE: INTERAGENCY COMMITTEE FOR OUTDOOR RECREATION. GRANT PROGRAM IN DATA BASE IS SRFB ONLY.

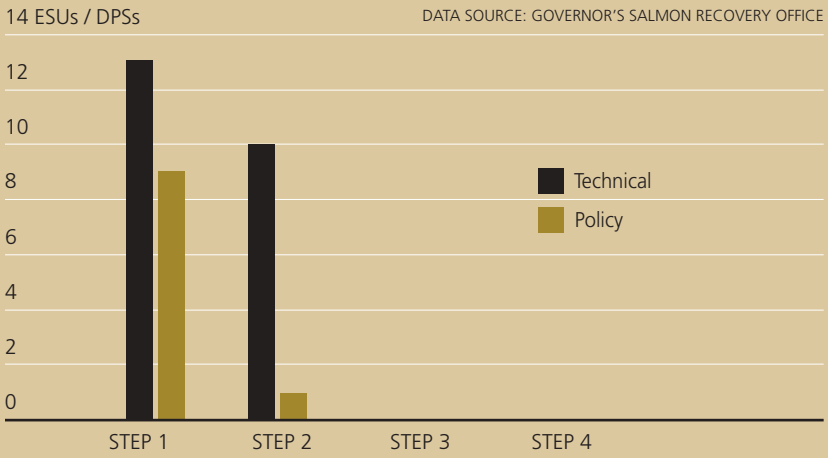
- Current data do not allow tracking of indicator information as listed in the indicator. IAC/PRISM data categories were used as surrogates.
- Preservation may be interpreted as acquisition.

GOAL

We have coordinated, science-based salmon recovery efforts.

Although progress is being made, there are no ESUs in Washington with federally established recovery goals.

Number of ESUs with federally established recovery goals



The process of establishing goals is a four-step operation:

Step 1 Creation of a regional salmon recovery board/entity (policy group) that interfaces with a technical group, and both groups interact to develop region-wide recovery plans.

Step 2 Development of draft recovery goals for identified populations that are the product of interaction between technical and policy groups. This stage drafts products that go to watershed groups and others for broader public review.

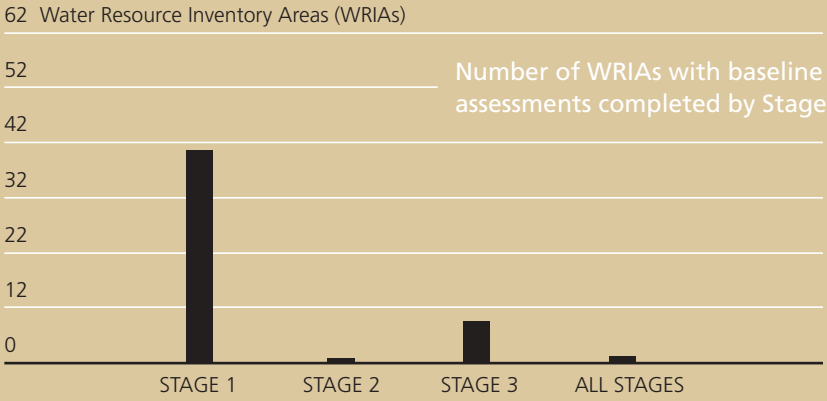
Step 3 Development of draft Evolutionarily Significant Unit (ESU) / Distinct Population Segment (DPS) recovery goals. This stage reflects efforts to "add up" watershed salmon recovery efforts at the ESU/DPS scale.

Step 4 Establishment of final salmon recovery goals are the products resulting from agreement and commitment of those in regions, watersheds, and others who affect salmon recovery (habitat-harvest-hatchery), and federal approval and adoption.

GOAL

We have coordinated, science-based salmon recovery efforts.

86% of watersheds involved in salmon recovery have completed their initial analysis of habitat conditions, but most have not yet analyzed the causes of the conditions and salmon response.



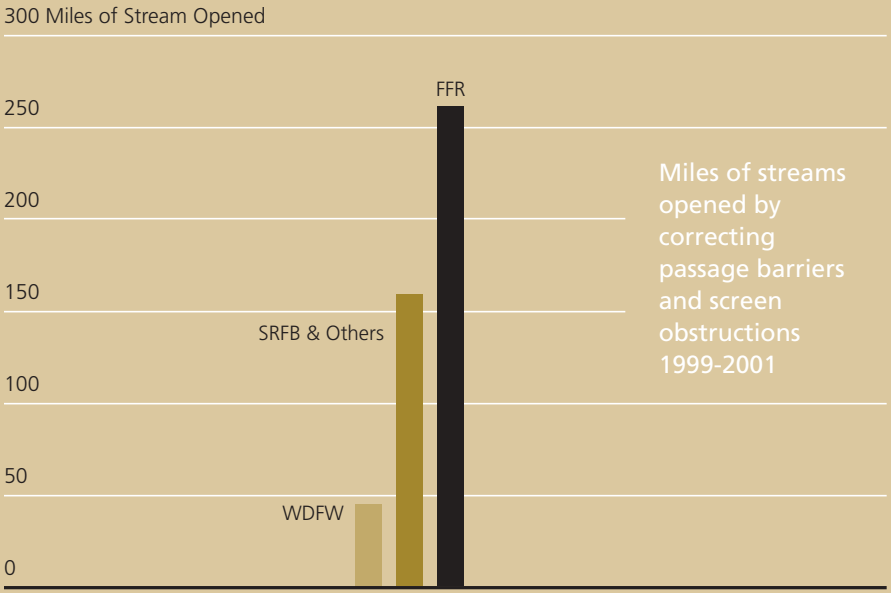
DATA SOURCE: CONSERVATION COMMISSION, REGIONAL ORGANIZATIONS, INTERAGENCY COMMITTEE FOR OUTDOOR RECREATION.

- **Baseline assessments** are those that are consistent with the Guidance on Watershed Assessment for Salmon (May 2001) which defines three stages: Stage I assesses habitat conditions, Stage II assesses causes of these conditions, and Stage III assesses salmon response.
- Data are based on the number of WRIAs with assessments equivalent to Stage I, II, and III.
- Sources of data include Limiting Factors Analyses, Watershed Assessments under the Watershed Planning Act, EDT, and others.
- No analysis has been done to determine quality of completed assessments or whether they are being applied to projects and watershed plans.
- 50 WRIAs have salmon and are considered in this indicator; 12 are not included.

GOAL

Our habitat, harvest, hatchery, and hydropower activities will benefit wild salmon.

During 1999-2001, over 400 miles of stream habitat were opened by projects.



SRFB: Salmon Recovery Funding Board Projects.
WDFW: Washington Department of Fish & Wildlife Projects.
FFR: Forests and Fish Projects.

DATA SOURCES: ESTIMATIONS FROM WASHINGTON DEPARTMENT OF FISH AND WILDLIFE HPAs AND SSHEAR DATA, AND WASHINGTON FOREST PROTECTION ASSOCIATION (WFPA)

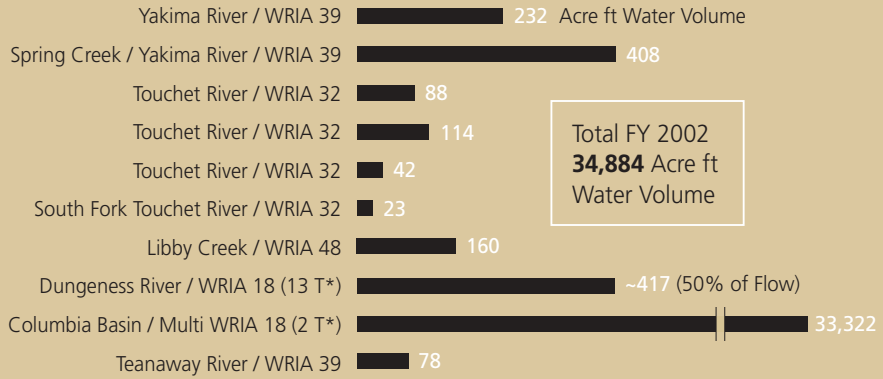
- During 1999-2001, an average fish passage barrier removal project not on forestlands opened 1.25 linear miles of stream.
- The average forestland passage barrier removal opened up 0.75 miles of habitat (WFPA estimates).
- SRFB project applicants estimate their projects have opened up 355 miles of streams (compared with 162 miles estimated by WDFW), so there is a need to validate both methods of estimation with on-the-ground inspections
- WDFW estimates more than 23,000 miles of stream habitat are blocked statewide.

GOAL

Our habitat, harvest, hatchery, and hydropower activities will benefit wild salmon.

In 2001, we restored a significant amount of water to critical basins during important times of the year for the purpose of protecting fish.

Volume of water restored to streams where water availability and flows are limiting factors



WRIA: WATER RESOURCE INVENTORY AREA. *TRANSACTIONS.
DROUGHT FUNDED WATER LEASES RANGING FROM JULY 1 TO OCTOBER 1, 2001.
DATA SOURCE: DEPARTMENT OF ECOLOGY.

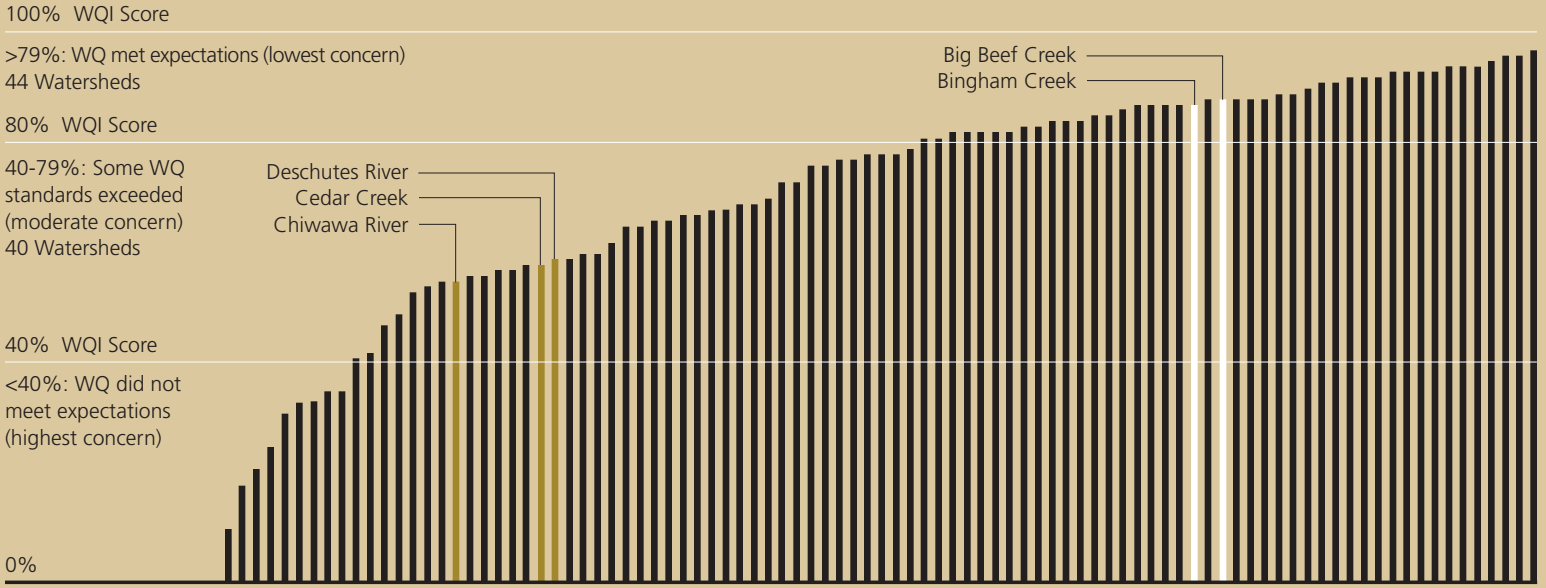
- **Restored water** includes water from actions that were taken to improve streamflows, including conservation, reuse, metering, regulating water use, enforcement, water purchases, or trust water donations; the focus is on summer low flow periods.
- Definition of streams where water availability and flows are limiting factors is from the 1999 Statewide Strategy to Recover Salmon.
- 35,000 acre feet of water is almost 11.5 billion gallons—enough to support half the population of Washington for 1 year.
- Further monitoring is essential to establish the contribution of restored water to healthy watersheds and fish.
- Summer low flows can be limiting factors for fish.

GOAL

Our habitat, harvest, hatchery, and hydropower activities will benefit wild salmon.

Water quality is good in two of the five salmon index watersheds.

Water Quality indicator scores for 5 salmon index watersheds in 2001 compared to 88 statewide water quality monitoring sites



DATA SOURCE: DEPARTMENT OF ECOLOGY.

- Five index watersheds that are monitored for juvenile salmon production are also monitored for water quality in this indicator.
- **Water quality index (WQI)** is a number that aggregates water quality data at a monitoring station for temperature, pH, fecal coliform bacteria, dissolved oxygen, nutrients, and sediments over a 12 month period.

Each station produces a single, annual water quality score between 1 and 100; in general, stations scoring 80 and above meet expectations for water quality and are of lowest concern, scores 40-80 are of marginal concern, and scores below 40 are of highest concern.

- This is a long-term trend indicator that will attempt to relate water quality trends to changes in salmon productivity.
- Data for Chiwawa and Deschutes do not cover the same time frame as other watersheds, so they may not be directly comparable.
- Parameters monitored include temperature, dissolved oxygen, pH, fecal coliform bacteria, total nitrogen, total phosphorus, total suspended sediment, and turbidity.

GOAL

Our habitat, harvest, hatchery, and hydropower activities will benefit wild salmon.

Hatchery compliance with the ESA is improving, but considerable work remains.

Hatchery Program ESA Compliance Status

Regions	Listed Species Potentially Impacted						
	Chinook	Steelhead	Bull Trout	Chum	Sockeye	Coho	Coastal Cutthroat
Puget Sound	Pending	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance
Washington Coastal	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance
Lower Columbia	0%	0%	In Compliance	0%	In Compliance	In Compliance	In Compliance
Middle Columbia	In Compliance	0%	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance
Upper Columbia	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance
Snake River	In Compliance	Pending	In Compliance	In Compliance	0%	In Compliance	In Compliance
Northeast Washington	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance	In Compliance

DATA SOURCE: WASHINGTON DEPARTMENT OF FISH & WILDLIFE.

Pending 0% In Compliance

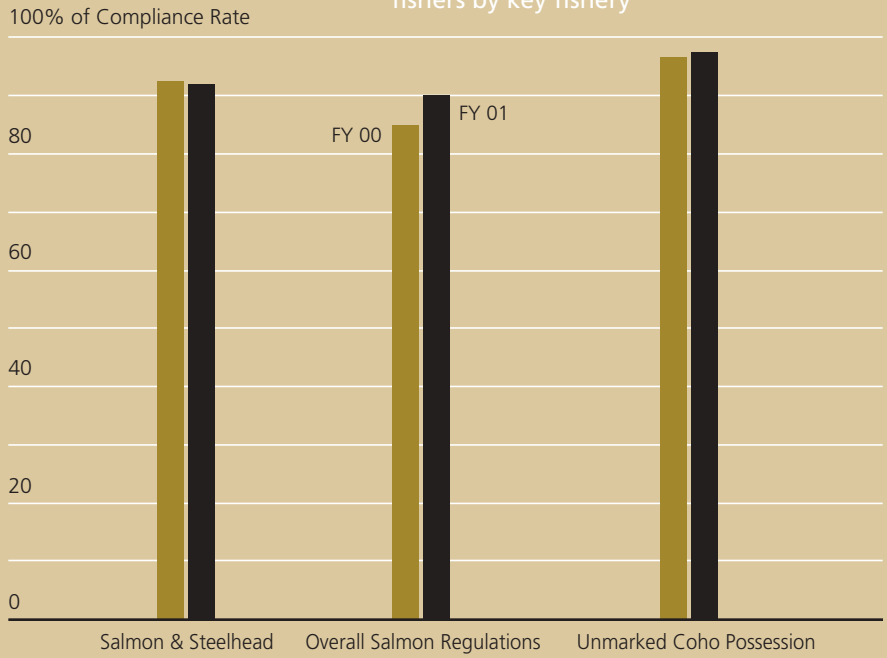
- Consistent with wild salmon recovery is measured by compliance with ESA.
- Pending category includes compliance products submitted to NMFS and awaiting response.
- ESA compliance is measured through approved Hatchery and Genetic Management Plans (section 4 [d]), section 7 consultations, section 6 agreements, and section 10 permits issued by NMFS/USFWS.
- Additional Columbia River programs should be submitted by Fall 2003.

GOAL

Our habitat, harvest, hatchery, and hydropower activities will benefit wild salmon.

Fishers are, for the most part, complying with fishing regulations.

Average compliance rate for fishers by key fishery



DATA SOURCE: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE.

- Salmon & steelhead compliance based on 2506 arrests & written warnings during 35,548 contacts in FY00; 3,570 arrests and written warnings during 49,603 contacts in FY01.

GOAL

Citizens and salmon recovery partners are engaged.

Volunteers working on watershed stewardship and salmon recovery projects for state agencies donated time equivalent to more than 36 state employees in 1999.

State Agency	Organizations	Category	People	Hours
WSU Coop. Extension	Individuals	CP	**9777**	**41202**
State Parks	Doug Mackey,	ARV	**1**	**200**
	Nooksack Salmon Enhancement Group,	CP	**23**	**46**
	UW-Pack Forest	ARV	**1**	**120**
WDFW	Reg. Fisheries Enhancement Groups	ARV ARV	**500**	**10375**
DNR	Individuals	ARV	**847**	**17762**
Ecology	Individuals,	ARV, CP	**141**	**1789**
	Wetland Function Assesment	ARV	**36**	**3000**
PSAT	People for Puget Sound,	CP	**23**	**241**
	Maxwelton Salmon Adventure,	CP	**5**	**35**
	Hood Canal School,	CP	**14**	**40**
	Seabeck Salmon Team	CP	**34**	**272**

DATA SOURCES: WASHINGTON DEPARTMENT OF FISH AND WILDLIFE, DEPARTMENT OF NATURAL RESOURCES, DEPARTMENT OF ECOLOGY, PUGET SOUND ACTION TEAM, WASHINGTON STATE UNIVERSITY COOPERATIVE EXTENSION PROGRAM.

◗ This graph seriously undercounts the volunteer time donated by citizens of Washington. Many volunteers with county programs, fish clubs, watershed councils, stream teams, school districts, and others are not included.

Agency Registered Volunteers (ARV)

ARVs are those volunteers registered specifically with a state agency, requiring: ◗ Worker safety training in compliance with Labor and Industries worker safety standards. ◗ Medical Aid insurance payments (by the sponsoring state agency) for each registered volunteer.
◗ Documentation and tracking of volunteer workers activities.

Community Participant Volunteers (CPV)

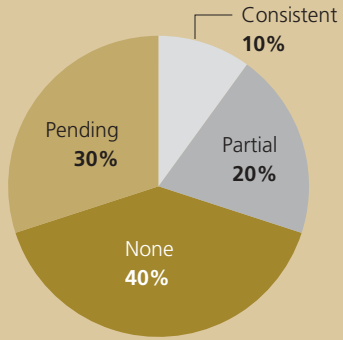
CPVs include salmon-related volunteer activities conducted by, for or on behalf of organization partners directly involved with state agencies working on salmon recovery.

GOAL

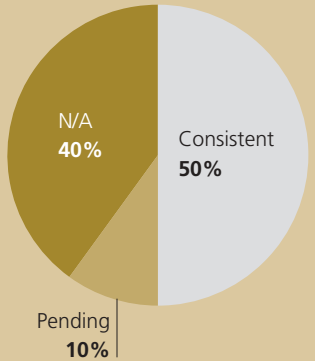
We will meet Endangered Species Act and Clean Water requirements.

Most state programs are not yet fully ESA consistent.

Endangered Species Act Consistency Determination



Clean Water Act Consistency Determination



DATA SOURCE: WASHINGTON DEPARTMENTS OF ECOLOGY, FISH AND WILDLIFE, WA STATE DEPT. OF TRANSPORTATION, NATURAL RESOURCES AND AGRICULTURE.

Consistent with requirements means state actions conform to ESA and CWA requirements; actions of the state do not result in violation of these federal statutes.

Key state programs are those important to salmon protection and recovery. They may be regulatory programs implemented by state agencies, a federal program delegated to the state for implementation, or a state program delegated to a local government.

Key state programs are: Shoreline Master Program guidelines, stormwater permits, water rights and storage permits, water quality standards, hydraulic project approvals, harvest regulations, state salmon hatcheries, pesticide applications, forest practices, transportation capital projects.

1999-2001 Accomplishments Highlights

Salmon recovery takes patience, perseverance and teamwork. The 1999 Statewide Strategy to Recover Salmon emphasized the importance of setting priorities because the need for funding and staff always will be greater than what is available. State agencies allocated available resources to implement early and immediate actions to address key factors for decline where resource risks were most severe. They also made a strong commitment to investing in long-range planning to ensure strategies were directed at actions that will have the most impact for recovering salmon.

Partnerships are essential to enhance the government's ability to attain sustainable recovery. The Statewide Strategy recognized this by recommending actions at three scales: statewide, Evolutionarily Significant Unit (ESU), and watershed. To help local partners organize, the Governor's Salmon Recovery Office worked with state and federal agencies to identify seven salmon recovery regions. Each region is defined by salmon recovery needs within a specific geographic area, based on existing as well as potential Endangered Species Act listings. Formed to address these needs, regional organizations will have a vital role (see pages 20 and 37) in salmon recovery planning during the coming years.

The Statewide Strategy identified goals and strategies to achieve success. This chapter highlights some of the diverse actions[1] agencies took during the 1999-2001 biennium to prevent further declines of salmon stocks—the first priority. State actions also sought to limit legal exposure and economic impacts for state and local governments and private landowners through compliance with federal law.

[1] Many actions highlighted here support two or more goals and numerous strategies, but they only will be listed in one location. An attempt has been made to align the action with the goal that it most clearly implements.

PAIR OF COHO SALMON SPAWNING / PHOTOGRAPH © MANU ESTEVE

Strategies

- **Sustain salmon productivity by providing wild spawner escapement, conserving genetic diversity, and meeting basic needs of salmon for spawning, rearing and migration in watersheds and ecosystems. Stewardship of salmon will be the first priority in managing the resource.**
- **Meet the goal of the Endangered Species Act to return endangered and threatened species to the point where salmon no longer need the statute's protection.**

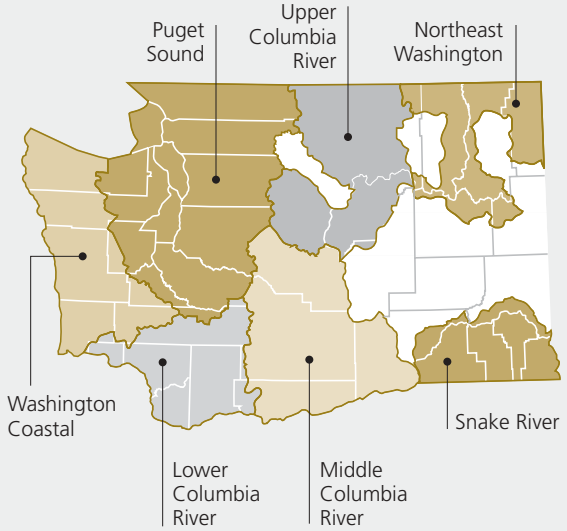
State Agency Salmon Stewardship Accomplishments

Protection and Restoration Return Salmon to the Dungeness River

2001 marked the largest return of wild spring chinook to the Dungeness River since 1988. After nearly becoming extinct, 453 adults were found in the river. State and tribal agencies, irrigators, and volunteers worked together to bring fish back through harvest restorations, model hatchery management, water conservation, water purchases and habitat restoration.

Regional Salmon Recovery Organizations

There are currently four organizations engaged in recovery planning for an entire salmon recovery region (roughly equal to groups of Evolutionarily Significant Units, or ESUs, in similar areas); a fifth group is in the beginning stages of organizing. These regional organizations complement existing groups such as the Puget Sound Tri-County salmon recovery effort led by King, Snohomish and Pierce County executives and the mayors of Seattle, Everett, and Tacoma. These organizations are partnerships among watershed groups, governments, organizations, and landowners with a stake in recovering salmon; they perform many different functions, from assessing factors for decline of salmon, organizing and approving recovery projects, to producing a recovery plan.



Salmon Recovery Regions

DATA SOURCE: GOVERNOR'S SALMON RECOVERY OFFICE

SALMON RECOVERY FUNDING BOARD

Regional Action Plan

Supporting local and regional plans and actions is one of the best ways to achieve diverse and productive wild salmon populations. Recently, state agencies and regional organizations developed an action plan to help these regional efforts. This plan includes specific state agency and regional organization commitments to enhance the effectiveness of everyone's efforts.

Regional Recovery Goals

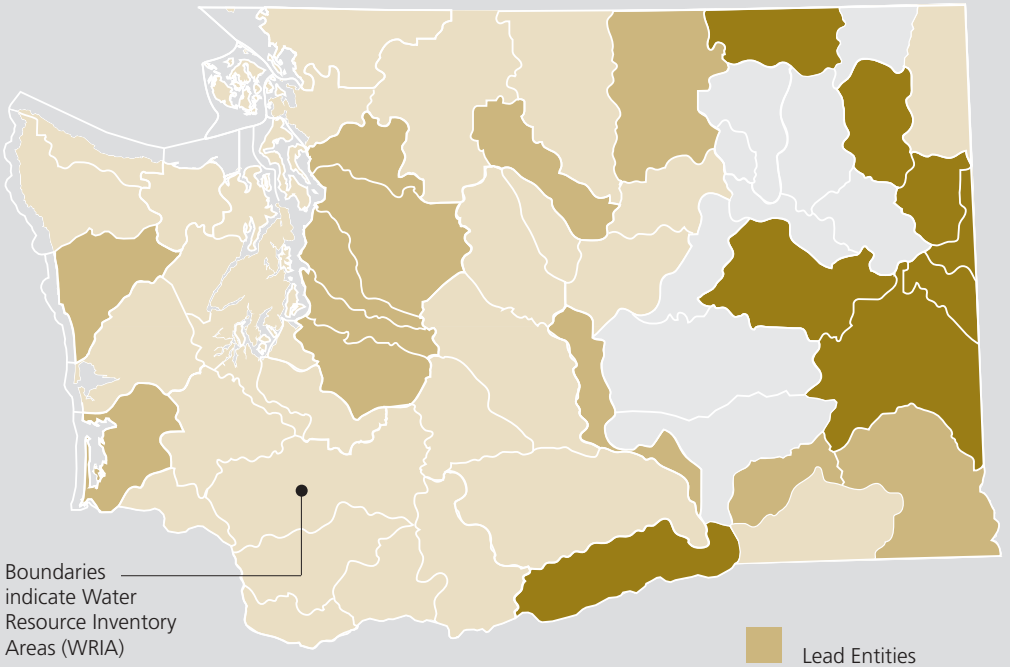
Recovery goals provide objective and measurable criteria for identifying the most effective habitat, harvest and hatchery recovery actions. State and federal agencies and tribes are working closely to develop recovery goals statewide. Preliminary goals for Puget Sound chinook have been released; others are expected within the 2001-2003 biennium. Existing regional organizations are engaged in the process and will link salmon recovery goals with social and economic goals.

> "Regional salmon recovery organizations provide an opportunity to integrate federal, state, local and tribal planning processes."

RON WALTER
CHELAN COUNTY COMMISSIONER AND MEMBER OF UPPER COLUMBIA SALMON RECOVERY BOARD, 2002

Identifying Limiting Factors

The Conservation Commission has completed reports on habitat factors that limit salmon and steelhead production in watersheds for 37 of the 62 Watershed Resource Inventory Areas. By the end of the 2001-2003 biennium, all watersheds with a Lead Entity will have a completed report. These will provide important baseline assessment information for setting priorities for habitat restoration projects.



DATA SOURCE: WASHINGTON DEPARTMENT OF ECOLOGY

2496 / 2514 Activities Statewide

Watershed Planning Units

The Watershed Planning Act (ESHB 2514) created Watershed Planning Units to help decide which watershed actions are necessary to provide adequate water for people and fish. Members include state, county and city governments, water purveyors, tribal representatives, and private citizens. To date, 31 Planning Units have been created, covering 41 of the state's 62 Water Resource Inventory Areas. These groups have applied for additional state funding to make stream flow recommendations for their watersheds.

Lead Entities for Salmon Recovery

The Salmon Recovery Planning Act (ESHB 2496) created Lead Entities to coordinate local salmon habitat restoration actions. Twenty-six of these groups, covering 45 watersheds, spearhead local recovery efforts and recommend projects to the Salmon Recovery Funding Board. Fourteen Regional Fisheries Enhancement Groups assist Lead Entities by developing projects. Scientific technical panels review and evaluate Salmon Recovery Funding Board grant proposals from Lead Entities.

Strategies

- **Achieve cost-effective salmon recovery and use government resources efficiently.**
- **Use the best available science and integrate monitoring and research with planning and implementation.**
- **Ensure that citizens, salmon recovery partners and state employees have timely access to information, technical assistance and funding they need to be successful.**

State Agency Science Accomplishments

Aquatic Habitat Guidelines

State and federal technical specialists developed science and management guidelines for practices to promote, protect or restore habitat in freshwater ecosystems. The guidelines affect design, construction and operation of projects located in or near aquatic systems, or projects that affect these systems. Integrated Streambank Protection Guidelines and Fish Passage at Road Culverts were completed and will be published in the 2001-2003 Biennium.

Independent Science Panel

The state's Independent Science Panel (ISP) was created by the legislature in 1998 to provide scientific oversight of the state's salmon recovery efforts. Governor Locke appointed the five members of the ISP in 1999. During the biennium the ISP worked on two major tasks which culminated in reports to the governor and legislature in 2000: (1) comments on the Statewide Strategy, and (2) salmon monitoring. Documents prepared by the ISP can be found on the web at: http://www.governor.wa.gov/esa/science/documents.htm

Catch and Release Commercial Fishing Nets

Healthy stocks of hatchery fish and wild fish return to spawn mixed with fish that need protection. When fisheries target healthy salmon stocks, fish from weak stocks inadvertently are caught as well. To preserve wild fish, the state is testing and evaluating different types of fishing gear that keep fish alive so that hatchery fish can be harvested and wild fish can be released to survive and spawn. Scientists are researching tangle nets and trap nets to evaluate which performs better. The state will work with commercial fishers to improve the gear they use.

Top Right: Live wild salmon being released from a tangle net.

TIM WATERS / WA DEPT. OF FISH AND WILDLIFE

> "A scientifically credible strategy should be based on identifying what is possible, attainable, and sustainable."
>
> INDEPENDENT SCIENCE PANEL
> MAY 2000

WA DEPT. OF NATURAL RESOURCES

Stormwater Management Manual for Western Washington

The Department of Ecology prepared a major revision to its 1992 Stormwater Management Manual for Western Washington. This revised technical manual provides a commonly accepted set of technical standards and guidance on stormwater management practices in order to control quantity and quality of stormwater produced by new development and redevelopment. The Department believes that, when the standards and recommendations in the manual are properly applied, stormwater runoff will generally comply with water quality standards and protect beneficial uses of the receiving water, including use as salmon habitat.

Monitoring Productivity of Watersheds

Wild salmon smolt production has been measured annually in river systems throughout the state for as long as 25 years. Originally developed as a tool to improve salmon management, this effort has increasingly become integral to monitoring salmon recovery. Presently, over 90 populations of chinook, coho, pink, chum and sockeye salmon, steelhead and cutthroat trout are monitored by the Department of Fish and Wildlife in over 30 streams in fourteen watersheds statewide. Research shows spawner abundance, instream flows, migration barriers, habitat quality, and species interactions all affect smolt production.

Salmon Recovery Grant Information

The Interagency Committee for Outdoor Recreation (IAC) Project Information System (PRISM) database tracks information for all Salmon Recovery Funding Board projects (the Board has funded over 650 projects). This web-accessible program has an online application process, tracks project expenditures, and has hundreds of standard reports. Interactive maps are used to display the location of salmon recovery projects, and project photos and images are available. To see PRISM, contact the web site at: www.wa.gov/iac/IACprism.

Best Available Science

The Office of Community Development (now part of the Department of Community, Trade and Economic Development) led the effort defining and identifying "Best Available Science." This standard helps local governments understand requirements of complying with the Growth Management Act. It also applies to salmon recovery work.

Over 1100 professionals were trained in Aquatic Habitat Guidelines during twenty-six workshops for engineers, biologists and consultants from private sector, DNR, WSDOT, USFS, BLM, and Conservation Districts. The guidelines are available at www.wa.gov/wdfw/habitat.htm#habrest.

HOWARD FUSS / WA DEPT. OF FISH & WILDLIFE


Fish trap on the Deschutes River.

Hatchery Reform

State fish biologists study hatchery fish reproduction in the wild at fish traps like this one in the Deschutes River near Olympia. They measure survival rates from egg to smolt stage and compare smolt to adult survival of wild and hatchery chinook. This information helps fisheries managers improve strategies in areas where hatchery and wild populations interact.

▲ A fish biologist collects data under water. Young salmon taken by a stationary underwater camera. Fluorescent identification tags identify them as hatchery fish.

Strategies

- Freshwater and estuarine habitats are healthy and accessible.
- Rivers and streams have flows to support salmon.
- Water is clean and cool enough for salmon.
- Hatchery practices meet wild salmon recovery needs.
- Harvest management actions protect wild salmon.
- Compliance with resource protection laws is enhanced.

State Agency Habitat Accomplishments | 1 of 4 Pages

Salmon Recovery Funding Board Grants

The Salmon Recovery Funding Board awarded $45 million in grants to local habitat recovery projects during the 1999-2001 biennium. These grants helped remove fish barriers, restore habitat, and purchase important salmon habitat. Grants also were given to local governments for salmon recovery planning, research and early recovery actions. A total of 84 grants worth $13.2 million were approved in the March 2000 funding cycle. An additional 147 grants totaling $31.8 million were approved in the January 2001 funding cycle.

Patit Creek Stream Restoration

Patit Creek, a tributary of the Touchet River in Columbia County, is home to threatened steelhead. The Umatilla Tribes, state and federal agencies, and a private landowner worked together to improve water quality and stream flow in the creek. They fenced off a 75- to 150-foot buffer on both sides of the stream to keep cattle out; planted native vegetation along streambanks to reduce sediment and lower stream temperatures; and built weirs out of boulders and large woody debris to create resting, feeding and nesting places for fish. The Salmon Recovery Funding Board funded the project. The tribes signed a 15-year agreement with the landowner restricting timber harvest, development and agricultural practices within the riparian corridor.

Water Cleanup Projects

The Yakima River cleanup was one of more than 100 projects by the Department of Ecology to improve water quality in the state. With the help of major irrigation districts, a highly criticized irrigation system was transformed into a model project. Sediments in the river have been reduced by more than 50 percent, meeting water quality standards in four out of five drainages.

Hydraulics Project Approval

These permits protect fish from the impacts of construction projects and other work in Washington waters. State Fish and Wildlife habitat staff made 6,718 on-site checks on 4,938 permited projects during 2001.

ROLLIE GEPPERT

With the help of major irrigation districts, a highly criticized irrigation system was transformed into a model project.

SALMON RECOVERY FUNDING BOARD

Patit Creek stream flow and natural habitat for steelhead restored.

SALMON RECOVERY FUNDING BOARD

Drayton Harbor Water Quality Restoration

Local shellfish growers and the Department of Ecology identified wetland sites with the greatest potential to restore and maintain water quality in Drayton Harbor near Bellingham. Existing information from the Ecology wetland restoration database and landscape scale assessment helped prioritize future preservation and restoration projects. This and similar information is available at www.ecy.wa.gov/eimreporting.

Flett Creek Dam Removal

The City of Lakewood, Pierce Conservation District, Puyallup Tribe, and state agencies removed the last fish passage barrier in Flett Creek and restored natural habitat. The Salmon Recovery Funding Board funded the project, which opened more than two miles of salmon habitat for chum, coho and cutthroat trout.

Agriculture, Fish and Water

Beginning in December 1999, state, federal, environmental, tribal and agriculture interests entered into negotiations to develop an agreement on how farmers could meet the needs of salmon recovery under the Endangered Species Act and the Clean Water Act. To date, these Agriculture, Fish and Water (AFW) negotiations have successfully produced guidelines for comprehensive irrigation district management plans (CIDMPs) and a pesticides registration review process that addresses fish protection. The state is implementing three pilot CIDMPs in the Dungeness, Nooksack, and Walla Walla watersheds. Direct negotiations with the agricultural community are on hold while several tasks are being concluded: an independent scientific review of the buffer science in agricultural landscapes was initiated (expected in October 2002); and application will be made to the USDA to modify the Conservation Reserve Enhancement Program to reflect any agreements.

Flett Creek natural habitat restored after a dam was removed.

WA STATE DEPT. OF TRANSPORTATION

Reforestation area at North Fork Newaukum Bank wetland enhancement area.

North Fork Newaukum Wetland Mitigation Bank

A relatively new approach to compensating for unavoidable construction project impacts to wetlands, wetland mitigation banking consolidates mitigation for multiple small impacts into a larger, higher-quality site that can be strategically placed elsewhere in the watershed where it can provide the most ecological benefit. The Washington State Department of Transportation created the North Fork Newaukum Wetland Mitigation Bank to compensate for proposed wetland impacts that will occur during the expansion of Interstate 5 through the Upper Chehalis River Basin. The project will restore or enhance nearly 90 acres of wetlands adjacent to the Middle and North Forks of the Newuakum River. It also will convert more than 74 acres of agricultural lands to mixed conifer and deciduous forests to improve water quality and augment summer low-flows.

Strategies

- Freshwater and estuarine habitats are healthy and accessible.
- Rivers and streams have flows to support salmon.
- Water is clean and cool enough for salmon.
- Hatchery practices meet wild salmon recovery needs.
- Harvest management actions protect wild salmon.
- Compliance with resource protection laws is enhanced.

State Agency Habitat Accomplishments | Continued

Non-point Pollution Inspections

Most pollution in Washington's waters comes from many different, hard-to-trace sources with no obvious point of discharge; this is called nonpoint pollution. Department of Ecology staff at four regional offices made 376 non-point pollution inspections during the 1999-2001 biennium. A primary goal was to educate and encourage local groups and farmers to take responsibility for their watersheds.

Restoring Instream Flows in Critical Basins

The Department of Ecology began a pilot project in voluntary water rights acquisitions aimed at increasing water for fish in basins with chronic low-flow problems. Over $6.6 million in state and federal funds has been set aside, with acquisitions occurring in the Yakima, Walla Walla, Methow, and Elwha-Dungeness basins. During Summer 2001, the state also entered into agreements with the Columbia-Snake River irrigators, Bonneville Power Administration, and US Bureau of Reclamation to remove 75,000 acres from agricultural production, keeping water in the river to help fish during the drought. The state also purchased 21 separate short-term water right leases from farmers that provided more water for fish.

Compliance Monitoring for Instream Flows

The Department of Ecology expanded the stream-gauging network in critical basins to document stream flows, verify water delivery, and support compliance efforts. Water users who were required to install meters and report use were provided financial assistance. Compliance staff will be able to detect illegal water use, such as pumping ground water or surface water without permit, or violating the terms of the permit.

LEFT: PAUL MAJER / CONSERVATION DISTRICT PARTNERSHIP. RIGHT: BRIAN WALSH

Computer technology in this corn field measures soil moisture. The farmer receives the data on a computer at home and adjusts crop irrigation to increase efficiency and conserve water.

WA DEPT. OF NATURAL RESOURCES

Effective Irrigation Techniques Improve Turbidity on the Yakima River

A multi-agency effort helped local farmers improve irrigation techniques through education, loans, and technical assistance. The project decreased harmful turbidity levels in the Yakima River by 95% and more.

WA STATE TOURISM

Skagit River Basin Instream Flow Rule

It had been 15 years since the Department of Ecology last adopted a stream-flow rule, but in 2001 a rule was adopted for the Skagit River. The Skagit is the largest source of clean, fresh water into Puget Sound. With the listing of Puget Sound chinook as threatened with extinction, coupled with an expanding human population, a solution was needed to ensure enough water for people and fish. The new rule describes the amount of water available for future appropriation from surface and ground waters in the basin. It protects flows for tidal inundation of the estuary and habitat for Skagit River chinook and other species. The new rule culminates a cooperative effort begun in 1996 with the departments of Ecology and Fish and Wildlife, the city of Anacortes, Skagit County, Skagit County PUD #1, Upper Skagit Indian Tribe, Swinomish Indian Tribal Community, and the Sauk-Suiattle Indian Tribe. The rule ensures coordinated management of flows in the Skagit River system.

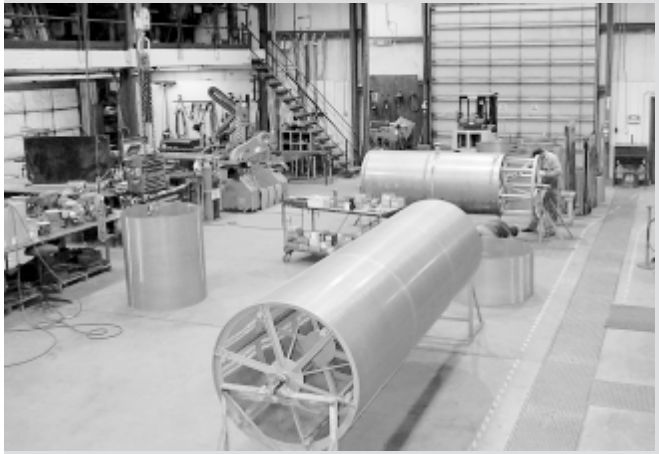
Reforming Outdated Water Laws

Governor Locke and legislators formed the bipartisan Joint Executive-Legislative Water Policy Group that worked on developing reforms to help make Washington's water laws more flexible. These reforms were enacted by the legislature during 2001 and 2002. They were the first substantial changes to water law in 30 years—and they were just the first step. Key features of the reform include: reducing water rights application backlogs, funding water conservation and irrigation efficiency projects in critical basins, providing additional funds to watershed planning groups that are working on instream flows for fish, acquiring water for instream flows through lease, purchase, or donation, and implementing stream gauging and metering in critical basins.

Fifteen major irrigation diversion screens were built and installed during the 1999-2001 biennium to protect salmon in eastern Washington streams.

"Our tribal council and members are hopeful that meaningful improvements have begun, and that restoration—once just a spoken word—can come to pass in our lifetime."

JOE PEONE
DIRECTOR OF FISH & WILDLIFE FOR THE COLVILLE CONFEDERATED TRIBES



ERIC EGBERS / WA DEPT. OF FISH & WILDLIFE

State-of-the-Art Fish Screens

The Department of Fish and Wildlife designs and fabricates fish screens in this Yakima shop. The screens prevent fish from getting trapped in irrigation ditches. It is imperative that these screens be high quality, and the Yakima shop is known throughout the Northwest for its high standards. The shop builds screens for local, state and federal agencies as well as for several tribal nations. Fifteen major irrigation diversion screens were built and installed during the 1999-2001 biennium to protect salmon in eastern Washington streams.

Strategies

- **Freshwater and estuarine habitats are healthy and accessible.**
- **Rivers and streams have flows to support salmon.**
- **Water is clean and cool enough for salmon.**
- **Hatchery practices meet wild salmon recovery needs.**
- **Harvest management actions protect wild salmon.**
- **Compliance with resource protection laws is enhanced.**

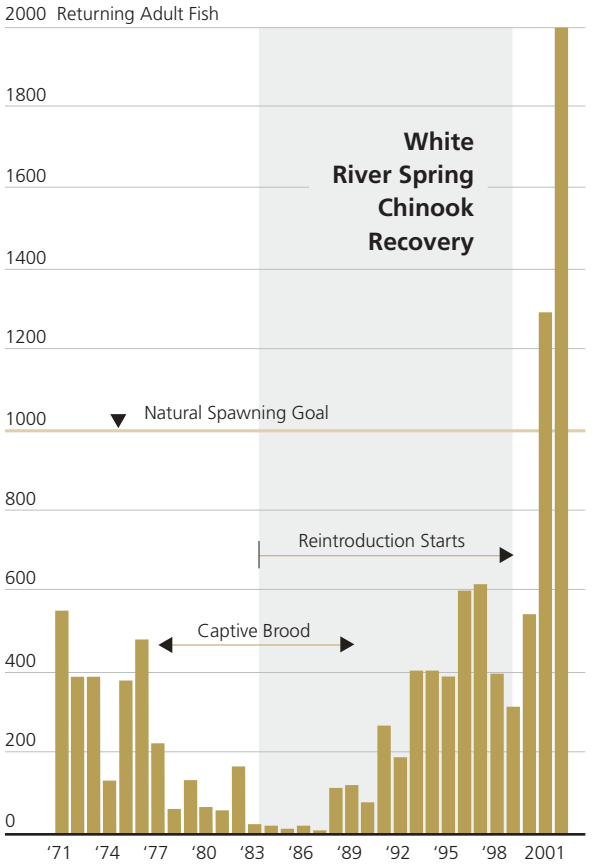
State Agency Fish Hatchery Accomplishments

Benefit / Risk Assessment Procedure (BRAP)

The Department of Fish and Wildlife developed this diagnostic tool to help analyze the compatibility of each state hatchery with the goal of recovering wild stocks. The procedure focuses on the presence of naturally spawning stocks, quality and availability of spawning habitat and other factors to help determine the degree of risk, if any, a hatchery facility poses to depressed or listed salmon stocks. Based on those assessments, specific hatchery operations may be modified or eliminated, depending on the measured risk to listed species. Use of BRAP by WDFW complements similar assessment tools being used by the Hatchery and Scientific Review Group, and will lead to the development of a hatchery reform plan for Puget Sound facilities. The tool will be further refined with a goal of eventually using it statewide.

Hatchery Restoration Programs Help Wild Fish

A cooperative project among the Puyallup and Muckelshoot Tribes, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service, and Department of Fish and Wildlife has helped bring a unique stock back from the brink of extinction. The White River chinook salmon restoration project on the Puyallup River system has used captive broodstock, supplementation, habitat restoration, harvest restrictions, dam relicensing, and water withdrawal agreements to rebuild the White River chinook salmon population from fewer than 20 returning adults in the early 1980s to 553 adult returns in 1999 and an estimated 2,000 adults in 2001. Prospects for recovery of this stock are now considered good.



DATA SOURCE: WA DEPT. OF FISH AND WILDLIFE

JULIE HOOFF / WA DEPT. OF FISH AND WILDLIFE

Mass Marking Hatchery Fish

Clipping the adipose fin on chinook, coho and steelhead hatchery fish makes it possible for fishers to catch and keep hatchery fish and release wild fish. Almost all coho from state hatcheries in Puget Sound and on the coast were clipped, as were 95% of the coho and 100% of the spring chinook released on the Columbia River (around 60 million hatchery coho and 60 million hatchery chinook).

WA DEPT. OF FISH AND WILDLIFE

State Agency Fish Harvest Accomplishments

Comprehensive Chinook Fisheries Management Plan for Puget Sound

This innovative and progressive approach to managing Puget Sound chinook identifies harvest levels each stock can sustain without affecting conservation and recovery of listed salmon. Enough fish are allowed to return to habitat created and maintained by other recovery actions. The plan includes extensive monitoring and evaluation of fishing-related impacts, abundance of returning hatchery and naturally produced fish, effectiveness of fishing regimes, and regulating compliance.

WA STATE TOURISM

Enforcement in Marine Waters

Department of Fish and Wildlife special enforcement detachments were consolidated into a new Marine Division to provide priority enforcement on selective salmon fisheries in marine waters. In 2001, more than 49,000 contacts were made for fishery compliance statewide, resulting in over 3500 arrests and written warnings. This represents a 40% increase in contacts over the previous year. Significantly, field contacts with anglers showed a 98% compliance rate with new selective fishing rules.

Economic Help for Commercial Fishing

Commercial fishers in Washington State have been hit hard by the decline in salmon populations. Many have taken advantage of a buy-back program for non-Indian commercial fishing licenses. Nearly $24.6 million in federal funds and more than $2.3 million in state funds have purchased 528 commercial licenses of 1667 total licenses, thereby reducing fishing pressure on salmon.

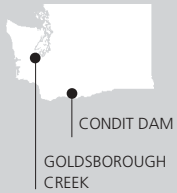
Officers from the Department of Fish and Wildlife contacted over 49,000 fishers during 2001 and found most people were complying with harvest regulations.

BRIAN WALSH / WA DEPT. OF FISH & WILDLIFE

State Agency Hydropower Accomplishments

Improving Conditions for Fish

Department of Fish and Wildlife efforts helped improve fish passage both to and through hydroelectric facilities in Washington. An agreement was reached to remove Condit Dam from the White Salmon River in 2006, opening up 25 miles of spawning habitat for salmon.



Salmon and Steelhead Return to Goldsborough Creek in Mason County

State and federal agencies, the Squaxin Tribe and Simpson Timber Company combined efforts and funds to remove Goldsborough dam, a non-functioning dam that blocked salmon passage to 14 miles of ideal spawning habitat since 1885. Workers placed boulders and logs to improve habitat in the creek, and added 35 weirs to help fish migrate up and downstream. The project was completed by the summer of 2001, in time for salmon and steelhead returning to the creek that fall. The creek is expected to eventually support an additional 2000 adult coho, 10,000 chum, and hundreds of steelhead and sea-run cutthroat each year.

Strategies

- **Create partnerships among governments and citizens. Provide leadership, coordination and technical assistance to create agreements on salmon recovery decision-making frameworks and recovery plans. Integrate scientific data with local knowledge and build in local flexibility and control.**
- **Inform, build support, involve and mobilize citizens to assist in restoration, conservation and enhancement of salmon habitat.**

State Agency Citizen Involvement and Partnership Accomplishments

Guidance on Watershed Assessment for Salmon

This guide was released in May 2001 to help watershed groups, local governments, state agencies and other salmon recovery groups make informed decisions. It describes assessments needed to select projects, make funding decisions and judge which projects will be sustainable. Technical specialists from related fields developed the guide under the direction of the Governor's Salmon Recovery Office.

Cooperative Fish Screen Compliance helps Landowners and Irrigators

The Department of Fish and Wildlife began a program in the Walla Walla River Basin designed to help landowners and irrigators achieve compliance with current state laws on fish passage, screen diversions and pump stations, and obtain permits required by the state hydraulics code for operation and maintenance of these facilities. Over 300 landowners chose to participate in the program, identifying 424 non-compliant diversions. In addition, 81 site assessments were completed, and $738,000 from the Salmon Recovery Funding Board and the Bonneville Power Administration had been approved to provide funding for screen materials and devices.

Small Forest Landowners Office

New forest practices rules to protect salmon may impact small forest landowners disproportionately. The Department of Natural Resources established this office to provide landowners with assistance and information to help them keep their land in forestry use. For example, in exchange for a 50-year easement, landowners can choose to be partially compensated for unharvested timber. The "leased" trees provide important functions along streams while landowners still own the property and retain full access.

WA DEPT. OF NATURAL RESOURCES

▲ The Department of Natural Resources established the Small Forest Landowners Office to provide technical assistance and information to landowners.

Seabeck Alki Salmon Education Project

Second to ninth grade students created these booklets to teach school kids about salmon and the environment and help other schools set up salmon teams. A Public Involvement and Education grant from the Puget Sound Water Quality Action Team funded students to create the guide and a slide show presentation. This grant was one of many to help educate citizens across the state on salmon recovery.

Roadmap for Salmon Habitat Conservation at the Watershed Level

This document helps local groups take key steps needed for salmon habitat conservation in their watershed and relate their work to regional salmon recovery planning. The Governor's Salmon Recovery Office helps state agency staff and local and regional partners apply the Roadmap to their watersheds.

Reference Guide to Salmon Recovery

This document explains what salmon recovery means, what is happening, and who is involved at different geographic scales. This information will help people who are interested in salmon recovery and salmon habitat conservation in their watershed better understand the broad context of salmon recovery. It also identifies some sources of additional information that are available.

Volunteers Aid Nutrient Enhancement Projects

Research over the past decade has demonstrated the critical role salmon play in transporting nutrients from the Pacific Ocean to aquatic and terrestrial ecosystems of the Pacific Northwest. The Department of Fish and Wildlife worked with Regional Fishery Enhancement Groups and other local organizations, primarily volunteers, to distribute the carcasses of adult salmon used for broodstock at WDFW hatcheries back into watersheds. More than 160,000 carcasses from 123 projects were distributed into streams across the state in 2000.

Volunteers helped distribute more than 160,000 adult salmon carcasses from 123 projects into streams across the state in 2000.

Stream Sampling

Volunteers donated more than 75,000 hours of their time to help recover salmon, participating in projects such as planting trees, collecting water samples, or rebuilding damaged streambanks and spawning areas.

DICK KNIGHT / SKAGIT FISHERIES ENHANCEMENT GROUP

HAL MICHAEL / WA DEPT. OF FISH AND WILDLIFE

Salmon carcasses are dropped from a helicopter into the Kalama River as part of a nutrient enhancement program.

Strategies

- **Strengthen land, water and fishery management policies, programs and activities to avoid, minimize and mitigate human impacts on salmon populations and their habitat.**
- **Seek Endangered Species Act compliance for state guidelines, regulations and plans; permitting activities; funding of projects/ activities; and state lands, facilities and infrastructure.**

State Agency Endangered Species & Clean Water Accomplishments

Forests and Fish Agreement

This voluntary pact covers eight million acres of private forestland and protects 60,000 miles of streams. Large and small forest landowners and federal, state, tribal and county governments negotiated the agreement, the first of its kind in the country. In May 2001, the Forest Practices Board adopted new permanent forest practices rules based on the agreement. The federal government has certified the rules are in compliance with the Endangered Species Act and Clean Water Act.

Harvest Plans and Fishing Seasons

Just as hatcheries need federal approval for operations, so do any harvest plans that might impact listed fish. The National Marine Fisheries Service approved Fishery Management Evaluation Plans (harvest plans, or FMEPs) for Puget Sound chinook and Hood Canal summer chum. FMEPs that could affect listed species in the Lower Columbia tributaries, Mid-Columbia tributaries, and Snake River and its tributaries are also submitted annually for federal approval. Other Endangered Species Act harvest compliance actions were taken for Columbia River bull trout and Upper Columbia steelhead.

Shoreline Master Program

To protect 20,000 miles of freshwater and saltwater shorelines, the Department of Ecology extensively involved the public to draft amendments to the Shoreline Master Program. The guidelines were adopted into rule in November 2000. Some businesses, local governments and private interests challenged the rules, but agreed to attempt to negotiate a settlement with the state. These discussions are still underway.

Hatchery Genetic Management Plans

All hatcheries need to comply with the Endangered Species Act and get federal approval for operation. As part of the approval process, the state develops Hatchery Genetic Management Plans that address structural aspects of hatcheries and fish genetics. These plans help protect genetic integrity of wild fish and aid in recovery of listed fish. They are based in part on guidelines resulting from the Congressionally—mandated review of federal, state, and tribal hatcheries now underway in Puget Sound called the Hatchery Scientific Review Group. During the 1999-2001 biennium, the Department of Fish and Wildlife developed 128 hatchery management plans and submitted them to the National Marine Fisheries Service for approval.

NANCY EBERLE

Hatchery plans help protect the genetic integrity of wild fish and aid in recovery of listed fish.

SALMON RECOVERY FUNDING BOARD

Streambank Restoration

When trees were harvested in the past, fast-growing alders usually re-vegetated clear-cut areas. These deciduous trees failed to offer the long-lasting woody debris streams need and streams essentially starved without it. Today, biologists are experimenting to improve riparian areas by planting conifers that do well in moist conditions along streambanks.

Several important cases affecting salmon were settled during the biennium. These include:

National Association of Homebuilders v. Mineta, 01-CV-02799 (D.C. Cir.)

The National Association of Homebuilders and others brought this lawsuit challenging NMFS' designation of critical habitat for listed West Coast salmon and steelhead. They alleged that NMFS "overincluded" lands in its critical habitat designation without ascertaining whether all areas designated were occupied by the species and failed to establish that the designated areas were essential to conservation of the species. A consent decree was filed with the court in April 2002. Under this agreement, NMFS agreed to withdraw critical habitat designation pending a new study and plaintiffs agreed to dismiss their lawsuit.

Washington Toxics Coalition v. EPA, 01-CV-00132 (W.D. Wash.)

Washington Toxics Coalition sued EPA alleging that the agency violated ESA Section 7(a)(2) because it failed to consult with NMFS regarding the effects of registered pesticides on threatened and endangered salmonids. The Coalition alleged that pesticides detrimentally affect salmonids by interfering with their sensory abilities to navigate back to their spawning grounds when returning from the ocean and that EPA therefore had a duty to consult with NMFS regarding this impact. The Court ruled that EPA had not complied with the ESA and set a schedule for EPA to make effects determinations and consult for 55 pesticides by December 1, 2004. The judge did, however, rule that there was not enough evidence to show that ESA consultation was required for an additional 898 pesticide active ingredients.

Washington Environmental Council v. NMFS, 00-CV-1547 (W.D. Wash.)

The Washington Environmental Council (WEC) brought this lawsuit claiming that NMFS lacked authority under Section 4(d) to promulgate a rule with a limited take prohibition. WEC argued that NMFS could allow incidental take protection from ESA liability only through actions under Sections 7 and 10. Judge Rothstein disagreed and concluded in her order that NMFS has discretion to craft a 4(d) rule that includes tailored limits. She also dismissed WEC's claims that NMFS failed to comply with NEPA and ESA Section 7. She found that as to the 4(d) rule itself, NMFS had met its obligations under NEPA and Section 7. However, when NMFS approves specific programs for coverage under the 4(d) rule, WEC could file claims at that time. Finally, Judge Rothstein dismissed all challenges to the substance of the Forests and Fish limit as well as the Municipal, Residential, Commercial, and Industrial Redevelopment limit as unripe for review.

Washington Environmental Council v. EPA, 00-CV-1548 (W.D. Wash.)

WEC and others filed suit against the Environmental Protection Agency (EPA), challenging assurances EPA made in the Forests and Fish Report. In Clean Water Act Assurances, EPA agreed that it would allow the state for ten years to defer calculating Total Maximum Daily Loads (TMDLs) for streams on lands protected by the new Forests and Fish regulations. TMDLs require the state to identify streams with impaired water quality, assess the maximum amount of pollutants those streams can assimilate, and to put mechanisms in place to limit the amount of pollutants going into each stream at or below the maximums. EPA agreed to defer TMDLs for streams covered by the new Forests and Fish forest practice regulations based on the assumption that the new regulations would reduce pollutants to streams from forest practices to levels that would not impair water quality. Judge Barbara Rothstein dismissed WEC's challenge because the case was premature. EPA had not signed the Clean Water Act Assurances, and Judge Rothstein agreed with EPA's position that the Assurances were therefore not a final agency action that a court could review.

2001-2003
Action Initiatives Highlights

The 1999 Statewide Strategy to Recover Salmon recognizes that most habitat protection and restoration initiatives are best implemented at the watershed level in partnership with local, tribal, and private entities, and with state and federal guidance and support. The Strategy also notes recovery plans that integrate habitat, hydropower, hatcheries, and harvest are best built collaboratively by local participants. During the present biennium (i.e., through June 2003), the focus for salmon recovery will be in continuing support for local salmon recovery activities, providing water for fish, and in completing the statewide comprehensive monitoring strategy.

PAIR OF PINK SALMON ON THE SPAWNING GROUNDS / PHOTOGRAPH © MANU ESTEVE

"Projects funded by the Salmon Recovery Funding Board demonstrate we can succeed in protecting and restoring salmon habitat and honor the needs of people, too."

WILLIAM RUCKELSHAUS
CHAIR, SALMON RECOVERY FUNDING BOARD, SEATTLE POST INTELLIGENCER EDITORIAL, JULY 25, 2000

Monitoring Results

Puget Sound Ambient Monitoring Program

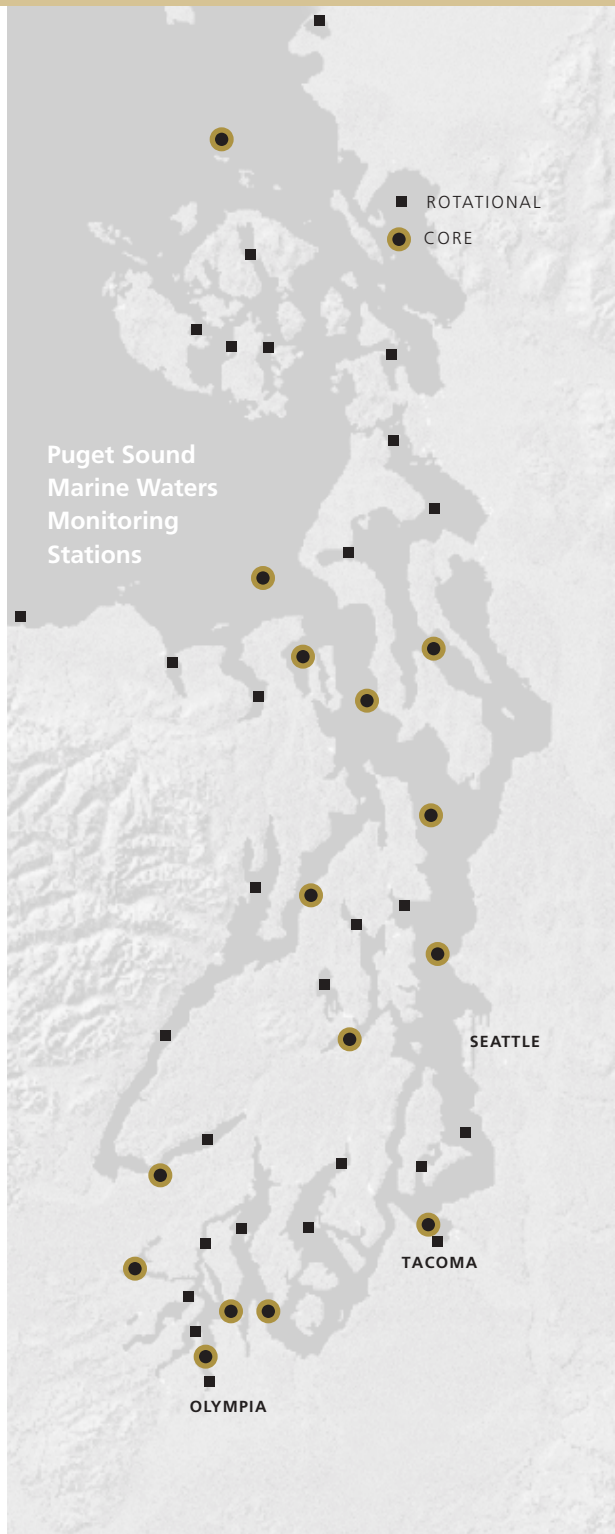
This interagency program managed by the Puget Sound Water Quality Action Team collects data from freshwater, marine water, and sediment quality monitoring stations. The data include contaminants in herring, rockfish and English sole; eelgrass distribution; and groundfish populations in the Strait of Juan de Fuca, Strait of Georgia, Rosario Strait, and more than 50 estuarine and nearshore marine assessment projects. This biennium, approximately 35 freshwater and 34 marine water stations will be monitored monthly, and 20 long-term sediment collection stations will be sampled annually. The Department of Ecology posts updated data on the agency web site, including a map of monitoring sites (right).

Salmon and Steelhead Habitat Inventory and Assessment Program

The state will expand this program. Data will be electronically displayed including salmon habitat and distribution information; Salmonid Stock Inventory (SaSI) assessments; and Salmonid Screening, Habitat Enhancement and Restoration (SSHEAR) fish passage barrier data. This information will be used with models to identify aquatic restoration and conservation needs and priorities. An electronic template for aquatic data storage also will be provided.

Comprehensive Monitoring Strategy

Responding to recommendations of the Independent Science Panel, the 2001 legislature established a committee to develop a statewide monitoring strategy and an action plan with an adaptive management framework. The plan will address watershed health with a focus on salmon recovery. Comprehensive monitoring will help those involved in salmon recovery know if they're making the right decisions and taking the most appropriate actions. Monitoring can help guide course corrections. Any necessary change in direction is called adaptive management, a fundamental principle in the Statewide Strategy. Federal, tribal and local government partners are part of this endeavor. The project will incorporate existing monitoring efforts and elements of previous salmon recovery efforts, such as the Statewide Strategy to Recover Salmon, the Salmon Recovery Scorecard and the Puget Sound Ambient Monitoring Program. The committee report is due in December 2002. It will identify steps needed to have the monitoring strategy fully implemented by June 30, 2007.



DATA SOURCE: WA DEPT. OF ECOLOGY

Providing Water for People and for Fish

Instream Flow Adoptions

Sixteen major water basins do not have enough water for fish. A strategic plan for setting instream flows through 2010 has been developed; the plan prioritizes where instream flows should be set for 2001-2003, and by 2010. The priority is based on the degree of urgency for flow setting, the readiness to proceed by local planning groups, information available, funding sources, and the dates by which instream flow recommendations are expected. A four-tier system was developed. Tier one has nine salmon watersheds that plan to have flows set in regulation or substantial progress made by June 30, 2003; twelve watersheds expect to have flows by 2005; and seven more expect to be set by 2010.

Creative Tools to Increase Stream Flows

A voluntary strategy to increase stream flows in 16 critical basins with vulnerable salmon and trout populations, this program will use many tools to acquire water rights to provide water for people and fish. Some, such as water leasing and purchasing, have been used; other more innovative measures, including water banking, auctions, and dry year leases, will be tested and employed where and when appropriate. A list and maps outlining priority watersheds, rivers, streams and stream reaches is being developed to identify where water rights acquisition efforts should be focused. Guidance for evaluating and selecting projects has been developed. The program will be implemented in the coming months through partnerships with key stakeholders, including watershed groups, conservation districts, tribes, federal agencies, and private organizations.

Update Water Code

The Department of Ecology plans to complete water resources policy studies (e.g., adjudication, water dispute resolution process) specified by the 2003 legislature. New legislation that would address important emerging issues such as municipal water rights and instream flows, exempt wells and stock watering, and relinquishment will also be evaluated.

Supporting Regional Salmon Recovery Planning

Regional Recovery Plan Model

Under leadership of the Department of Fish and Wildlife, state and federal agencies, tribes, the Governor's Salmon Recovery Office, and regional salmon recovery organizations have developed a regional recovery plan model. This model identifies the essential elements of a recovery plan, a document that will comprehensively define actions necessary to recover one or more salmon populations within a region.

Salmon Recovery Planning Grants

The Salmon Recovery Funding Board and Department of Fish and Wildlife are administering grants to help address one of the most pressing needs identified by regional groups. They will fund regional organizations to help integrate local, state, and federal recovery efforts. Five regional salmon recovery planning groups—Upper Columbia, Lower Columbia, Yakima Basin, Snake River, and Puget Sound—have been provided over $2 million, and additional money will be available to do watershed-scale activities that will assist the regional organizations as they develop their recovery plans.

Regional Water Initiatives

The Department of Ecology plans to complete the Central Puget Sound and Columbia River mainstem water initiatives. In the Yakima basin, they will pursue funding for additional storage and related fish passage and work on "use it or lose it" (relinquishment) issues through on-going mediation.

Watershed Planning

The Watershed Plan Implementation Committee's report to the legislature on implementation of watershed plans is due December 2002. It should help state agencies improve coordination between local watershed planning and salmon recovery efforts, support completion of local watershed plans, and identify important early actions for implementation. The Committee will present its report at a statewide conference in November 2002.

During the 2001-2003 biennium several legal cases could have a significant effect on how salmon recovery proceeds.

United States v. Washington, Civil No. 70-9213, Subproceeding 01-1 (W.D. Wash.) (Culverts/ "Phase II")

In January 2001, treaty Indian Tribes in Western Washington, joined by the United States, sued the State of Washington, claiming the state is violating the Tribes' treaty "right of taking fish" because some culverts underlying state highways and roads block fish passage.

The Tribes and the United States ask the court to say the treaties impose a duty to protect fish habitat, and the Tribes' ability to earn a livelihood from fishing is the standard by which this duty must be gauged. They further argue the treaties impose a standard of habitat protection that is higher than the standard imposed under the Endangered Species Act.

The parties have recently agreed to put the litigation on hold while they try to negotiate a settlement. One of the goals of the negotiations is development of a plan to identify and repair or replace all fish-blocking culverts owned by the federal government, the State of Washington, and the Tribes within much of western Washington. If negotiations are unsuccessful, discovery could resume as early as October 2002.

National Wildlife Federation v. NMFS, 01-640-GMK (D. Ore.) (Federal Columbia River Power System 2001 Biological Opinion Lawsuit)

A consortium of environmental and fishing groups is seeking review of a biological opinion ("2000 BiOp") issued by the National Marine Fisheries Service (NMFS) pursuant to the ESA. The 2000 BiOp addresses effects of operating the Federal Columbia River Power System (FCRPS) on 12 salmonid evolutionarily significant units (ESUs) listed as either threatened or endangered under the ESA. The FCRPS consists of dams, powerhouses, and associated reservoirs located on the Columbia and Snake Rivers that are operated by several federal agencies—the Bonneville Power Administration (BPA), the United States Army Corps of Engineers (Corps), and the United States Bureau of Reclamation (BOR)—called the "Action Agencies."

NMFS concluded that the Action Agencies' operation of the FCRPS is likely to jeopardize the continued existence of eight of the ESUs. NMFS therefore prescribed hydro actions and offsite mitigation actions for each adversely affected ESU that, if implemented, would not be deemed to jeopardize the species' continued existence and would allow the FCRPS to operate in compliance with the ESA.

The lawsuit argues that the 2000 BiOp violates the ESA by understating the risk of extinction these species face, by relying voluntary actions by private, state and other federal agencies, and by granting emergency exemptions that make many key measures optional.

For the past eight months, parties involved in the lawsuit—including Washington, Oregon, Idaho, Montana, the Northwest Power Planning Council, Columbia River Basin Tribes (Yakama Nation, Nez Perce Tribe, Warm Spring Tribes, and Umatilla Tribes), and various river user groups—have been engaged in court ordered mediation. A hearing is currently scheduled for February 2003.

Washington Trout and PEER v. WDFW, 02-CV-1221 (W.D. Wash.) (Tokul Creek Litigation)

Washington Trout and Public Employees for Environmental Responsibility sued the Washington Department of Fish and Wildlife (WDFW) for an alleged violation of ESA and state law due primarily to potential fish passage problems associated with an existing water diversion dam at the Tokul Creek hatchery. The parties are engaged in settlement discussions. WDFW is working with the Army Corps of Engineers to obtain assistance in eliminating any potential fish passage problems.

Muckleshoot Indian Tribe v. Ecology

The Muckleshoot Tribe is attempting to challenge an instream flow agreement entered into by the City of Seattle, Ecology, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service as part of the Cedar River Habitat Conservation Plan. The agreement is intended to ensure sufficient flows to protect listed salmon in the Cedar River. King County Superior Court dismissed the case on procedural grounds and the Court of Appeals, Division I affirmed. The case is still pending before the Court of Appeals on motions for reconsideration.

Methow Valley Irrigation District v. Ecology; Okanogan Wilderness League v. Ecology

These two cases have been consolidated before the Pollution Control Hearings Board and involve appeals of an Ecology order requiring the Methow Valley Irrigation District (MVID) to limit its water withdrawals. The order is based upon Ecology's authority to prevent violations of state water quality standards and to prevent the waste of water. While there are no specific salmon/ESA issues being litigated in this case, Ecology's actions follow upon significant litigation and negotiations between the NMFS and the irrigation district over salmon/ESA issues. One of the factors underlying both the actions by NMFS and Ecology is the impact of MVID's withdrawals on listed salmon.

Washington Trout and Native Fish Society v. WDFW

Washington Trout and the Native Fish Society have filed a 60-day notice of their intent to sue WDFW under the ESA in a lawsuit challenging the Puget Sound chinook hatchery operation as a whole. These groups allege the Puget Sound chinook hatcheries are being operated in violation of the ESA by directly taking adult salmon to collect eggs for the hatchery, placing juvenile hatchery fish in streams where they compete with wild juveniles, releasing genetically inferior hatchery fish to interbreed with wild fish, and by blocking upstream passage of adult fish at some facilities. On August 27, 2002, the WDFW submitted a Hatchery Genetic Management Plan (HGMP) to NMFS - Fisheries. NMFS will review the HGMP to decide whether or not the plan meets the standards for inclusion under the 4(d) Rule, which includes a limit for hatchery operations. Approval will result in the approved hatchery program being exempt from the ESA "take" prohibition.

> "We are really just starting the actions necessary to restore and sustain the salmon..."

WILLIAM RUCKELSHAUS
CHAIR, SALMON RECOVERY FUNDING BOARD
SEATTLE POST INTELLIGENCER EDITORIAL
JULY 23, 2000.

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