



Citizen Update

Salmon & Our Future

Fall 1999 • Issue 1

A Publication of the Federal Caucus, Columbia River Basin Fish Recovery

Threatened and Endangered Species

Twelve species of Columbia River Basin salmon and steelhead are listed under the Endangered Species Act.

T = threatened
E = endangered

○ Chum Salmon
Columbia River: T

□ Chinook Salmon
Snake River Fall: T
Snake River Spring/Summer: T
Lower Columbia River: T
Upper Columbia River Spring: E
Upper Willamette River: T

● Steelhead
Snake River Basin: T
Lower Columbia River: T
Middle Columbia River: T
Upper Columbia River: E
Upper Willamette River: T

★ Sockeye Salmon
Snake River: E

Also listed are these resident fish and snails:

Bull Trout:
Columbia River: T
(throughout the basin)

White Sturgeon
Kootenai River: E
(approximately 168 miles in the Kootenai River)

Snails
Snake River: E
(five species)

About This Update

This publication is intended to help Northwest citizens understand the many studies to be released this fall and winter on recovery of endangered and threatened fish and other aquatic species throughout the Columbia River Basin.

It is sponsored by the Federal Caucus, a group of nine federal agencies responsible for federal actions in the Northwest that affect salmon, steelhead, bull trout, white sturgeon and snails listed under ESA. The Caucus is coordinating federal planning with other regional recovery efforts, including those of states, Indian tribes, the Northwest Power Planning Council and the Columbia River Basin Forum. Further editions of this *Citizen Update* will describe study results and list dates and places of public meetings.

Public Meetings

The Federal Caucus will host public meetings January through March 2000. They will provide citizens throughout the basin an opportunity to learn more about the options being considered for recovery, and to make written and oral comments before final decisions are made (see page 2).

Columbia River Basin Fish Recovery

It is no secret to Northwesterners that salmon are in serious trouble. There are now 12 salmon and steelhead species in the Columbia and Snake rivers listed under the Endangered Species Act (ESA), and more may be forthcoming. Resident fish and other aquatic species are also listed.

Immediate and regionwide action is needed to reverse the declines of naturally spawning wild salmon, steelhead and other fish, and improve habitat. Though opinion is strong among Northwesterners that salmon should be protected, intense debate is focused on *how* to solve the problem. At the very center of this debate is the question of removing four federal dams on the lower Snake River. Other actions under study relate to improving ways to get migrating fish past the dams, protecting and improving salmon and other fish habitat in the rivers and many tributaries, and making changes in hatchery and harvest practices. These four factors that affect the life cycle of salmon are referred to as the Four Hs – habitat, hatchery, harvest and hydropower.

A Federal Caucus of nine agencies is working with regional tribal and state representatives to lay the groundwork for a unified and coordinated approach throughout the Columbia River Basin, to restore ESA-listed species and to achieve a healthier ecosystem. This fall and winter, the region will move a step closer to solutions when key scientific and analytical reports are published. This will set the stage for public meetings and comment periods in Washington, Oregon, Idaho, Montana and Alaska, January to March 2000, providing opportunity for public input on many facets of long-term salmon recovery decisions.

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Why Is Salmon Recovery Important?

- ▶ healthy watersheds and clean water mean ecological integrity of natural systems, important for our future economic, environmental and social health
- ▶ salmon have been part of the Northwest culture and food source for thousands of years
- ▶ healthy salmon runs provide tribal fishing opportunities that recognize tribal culture and treaty rights
- ▶ salmon and fisheries contribute to our economy and provide jobs
- ▶ the Endangered Species Act requires protection of native wild species

What You Can Do

The time frame for reviewing study results and shaping key recommendations for regional recovery plans will be now through March 2000. Here are ways to be involved.

To Learn More

Citizen Updates

This Update will give you an overall picture of what is happening.

- A second Update late this fall will provide a summary of the Federal Caucus Four-H Paper describing fish recovery options for the basin hydropower system, habitat, hatcheries and harvest practices.
- A third Update will provide more information about specific studies including the Lower Snake River Juvenile Salmon Migration Feasibility Study, the Biological Assessment of the Federal Hydropower System in the Columbia River Basin, the Interior Columbia Basin Ecosystem Management Project and others.

The second and third Updates will provide further information about upcoming public meetings.

Web Site and Requesting Report Drafts

You can learn more about these studies on agency Web sites (see page 8). Or you can go to www.bpa.gov/federalcaucus to see a list of these Web sites, find other links and see public meeting dates and places as they are scheduled.

To request copies of reports (available mid-December), call 1-509-358-7415, or write to the Federal Caucus, address below.

To Participate

Federal Caucus Public Meetings January to March 2000

These meetings, to be scheduled in locations throughout the basin, will provide citizens an opportunity to review and comment on options in all four areas of recovery, called the “four Hs”—habitat, hatcheries, harvest, hydropower. Each meeting will provide a time for people to:

- talk with study managers, ask questions and learn more about the issues and options
- view a presentation about recovery options
- give written or oral comments to be recorded and reported to decision-makers.

Since all key documents will be available by this time, these meetings will help participants learn about all parts of a multi-species recovery plan and look at how the parts can work together.

Both written and oral comments will be welcomed on the Corps of Engineers *Draft Lower Snake River Juvenile Salmon Migration Feasibility Report and Environmental Impact Statement (EIS)*. Also, comments on the *Four-H Paper* will be reported to the federal agencies that compose the Federal Caucus including the National Marine Fisheries Service and U.S. Fish and Wildlife Service for consideration in the biological opinions and recovery plans for listed species. A report on the public meetings will be available to the public, members of Congress and any interested parties.

Note: Meeting dates and places to be scheduled. Watch for future *Citizen Updates* for more information on these public meetings and others related to specific documents, or check the Web site: www.bpa.gov/federalcaucus

To Make Written Comments

Comments To The Federal Caucus

Written comments can be made to the Federal Caucus regarding any of the options in the Four Hs: habitat, hatcheries, harvest, hydropower. Comments received now through March 2000 will be included along with comments made at the public meetings described above and reported to all the member agencies of the Caucus.

By mail: **Federal Caucus Comment Record, c/o BPA-PL**
707 W. Main St., Suite 500
Spokane WA 99201

By email: federalcaucus@bpa.gov

“For centuries, the muscular fish whose life flashes between woodland streams and ocean depths has embodied the bold health and vitality of the Pacific Northwest.”

-Theresa Novak, from “A Snapshot of Salmon in Oregon, 1998”

PERSPECTIVES

...a sustainable economy that works for salmon, people and the future

-Tim Stearns, Save Our Wild Salmon



Columbia River Basin



From *Rivers to Ocean: The Columbia River Basin* drains an extremely diverse geographic area, from mountain peaks that bear snow year-round, to sea-level tidal flats where the Columbia meets the Pacific Ocean. In between are deserts, forests, farmlands, towns and cities.

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The Columbia River Basin collects water from hundreds of mountain streams into four U.S. rivers—the Snake, the Kootenai, the Clark Fork-Pend Oreille and the Willamette Rivers. These feed into the mainstem of the Columbia River which eventually empties into the Pacific Ocean. Covering 219,000 square miles in seven western states—Washington, Oregon, Idaho, Montana, Wyoming, Nevada and Utah - the basin also takes in 39,500 square miles in British Columbia. That’s a total area roughly the size of Texas.

Decline Of Fish and Habitat In The Basin

It is estimated that before the 19th century influx of large human populations and development, between 10 million and 16 million adult salmon and steelhead returned to the

Columbia River each year. Today, about one million adult salmon return, and 80 percent of these are salmon reared in hatcheries.

The decline in fish and their habitat in the Columbia River Basin has coincided with rising human populations and development in the last 150 years, bringing progress to communities, but at no small cost to the basin’s natural ecosystem. Harnessing the basin’s rich resource has brought abundant and cheap electrical power for homes and businesses; turned desert areas into productive land that provides food, jobs and export commodities; created a water highway in the Columbia River Basin for bringing wheat, barley and other products downstream and supplies back upstream to the inner reaches of Oregon, Washington and Idaho; provided flood control for river communities and irrigation for agricultural land; and supported recreational opportunities including boating, wind surfing, hiking, camping and fishing.

However, this development has also caused extensive environmental problems and habitat degradation throughout the basin, and brought intense commercial fish harvesting. Some juvenile fish are injured or killed in their passage through powerhouse turbines at dams. Hatchery fish releases have expanded. Watershed development has included agricultural practices, timber harvest and road construction that affect water quality and quantity.

Also, although not necessarily a result of development, ocean conditions including currents and temperature changes, can affect salmon survival by decreasing food production and increasing predator population.

Anadromous Fish

Salmon and steelhead are *anadromous* fish. This means they are born in fresh water, migrate downstream to the ocean where they mature in saltwater, and then return to their original freshwater birthplace to spawn.

Depending on the species, these fish may range thousands of miles during a four- or five-year life span, without regard to federal, state, tribal or international boundaries or management practices. Because the salmon’s habitat is vast and varied, from high mountain streams to the ocean, protecting and restoring it is especially complicated and difficult.

Resident Fish

Rivers and reservoirs in the basin are also home to *resident* freshwater fish, such as trout and sturgeon. They do not migrate to the ocean, but may migrate to some extent through freshwater territory. Human development has altered their habitat too. Some floodplains and streamside habitats important to wildlife were covered when reservoirs behind dams filled with water. Development in watersheds has affected water quality of many formerly pristine tributaries, also home to resident fish.

The Endangered Species Act Steps In

The Endangered Species Act (ESA) is a federal law passed in 1973 to protect species of plants and animals from impacts of human actions. Under the ESA, species can be listed as *endangered* – in danger of extinction, or as *threatened* – likely to become endangered.

The National Marine Fisheries Service (NMFS) has authority over marine fish (including anadromous fish) and marine mammals, while the U.S. Fish and Wildlife Service (FWS), has authority over all other species.

Any federal agency whose proposed actions may affect a listed species or its habitat must assess the potential impacts of those actions, in a document called a **biological assessment**, or **BA**. The “action agency” must consult with NMFS and/or FWS, which then issues its **biological opinion**, or **BO**, stating whether the proposed actions will jeopardize the continued existence of the species. This BO may contain “reasonable and prudent” actions needed to avoid jeopardy.

ESA listings of Snake River salmon in 1991-92, and subsequent listings of additional salmonids (salmon and steelhead) in the Columbia and Snake Rivers, set in motion the federal consultation process. This eventually led to the 1995 BOs from NMFS and FWS, a 1998 supplement to the NMFS BO, and a pledge of a 1999 decision on how the Federal Columbia River Power System should be operated and configured to protect fish, with a focus on the future of the four federal dams on the lower Snake River.

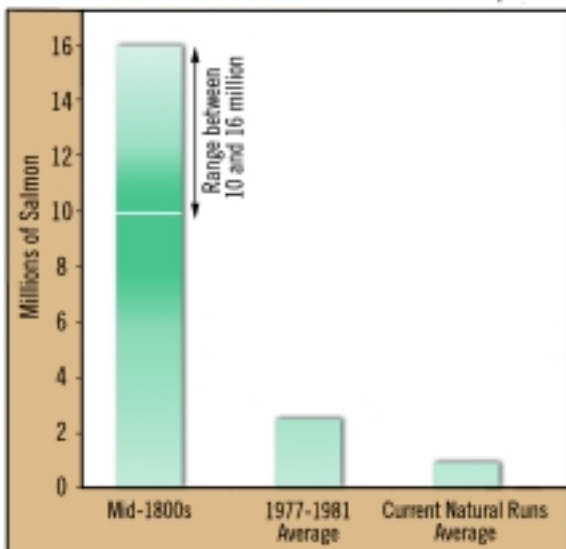
The agencies realized that actions beyond those in the hydropower system must also be considered to recover listed salmon and other species. Those actions include improvements in habitat, harvest and hatchery management. To ensure a coordinated approach to analyzing all opportunities for improvement in all Hs, the Federal Caucus was formed and began work on a “Four-H Paper.”

PERSPECTIVES

“Protecting and recovering endangered salmon and maintaining the economic viability of the Northwest are not mutually exclusive.”

-Mark Dunn, J.R. Simplot Company

Northwest Salmon Runs: An Historical Perspective



Data courtesy of the Northwest Power Planning Council

What is the Four-H Paper?

Recovery of ESA-listed fish will require changes in the way people affect fish in each stage of their life cycles: habitat, hatcheries, harvest, and hydropower system. Decisions about the hydro system, whether they involve breaching dams or making further changes in river operations, will need to be presented in the context of how they fit with the other three Hs to be meaningful.

The federal and regional partners are describing and analyzing recovery options across the salmon life cycle that involve all four Hs. These options are broadly described, to engage a regional discussion.

The measures in each “H” will vary depending on the companion measures in the other Hs. This is important in several respects. It means the agencies are taking a “whole system” perspective, ensuring that hydropower improvements, in combination with other factors that affect fish, achieve the desired results.

The *Four-H Paper* will clarify these potential trade-offs. The bottom line is this: the region is working to find the right combination of measures, including improving fish passage at dams, restoring healthy watersheds and clean streams, applying new scientific discoveries to hatchery operations, and negotiating and monitoring harvest, to ensure salmon runs regain their strength. Actions in each H are critical to recovery.

Goals for Recovery

These goals are expressed by the Federal Caucus in the *Four-H Paper* and generally reflect the goals of the regional partners:

Conserve Species: Avoid extinction and foster long-term survival and recovery of Columbia Basin salmon and steelhead, and other aquatic species. Protect and restore abundant, productive, widely distributed, and biologically diverse naturally spawning populations. Foster recovery to levels that can withstand reasonable harvest, the impacts of continuing human activities, and a range of climatic and ocean conditions.

Conserve Ecosystems: Conserve the ecosystems upon which salmon and steelhead depend. Protect and restore ecosystem processes that create high quality habitat (tributary, estuary, mainstem) and protect and restore high water quality for spawning, rearing and migration.

Assure Tribal Fishing Rights: Restore salmon and steelhead populations, over time, to a level that provides a sustainable harvest sufficient to allow for meaningful exercise of tribal fishing rights. Until these restoration levels are achieved, provide tribal fishing opportunities that respect tribal culture and recognize treaty rights.

Balance the Needs of Other Species: Ensure that salmon and steelhead conservation measures are balanced with the needs of other native fish and wildlife species. Ensure the long term persistence of self-sustaining, complex interacting groups of resident fish and other aquatic and wildlife species across their native ranges.

Minimize Adverse Effects on Humans: Implement salmon and steelhead conservation measures in ways that minimize their adverse human effects.

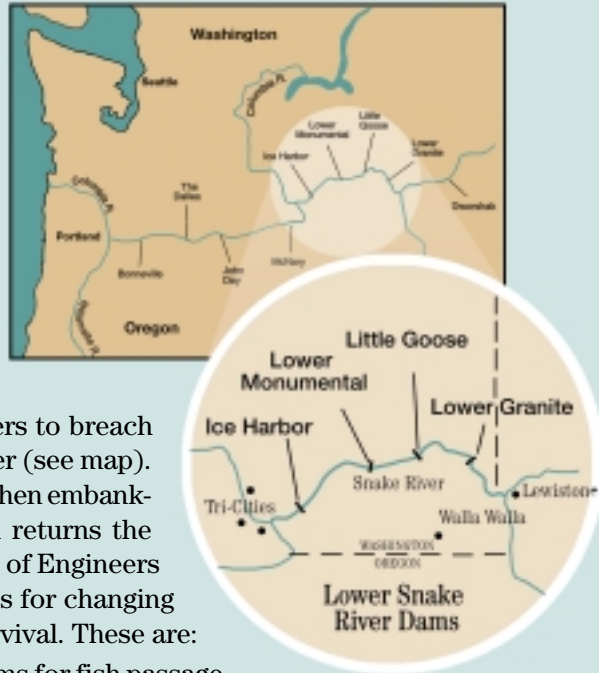
The Lower Snake River Dams

A difficult and controversial option is an alternative under study by the Corps of Engineers to breach four dams on the lower Snake River (see map). Breaching means removing the earthen embankment portion of the dams, which returns the river to its natural level. The Corps of Engineers is analyzing four major alternatives for changing the dams for improved salmon survival. These are:

1. maintain the existing systems for fish passage, with planned improvements
2. maximize juvenile fish transport, barging or trucking as many fish as can be collected
3. make major system improvements such as surface bypass systems for juvenile fish
4. breach the dams to restore a free-flowing 140-mile stretch of river.

The *Four-H Paper* is considering similar options for the Snake River dams, and looking at dam breach in the context of companion measures addressing other hydro choices and options for habitat, harvest and hatcheries. The *Four-H Paper* also considers the possibility of deferring a decision on whether to breach these dams, if the science is too incomplete at this time to justify major changes to the hydropower system, or if it seems likely the fish runs could be restored through other measures.

Whatever the outcome of the Corps study, breaching the dams would require Congressional authorization and funding and would take seven to eight years to complete. Interim measures, in any case, are a high priority.



The Four



HYDROPOWER: The Corps of Reclamation operates thousands of power projects in the Columbia River Basin. The Bonneville Power Administration operates various projects. Congress authorizes projects for various uses, including power, irrigation, water supply, and flood control. There are also many nonfederal projects.

Dams create barriers to salmon upstream to spawning and rearing areas, and for juvenile nook salmon once traveled as many as 1,200 miles to reach headwaters in Canada. About one-third of all salmon habitat is blocked by a few dams that do not allow fish passage.

Even dams that provide passage systems are a hazard downstream. The reservoirs that back up behind the dams alter the river's flow, temperature, and provide habitat for fish predators. The reservoirs also change the river's chemistry and may have adverse effects on the physiological processes of fish. Fish that change to adapt from a freshwater to a saltwater environment are often injured or killed when they pass through dam turbines or spillways.

The salmon and steelhead that migrate from the upper Snake rivers must pass as many as eight or nine dams on the lower Snake River and return.

One solution now used is mechanical bypass systems that include screens to divert juvenile fish into special conduits upstream or around the dam. Juvenile fish are also collected at some dams, trucked and released below the dams. Increased spill is also used to pass fish away from turbines and over the spillways. Flows are increased from storage dams during juvenile migration seasons.

After maturing in the ocean for one to four years, adult fish return to their original habitat to spawn. Fish ladders have been built to help fish to get past them.

- Options** >
- Option 1:** Continue present operations and ongoing improvements to maintain roughly the existing annual level of investment and investment in dam passage survival.
 - Option 2:** Implement measures such as surface bypass systems to increase dam passage survival. Federal agencies will require more aggressive implementation of measures to improve dam passage survival.
 - Option 3:** Breach the four federal dams on the lower Snake River.



HATCHERIES: Hatcheries enhance fish runs depleted by harvest. Fish hatcheries have been used for many years as mitigation for depleted runs. Federal and state hatcheries. Today, more than 80 million fish are raised in hatcheries. The Columbia River Planning Council is focusing on policies, operations, and funding of fisheries management.

will be incorporated in the *Four-H Paper*.

In hatcheries, adult fish are artificially spawned and the juveniles essentially replace natural freshwater rearing for salmon. Juvenile fish are reared in ponds or raceways until they are released directly from the hatchery; a small proportion of hatchery fish migrate to the ocean where they were released. Hatchery fish migrate to the ocean where they were released.

Some scientists now believe that hatcheries have weakened the Columbia Basin. Juvenile wild salmon and steelhead caught in hatcheries are released into the same river habitat. Hatchery fish caught in hatcheries tend to weaken the gene pool of wild fish. Hatchery fish population to survive a natural disaster or disease.

- Options** >
- Option 1:** Includes currently planned programs to conserve genetic resources in mitigation programs.
 - Option 2:** Increase programs to conserve genetic resources in currently planned improvements in mitigation programs.
 - Option 3:** Increase programs to conserve genetic resources in mitigation programs below currently planned levels.

Hs : Issues & Options for Fish

of Engineers operates 12 and the Bureau of
o of the 14 major Columbia River hydro-
Federal Columbia River Power System.
nistration markets the power from these
rized the federal dams and reservoirs for
power generation, flood control, navigation,
y, fish and wildlife, and recreation. There
l hydro dams in the Northwest.

on and steelhead migration, for adult fish migrating
fish swimming downstream to the ocean. Chi-
h spawning sites in the Columbia River's
at in the Northwest has been blocked

d to young salmon migrating
alter river flows and tempera-
increase fish migration time,
s through which young fish
ment. Juvenile fish can be
their journey downstream.
er parts of the Columbia or
their journey to the ocean

nstalled at some dams. These
that "bypass" the fish through
e dams for transport by barge or
o used at the dams to divert more
re augmented by release of water

ult fish migrate back upriver to
ilt into the dams to allow adult

g improvements to the system, with
inuing into the future.

pass systems for juvenile fish, to in-
ould seek increased funding to pursue
rove passage survival.

r Snake River

were first built in the basin in the 1870s to
ed by overfishing. More than 80 anadromous
t built by federal and state governments and
hydroelectric development and habitat de-
ate agencies and tribes operate the hatcher-
percent of the basin's salmon and steelhead
In 1997, Congress asked the Northwest Power
sweeping review of the region's hatcheries,
rations and their role in the broader context
This review includes recommendations that

e eggs are incubated until they hatch. Hatcheries
on and minimize mortality at this life stage. The
y are ready to migrate. Most juvenile fish are then
are transported and released in streams at other
ey mature. Those that survive will return to the

contributed to the decline of wild salmon in the
mpete for food and shelter with hatchery fish that
an attract predators and carry disease, and hatch-
Loss of genetic diversity decreases the ability of a

nserve genetic resources and currently planned improvements

sources over the currently planned programs, with the same
rams.

sources, as described in Option 2, and significantly decrease

HABITAT: The U.S. Forest Service and Bureau of Land Management manage more than 50 percent of spawning and rearing habitats for salmon and steelhead in the Columbia River Basin. Other public lands are managed by state, local and tribal entities.

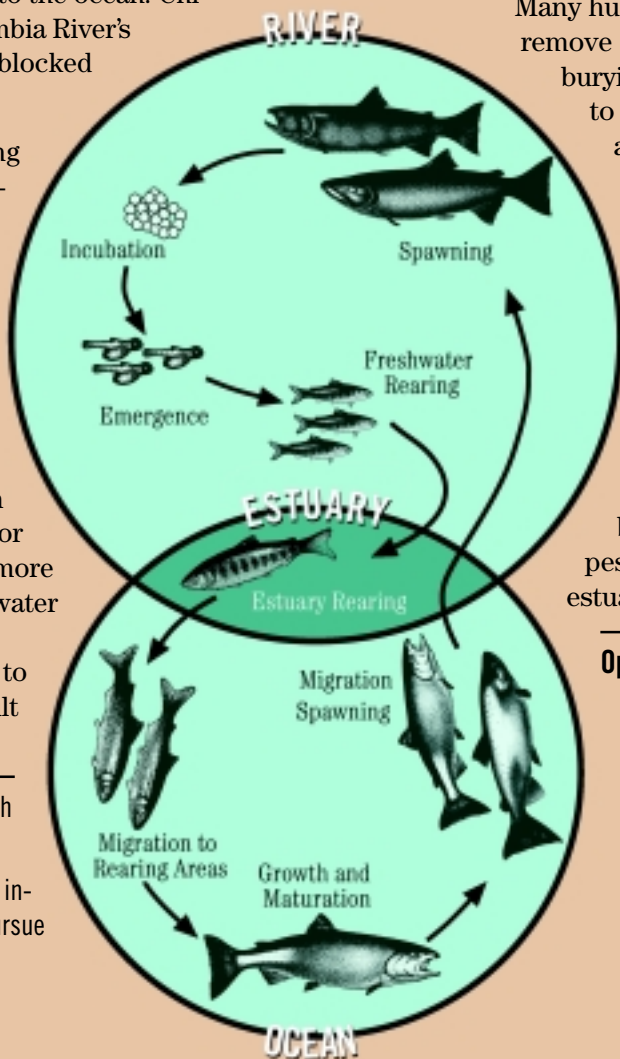
The habitat required by salmon and steelhead varies with their life cycles, but it always includes clean, cool water. Overhanging trees provide shade to keep the water cool. For spawning and the survival of eggs, fish need clean, silt-free gravel so water can circulate. After hatching, young fish need pools to rest in, overhanging vegetation to provide places to hide from predators, and plenty of food, like insects and larvae.

Many human activities can degrade and destroy fish habitat. Logging and road building can remove shade trees and increase sediment in the water, raising water temperatures and burying spawning gravels. Heavy livestock grazing destroys streamside vegetation, leading to bank erosion, sedimentation and higher water temperatures. Manure, pesticides and agricultural runoff have contaminated lakes, streams and rivers near farm communities.

Low flows can strand fish or cause water temperatures to rise, increasing risk of disease and death. Irrigation withdrawals can further reduce streamflows in the summer when they are already low, reducing quality and quantity of habitat, and inhibiting juvenile fish migration downstream. Unscreened irrigation ditches can divert migrating fish into dead-end ditches. Irrigation return flows can increase water temperature, sediment loading of streams and pollution.

Mining can result in lethal acid or heavy metal contamination of waters. Placer or dredge mining can destroy spawning gravels and pools where fish live.

Urban runoff from residential and industrial development can contaminate bodies of water through increased organic materials, like sewage, or household lawn pesticides washing into streams. As development moves out into new areas, wetlands, estuaries and streams that nourish fish and wildlife disappear.



Options ➤ These options assume the federal land management agencies will continue to pursue their current programs and will continue to consult on those programs under the ESA.

Option 1: Moderate increases in efforts to protect and restore habitat, a measurable increase in federal action and coordination, and increased habitat assessments and planning efforts using federal funds.

Option 2: State, tribal, local and federal entities would significantly increase level of coordination, planning and habitat implementation. There would also be an increase in federal funding for habitat assessments, plans, immediate actions, and monitoring.

Option 3: Similar to option 2, with increased regulation by the federal agencies under the Clean Water Act and ESA. This option would be implemented if the region cannot develop a coordinated plan with state and local governments.

HARVEST: Since the 1960s, state, federal and international fishery managers have been cutting harvest rates to protect salmon runs. Commercial and recreational fishing is regulated by a series of state and federal regulations and court decisions regarding treaty rights. Harvest has been shaped by decades of negotiations between the United States and Canada and by extensive litigation that has involved ocean, in-river and treaty fisheries.

Historically, overfishing has contributed to declines in fish populations. Fish are caught in the ocean by commercial fishing operations, using hooks and line trolling. Commercial fishing also takes place in the lower Columbia River using gillnets. Native American tribes of the region have treaty rights to catch salmon for their own use, for sale and for cultural and religious ceremonies. Sportfishers catch salmon in the ocean, mostly from charter boats, and many more salmon are taken when they migrate up the rivers. Steelhead, caught primarily in the rivers, are considered a prize sport fish.

Because hatchery fish intermingle with wild fish, harvest rates set based upon abundance of hatchery fish may result in overharvest of weaker stocks of wild fish. However, harvest management has in recent years taken this into account.

Options ➤ The following options presume that the beneficial harvest reforms of recent years will continue.

Option 1: Implement recent Pacific Salmon Treaty agreements. For in-river fisheries, harvest rates are constrained to 1999 levels, but may increase modestly if populations of listed fish increase.

Option 2: Implement recent Pacific Salmon Treaty agreements and continue the in-river harvest constraints developed for 1999. The 1999 in-river harvest rates would continue until recovery goals are achieved.

Option 3: Harvest impacts on listed populations would be reduced to conservation crisis levels for ten years, after which shift to option 1 or 2.



HABITAT



HARVEST

"The salmon fisheries of this state have, in the past, been wonderfully productive. Of late, however, evidence of a decrease in the run is apparent, and all are agreed that something ought to be done to prevent the final extinction of a great industry."

-John R. Rogers, Governor of Washington, 1899



Courtesy of the Northwest Power Planning Council

Who Has a Role in Recovery of Listed Species?

The fish and wildlife problems in the Columbia River Basin cannot be solved by one government, state or community. Recovering species in this large region requires a commitment to cooperation. All major government entities are working together to develop a coordinated multi-species management plan. Here are the major parts of this effort:

Native Americans

Northwest Indian tribes fished the streams and rivers of the Columbia River Basin for thousands of years, and their culture reflects respect for water, fish and wildlife resources. In 1855, four Columbia River tribes signed treaties giving the U.S. government control of more than 40 million acres of the Northwest. In those treaties, the tribes reserved their right to fish in their usual and accustomed fishing areas. Other tribes have treaties or executive orders that recognize their sovereignty. Tribal leaders are concerned that the loss of salmon runs means a loss of cultural practices that have focused on salmon as spiritual and physical nourishment. Tribal rights include fishing for subsistence, for sale and for cultural and religious purposes.

There are 13 federally recognized Indian tribes in the United States portion of the basin affected by the Columbia River power system. They are: the Confederated Tribes of the Colville Reservation, the Confederated Tribes of the Umatilla Reservation, the Confederated Tribes of the Warm Springs Reservation, the Yakama Nation, the Nez Perce Tribe, the Spokane Tribe of Indians, the Coeur d'Alene Tribe, the Kalispel Tribe of Indians, the Kootenai Tribe of Idaho, the Salish-Kootenai Tribes of the Flathead Indian Reservation, the Shoshone-Bannock Tribes of the Fort Hall Reservation, the Burns-Paiute Tribe and the Shoshone-Paiute Tribes of the Duck Valley Reservation.

How Might Recovery Plans Affect People?

Recovery plans will cover all facets of managing a healthy ecosystem and may require changes that are potentially disruptive to some uses. Farmers and ranchers, barge operators, hikers, fishers, and hunters, electricity providers and consumers, and more, depend upon the bounty of regional resources.

Many people have multiple interests and a majority support both a healthy economy and environment. Together, they want to see abundant and harvestable fish and wildlife stocks, a strong economy and jobs in the Northwest, regulators and government that keep taxes and power rates as low as possible, and a Northwest ecosystem that is healthy and productive, sustaining natural resources for many generations into the future.

Federal Caucus: To prepare for ESA consultations and to ensure coordination with regional processes related to all Four Hs – hydropower, habitat, hatcheries and harvest – the nine federal agencies with responsibilities for some aspect of fish and wildlife recovery formed a caucus which includes:

- **ESA Regulatory Agencies – National Marine Fisheries Service, U.S. Fish and Wildlife Service.** NMFS and FWS make listing decisions under ESA and prepare recovery plans for listed species. The federal agencies that own and operate the hydropower system and manage federal lands in the Columbia River Basin are required to consult with NMFS and FWS on actions that may affect listed species.
- **Federal Columbia River Power System Action Agencies** – The federal agencies that own and operate the federal hydropower system, called the “action” agencies – **Bonneville Power Administration, Corps of Engineers and Bureau of Reclamation** – are required to prepare a biological assessment of how they propose to operate the dams and how these actions will affect ESA listed species.
- In addition, the **Environmental Protection Agency** is responsible for enforcing the Clean Water Act; **U.S. Forest Service** and **Bureau of Land Management** manage public forest and range lands that may provide critical habitat for listed species; **Bureau of Indian Affairs** acts as a trustee for tribal/individual Indian land and resources held in trust.

Tribes: Indian tribes in the Columbia Basin represent sovereign entities with management authorities for fish, water and wildlife resources within their reservations, as well as various legal rights expressed in treaties and executive orders.

States: Washington, Oregon, Idaho and Montana have authorities over fish, wildlife and water resources within their jurisdictions. In particular, water quantity and quality issues fall under state authorities pursuant to the Clean Water Act, Safe Drinking Water Act and state water rights laws. Several states have developed their own management and recovery plans for fish and wildlife resources of the Columbia River ecosystem. State water resource agencies control how much water is withdrawn from streams and reservoirs for irrigation, municipal and industrial water supply and other purposes.

Northwest Power Planning Council: The four states also appoint the members of the Northwest Power Planning Council. The council develops a Fish and Wildlife Plan that the federal action agencies take into account in their planning.

The council also makes recommendations to the Bonneville Power Administration on distribution of ratepayer funds to fish and wildlife programs in the basin.

Columbia River Basin Forum: The Forum includes representatives from the four states, Columbia River tribes, and the federal government. Its purpose is to provide a forum to address, collaborate on, and coordinate basin level planning and policy for fish and wildlife and related habitat.

Local Governments: Counties and cities throughout the region are also developing action agendas to aid recovery of listed species. Urban development and construction projects that range from highway expansions to marina dock repairs must consider effects on listed species.

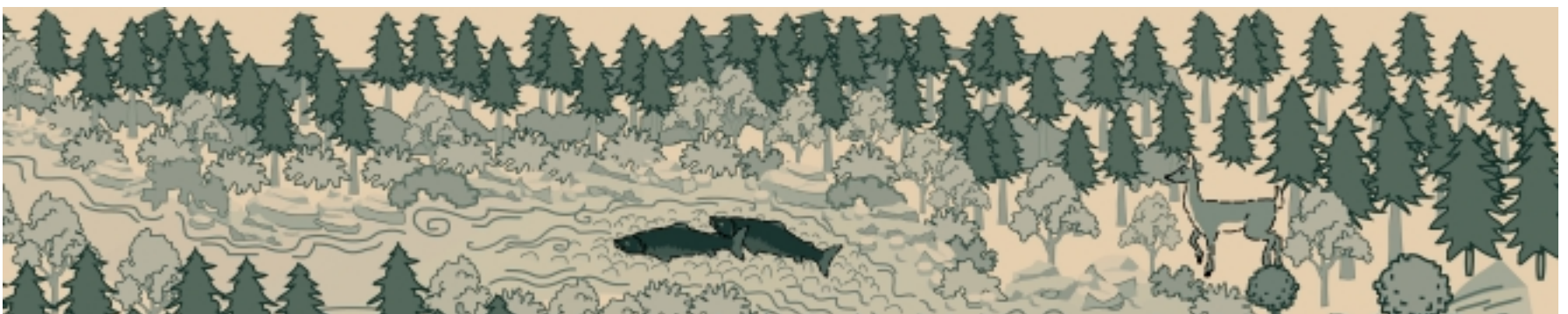
Citizens, Landowners, Businesses, Institutions: Over the past several decades, new awareness about the problems of watersheds and wildlife has resulted in hundreds of local restorative actions. Private and public partnerships have been formed in watershed councils. School programs have brought kids into the recovery process. Local businesses have pitched in with their own efforts.

PERSPECTIVES

“...a healthy Columbia River Basin, one that supports both human development and the long-term sustainability of native fish and wildlife species in native habitats, where possible.”

-NWPPC, Fish and Wildlife Program Overview, 1994

Courtesy of King County Department of Natural Resources





What Happens Next?

REPORTS ▶ A series of documents (described below) that analyze recovery options will be released this fall and winter for public comment and review.

PUBLIC INPUT ▶ In January to March 2000, public meetings will be held around the region, dates and places to be announced in further issues of this Citizen Update.

DECISIONS ▶ The “action” agencies - Bureau of Reclamation, Corps of Engineers and Bonneville Power Administration, will make final recommendations; NMFS and FWS will issue biological opinions in time for some of the hydropower options to be applied to spring migration of salmon; and action agencies make their operating decisions.

IMPLEMENTATION ▶ Then it’s the long haul – beginning the process of implementing these policies in the years ahead for all four Hs – hydropower, habitat, hatcheries, harvest.

The goal of the Federal Caucus is to participate in a coordinated decision-making process in which the entire region can build solutions to recover listed species. This process will be open and accessible to the public, so the thoughts and views of Northwest citizens can be considered in decisions.

Decision Tools And Documents

Endangered Species Act Federal Documents

Federal Columbia River Power System

Biological Assessment

Descriptions of how the three federal action agencies propose to operate the Federal Columbia River Power System dams, and their assessment of effects on fish and other aquatic species listed under ESA. This assessment takes into consideration information from other related studies.

Agencies:

U.S. Army Corps of Engineers
Bonneville Power
Administration
Bureau of Reclamation

Timetable:

✓ January 2000

Public Input:

Not required, but comments received will be reported to NMFS and FWS for consideration in preparing their Biological Opinions.

Biological Opinions

Response to the Biological Assessment, either agreeing with the proposed actions or if not, outlining alternative measures.

NMFS writes opinion on salmon and steelhead.

FWS writes opinion on Kootenai River white sturgeon, bull trout, and five species of Snake River snails.

Agencies:

National Marine Fisheries Service
U.S. Fish & Wildlife Service

Timetable:

✓ May 2000

Related Federal & Regional Documents

The following studies will contribute to the development of a basinwide management plan for recovering fish and wildlife. NMFS and FWS will also consider them in final biological opinions on the hydropower system.

Conservation of Columbia Basin Fish

The Four-H Paper: Habitat, Hatcheries, Harvest, Hydropower

A conceptual document that explores alternative actions needed to recover ESA-listed species in the basin, organized around four factors that affect the life-cycle of salmon. Consolidates information from the Framework report (below).

Agencies:

Federal Caucus of nine agencies with NMFS taking the lead

Timetable:

✓ Available in December 1999

Public input

Public meetings and comments, January to March 2000

Lower Snake River Dams

Lower Snake River Juvenile Salmon Migration Feasibility Study & Environmental Impact Statement (EIS)

Feasibility study and EIS of alternatives for four lower Snake River dams for improved salmon migration. The options include 1) maintain existing system with planned fish passage improvements; 2) maximize juvenile fish transport by barge or truck; 3) make major system improvements such as surface bypass systems for juvenile fish; 4) breach the dams to restore free-flowing 140-mile stretch of river.

Agency:

U.S. Army Corps of Engineers

Timetable:

✓ Draft – December 1999

✓ Final – Summer 2000

Public input:

Public meetings January to March 2000
Comment period: through March 2000

Interior Basin Habitat

Interior Columbia Basin Ecosystem Management Project (ICBEMP) Supplemental Draft EIS

The ICBEMP is developing an ecosystem-based strategy for the management of Forest Service and Bureau of Land Management administered lands in the Columbia River Basin. The Supplemental Draft EIS addresses broad-scale issues of forest and rangeland health, socio-economic factors and aquatic and riparian health. The aquatic component of this strategy will provide guidance on the management of important aquatic habitat for 72 million acres of federal land in eastern Oregon and Washington, Idaho, and Montana.

Agencies:

Forest Service
Bureau of Land Management
U.S. Fish and Wildlife Service
National Marine Fisheries Service
Environmental Protection Agency

Timetable:

✓ Supplemental Draft EIS – Winter 2000

✓ Final EIS – to be determined

Public input:

Public meetings - late winter, early spring
Comment period - 90 days

Regional Framework

Multi-Species Framework Project

Describes the structure and components of the Columbia River ecosystem, and the biological, economic and social effects of a range of general recovery management approaches. Provides an analytical base for the Four-H Paper (see above).

Agencies:

NW Power Planning Council in association with Columbia River Basin Forum, a coalition of states, tribes and federal government

Timetable:

✓ Preliminary Report – December 1999

✓ Final Report – January 2000

A Time to Decide

*A Publication
of the Federal Caucus,
Columbia River Basin
Fish Recovery*

Federal Caucus Comment Record
c/o BPA-PL
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Spokane, WA 99201

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Above photo, and several interior, courtesy of the Seattle Aquarium.

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P E R S P E C T I V E S

"We did not inherit this earth or its natural resources from our ancestors, we are only borrowing them from our children's children; therefore, we are duty bound and obligated to protect them and use them wisely until such time that they get here, and then they will have the same obligations."

-Eugene Greene, Sr., Warm Springs

For more Information:

For information or copies of reports:

Call 1-509-358-7415, write to Federal Caucus Comment Record c/o BPA-PL, 707 West Main Street, Suite 500, Spokane, WA 99201, or go to the Federal Caucus Web site.

Federal Caucus Web site:

www.bpa.gov/federalcaucus

What you can find on this Web site:

- **Citizen Updates** as available
- Public meeting dates and locations
- Links to agencies, reports and further information about recovery

In addition, the following Web sites provide further useful information:

Lower Snake River Juvenile Salmon Migration Feasibility Study: www.nww.usace.army.mil

Interior Columbia Basin Ecosystem Management Project: www.icbemp.gov

NMFS Salmon Information: www.nwr.noaa.gov

Science Information: www.nwfsc.noaa.gov/cri, www.nwfsc.noaa.gov/pubs/nwfscpubs.html

Multi-Species Framework: www.nwframework.org

Next Issues of this Citizen Update


#2 - A summary of the Four-H Paper

#3 - An overview of the other documents released

All issues will keep you updated on public meetings as they are scheduled.

Provided By:

The Federal Caucus: National Marine Fisheries Service, U.S. Army Corps of Engineers, Bonneville Power Administration, Environmental Protection Agency, Bureau of Reclamation, Fish and Wildlife Service, Bureau of Indian Affairs, Bureau of Land Management and Forest Service.



Science: How it works toward recovering endangered fish

Science can help us better understand the needs of salmon throughout their life stages. The scientific approach to the recovery of fish and wildlife involves biology, ecology and other related sciences, and a range of models for exploring data, identifying key risk factors and evaluating management options. If you would like to learn more about relevant research efforts visit the Web sites listed on this page.

Some small illustrations are courtesy of King County Department of Natural Resources