



*Striking a Balance Between Energy and the Environment in the Columbia River Basin*

## Subbasin Plans, Intended to Implement the Council's Fish and Wildlife Program, Are Proving Useful in Other Ways, Too



From urban downtown Portland to rural northern Idaho and western Montana, subbasin plans are proving unexpectedly useful in environmental restoration activities.

Subbasin plans are intended to guide future implementation of the Northwest Power and Conservation Council's Columbia River Basin Fish and Wildlife Program. Increasingly, however, the plans' detailed information about watersheds, environmental conditions and fish and wildlife species is providing the rationale or scientific support for projects outside the Council's program.

Doug Marker, director of the Council's Fish and Wildlife Division, sees this as a positive development in efforts to rebuild fish and wildlife populations and improve habitat in the Columbia Basin, as the

plans are helping to diversify projects and funding. Using the plans in this way is a compliment to the fish and wildlife agencies, Indian tribes, watershed councils and others who worked for nearly two years to develop the plans, Marker said, as it demonstrates the plans are considered thorough and credible.

Subbasin plans were completed in 2004 and adopted by the Council into the fish and wildlife program that year and in 2005. The 57 plans address Columbia and Snake river tributaries and sections of the mainstems of the rivers. Each plan includes an assessment of environmental conditions including the status of fish and wildlife populations, a history of past actions to improve those populations and their habitat, and a management

*(continued on page 2)*

## What's Inside

Independent Scientists Recommend Ways to Improve Decision-making	3
Puget Sound Energy's Latest Wind Project Adds to the Region's Renewables	4
Federal Judge Gives NOAA Fisheries One Year to Write a New Biological Opinion	5
Science Board to Review Court-Ordered 2005 Spill Operations	5
NW/Q&A: Gary Loomis, Founder of Fish First	6
Success Stories – StreamNet Library	9

## Notes from the CHAIR

Melinda Eden



For 25 years, the Northwest Power and Conservation Council has been a steady advocate for conservation in the region's energy planning. Over the course of two decades, electricity demand has been reduced in the region by over 2,800 average megawatts through conservation measures—that's enough energy to power two cities the size of Seattle.

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## Council Decisions

### 2006 Fish and Wildlife Program Budget Approved

August

The Council recommended to the Bonneville Power Administration a planning budget of \$157.1 million for

*(continued on page 10)*

# Subbasin Plans, Intended to Implement the Council's Fish and Wildlife Program, Are Proving Useful in Other Ways, Too

plan that includes strategies for addressing problems identified in the assessments. At three-year intervals, projects will be proposed to the Council to implement the strategies in the plans. As it has in the past, the Council will recommend projects to the Bonneville Power Administration for funding after reviews by the public, the region's fish and wildlife managers, and by a panel of independent scientists.

While the Council's program is the largest fish and wildlife improvement effort in the Columbia River Basin, it is not the only program and not the only source of funding. State and national government agencies and non-profit organizations also sponsor and fund programs and projects. Many of the agencies and tribes that propose projects to implement the Council's program also apply to these other sources for project funding. With subbasin plans as a common source of information regarding subbasins, it may be possible in the future to co-fund projects that implement the Council's program and also meet the requirements of other fish and wildlife improvement initiatives.

In Portland, where the Willamette River bisects the densest urban development in the Columbia River Basin and spring Chinook salmon and steelhead share the river with ocean freighters, the Willamette subbasin plan is helping the city preserve and enhance environmental quality in the river and its tributary creeks. Jim Middaugh, the city's Endangered Species Act Program manager, said the city followed the planning guidance

"We can show our work is consistent with the Council's [subbasin] plan, and it helps the biologists appreciate that we've done our homework."

*Jim Middaugh,  
ESA Program Manager  
City of Portland*

developed by the Council and NOAA Fisheries in gathering data about the river, water quality, and aquatic species. As a result, when the city negotiates with entities such as the U.S. Army Corps of Engineers over permits for shoreline or in-water construction, "we can show our work is consistent with the Council's [subbasin] plan, and it helps the biologists appreciate that we've done our homework," Middaugh said.

Portland also used another subbasin planning tool, the Ecosystem Diagnosis and Treatment model, he said. "We have protection and restoration priorities identified for all our watersheds so we can identify species of interest and mitigation activities; we have that wrapped up all in one place, and we draw from it on a regular basis."

Middaugh said Portland used information in the Willamette plan to facilitate a cost share with the Corps of Engineers for an environmental study of the lower Willamette, where the city is spending more than \$1 billion to improve water quality. Through its participation in developing the Willamette subbasin plan, and now with the plan in place, Portland "suddenly is much more in a regional context than we were before; we have a much better idea of where we fit with upstream and downstream communities, and we have a much better opportunity to partner with others in the region and move forward on regional goals."

Middaugh said the subbasin plan helps fit Portland into watershed protection efforts elsewhere in the Willamette basin. "Urban areas have a contribution to make," he said. "We're at the bottom of a giant watershed; what we do here matters. The plan helps us make the transformation as a city from a simple provider of utilities to a contributor to natural resource management."

Meanwhile, in rural northern Idaho, the Kootenai Tribe has been successful in using information from the Kootenai River subbasin plan in grant applications to the Natural Resources Conservation Service (NRCS), a division of the U.S. Department of Agriculture.

"We always mention the subbasin plan in any proposals we're writing for other sources of funding, specifically when we are seeking to improve habitat on private land," said Susan Ireland, fisheries program manager for the tribe. "It works."

In one instance, the tribe was a co-sponsor of a project proposal to the NRCS that required projects to focus on species of concern identified in watershed plans — bull trout and cutthroat, in this case.

"We used the subbasin plan as the watershed plan, and it worked great," Ireland said. The \$60,000 grant is paying for streambank restoration and revegetation in a portion of Long Canyon Creek, a Kootenai tributary north of Bonners Ferry.



Commercial traffic on the Willamette River.

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# Independent Scientists Compliment Salmon and Steelhead Harvest Management, Recommend Ways to Improve Decision-making

The Endangered Species Act both protects threatened and endangered salmon and steelhead and allows them to be killed incidentally in fisheries. Increasingly, public attention is focusing on a fundamental question fishery managers face: What constitutes a sound scientific basis for managing the harvest of Columbia River Basin salmon and steelhead so that recovery of listed species continues and healthier populations don't decline?

To help answer the question and clarify the role of harvest in recovery planning, three agencies — the Northwest Power and Conservation Council; NOAA Fisheries, which implements the ESA for salmon and steelhead; and the Columbia River Inter-Tribal Fish Commission — developed 14 harvest-related questions for the Independent Scientific Advisory Board, a panel of 11 scientists who advise the agencies. The ISAB combined the questions into three broad topics:

- 1) Does harvest management adequately protect naturally spawning populations of fish;
- 2) Could harvest focus on abundant stocks in order to protect weaker stocks, and could hatchery production help sharpen this focus; and
- 3) Do harvest managers have adequate information and guidance to manage fisheries in the ocean and rivers?

Harvest is one of the “Four Hs” that affect fish survival. The others are hydropower, hatcheries, and habitat. Each of these influences has the potential, alone or

“As straightforward as this task may sound, the capacity to regulate harvests to attain a given management objective can be an extraordinarily difficult and challenging task for many Columbia River salmon stocks.”

*Independent Scientific Advisory Board*

in combination, to drive down fish populations. To be effective, recovery efforts for salmon and steelhead must address all four Hs — improving fish passage at hydroelectric dams, improving habitat for fish that spawn in the wild, reducing or altering hatchery production, and reducing or redefining harvest seasons in the rivers and the ocean.

Until recently, most of the attention in recovery planning has been on the impacts of dams, habitat and hatcheries. Now harvest is an increasing focus — particularly the issue of whether or not present harvest management is consistent with recovery of ESA-listed salmon and steelhead.

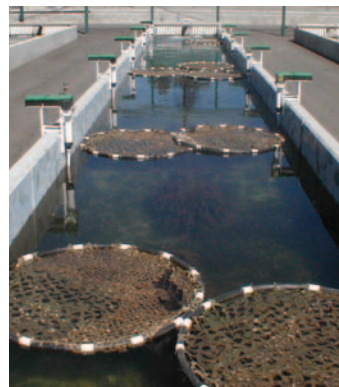
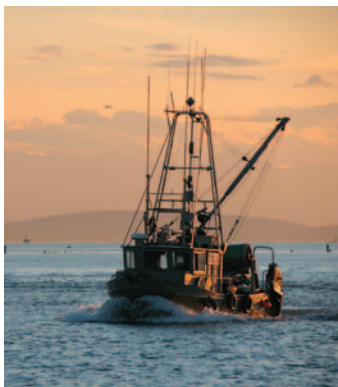
Harvest is only one source of mortality in the salmon and steelhead lifecycle, but it obviously affects the numbers of fish that return from the ocean to spawn. Ideally, in determining how many fish can be harvested, the expected mortality from harvest is balanced against the expected impacts of hydropower dams, hatchery production, and habitat conditions.

In its report, submitted to the agencies in June, the ISAB acknowledged that harvest management is simple in theory: determining how many fish can be caught while ensuring that enough survive to produce the next generation. The ISAB comments in its report: “As straightforward as this task may sound, the capacity to regulate harvests to attain a given management objective can be an extraordinarily difficult and challenging task for many Columbia River salmon stocks.”

The reasons for this complexity, according to the report, are both biological and political. Salmon and steelhead life cycles are biologically complex. Fish spawn or are produced in hatcheries in different places and at different distances from the ocean. Different populations spend differing amounts of time in the ocean before returning to spawn. The political complexity arises from the fact that 25 management entities along the Pacific coast — from Oregon to Alaska and including British Columbia — set harvest seasons that affect Columbia River salmon and steelhead in the river, its tributaries, and the ocean.

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## The 4 Hs: Harvest, Hydropower, Hatcheries, and Habitat



# Puget Sound Energy's Latest Wind Project Adds to the Region's Renewables

**W**ind generation continues to mature as a resource in the Northwest with the development of Puget Sound Energy's latest wind farm.

Construction on the Hopkins Ridge wind project in southeast Washington began last spring. Hopkins Ridge is located on 11,000 acres of remote, open wheat fields approximately 15 miles northeast of Dayton, Washington. The project, when completed, will feature more than 80, 1.8-megawatt wind turbines providing up to 150 megawatts of capacity, enough energy to serve 50,000 homes. The Bonneville Power Administration will deliver the energy from the project to PSE's service territory. The project is expected to cost approximately \$200 million.

Puget Sound Energy is the state's largest and oldest utility and serves nearly 1 million electric customers and over a half million gas customers, primarily in the Puget Sound region. Hopkins Ridge is the utility's second wind power project in Washington, bringing its ownership of wind energy to nearly 400 megawatts. Vestas Wind Technology, a Danish company, will manufacture the turbines, hubs, and blades, as well as provide maintenance and service support for the project. The company has supplied more than 26,000 wind turbines to over 50 countries throughout the world, and provided the wind turbines for the 454-unit Stateline Wind Project located on the Washington-Oregon border off Highway 12, west of Walla Walla. The Stateline project is the largest single wind farm in the United States.

The Council's latest power plan favors wind power as a resource for a number of reasons. It's a clean, renewable source of electricity, and the Northwest has some of the best wind areas in North America. It offers a hedge against rising fuel costs and, thanks to decreasing production costs and tax credits, wind is proving to be a popular choice for many utilities seeking to diversify their resource portfolios.



"We decided to invest in wind because it fits in with our resource acquisition strategy," explains Roger Garratt, Puget Sound Energy's director of resource acquisition. "Our strategy is to have a balanced portfolio, so that means looking at energy efficiency, looking at hydro, efficient thermal such as highly efficient gas turbines, and coal. And it means renewable resources. And what we see with respect to renewables, is that wind is the most attractive, from both an economic and an evaluation perspective."


"...what we see with respect to renewables, is that wind is the most attractive, from both an economic and an evaluation perspective."

Roger Garratt  
Puget Sound Energy

PSE's decision to construct the Hopkins Ridge project followed an extensive review process that started when PSE issued an "all-service" request for proposals in 2004. The

company reviewed numerous proposals for various generation technologies, including more than 40 proposals from 10 developers of new wind power projects in the Pacific Northwest that, taken together, represented approximately 1,800 megawatts of renewable energy.

Investment in wind power was strengthened when Congress voted to extend the wind energy Production Tax Credit through 2007. The credit, which was scheduled to expire at the end of 2005, provides a 1.9 cent/kilowatt hour tax credit for electricity generated with wind turbines over the first 10 years of a project's operation. It has been a critical factor in making the development of new wind farms financially feasible. Other challenges to wind development, according to Garratt, include uncertainty surrounding the extension of the production tax credit beyond 2007, changes to renewable portfolio standards, and market forces such as the availability of wind turbines from suppliers—most of which are in Europe—steel and petroleum prices, and the exchange rate between the euro and the dollar.

Still, says Garratt, "We continue to be fairly bullish on wind in the region. There are clearly a lot of good sites in the region, and we'll continue to look at wind projects to add to our portfolio." 

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## Federal Judge Gives NOAA Fisheries One Year to Write a New Biological Opinion

In October, U.S. District Court Judge James Redden ordered NOAA Fisheries to prepare a new biological opinion on hydropower operations to protect threatened and endangered salmon and steelhead in the Columbia River Basin.

Redden presided over litigation in Portland earlier this year in which plaintiffs led by the National Wildlife Federation sued NOAA Fisheries, which implements the Endangered Species Act for salmon and steelhead, and federal agencies that operate federal dams on the Snake and Columbia rivers. The plaintiffs argued, and Judge Redden agreed, that NOAA Fisheries' 2004 Biological Opinion was flawed in its approach to determining whether the federal dams jeopardize the survival of the listed species. In a ruling in May, Redden invalidated the 2004 Biological Opinion, granted a request by the plaintiffs to order the U.S. Army Corps of Engineers to spill water over the four lower Snake River dams and McNary Dam on the Columbia during the summer months to aid juvenile fish passage, and promised to issue a detailed remand order for the biological opinion in the fall.

The judge issued a remand order on October 17 giving NOAA Fisheries one year to complete the new biological opinion. In



the order the judge set a schedule that includes an evidentiary hearing on December 12 and 13 and the appointment of an expert or expert panel to evaluate testimony presented at the hearing. According to the order the evidentiary hearing will be "limited to the testimony and examination of expert witnesses" regarding the "science and efficacy" of the three ways juvenile salmon and steelhead are helped on their downstream migration during the spring and summer: spilling water — and the fish — over dams, transporting fish downriver in barges and trucks, and boosting river flows. The judge asked for recommendations for an expert or expert panel from the Independent Scientific Advisory Board, which advises the Council, NOAA Fisheries, and the Columbia River Inter-Tribal Fish Commission.

Judge Redden also ordered that during the one-year remand period, NOAA Fisher-

ies, the Corps of Engineers, and the Bureau of Reclamation "...shall collaborate with the sovereign entities, including the States of Idaho, Montana, Oregon, and Washington, and the Treaty Tribes, to achieve the goals of: (a) developing items to be included in the proposed action, and (b) clarifying policy issues and reaching agreement or narrowing the areas of disagreement on scientific and technical information." The order requires NOAA Fisheries to file detailed written status reports regarding progress every 90 days. The federal agencies will address Judge Redden's order, but simultaneously will seek review of his decision in the Ninth Circuit Court of Appeals.

The Council is not aligned with either the plaintiffs or defendants, but does participate as a friend of the court to inform the judge and the parties about the Northwest Power Act requirements and the Council's fish and wildlife program, as some of the actions included in the 2000 and 2004 Biological Opinions — particularly regarding habitat and hatcheries — are accomplished through the Council's program. [CCQ](#)

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## Science Board to Review Effectiveness of Court-Ordered 2005 Spill Operations

At its October meeting, the Northwest Power and Conservation Council agreed to ask the Independent Scientific Advisory Board to review the biological effectiveness of the 2005 spill operations at federal Columbia and Snake River dams. The late June through August spill regime was ordered by U.S. District Court Judge James Redden to improve the survival of outmigrating juvenile fall Chinook salmon. As part of an ongoing lawsuit against the federal government's salmon protection plan, plaintiffs had argued successfully for the spill program.

The Council has asked that the ISAB consider the full migration and spill season as they determine the net effect of the court-ordered spill on juvenile survival over other

passage routes designed to aid fish passage through the dams. The Council has also asked the ISAB to examine how the behavior of a certain type of fall Chinook salmon factors into the effectiveness of the 2005 operations. These fish, known as a reservoir-type, winter over in the reservoir and can contribute to half of the returns. An earlier ISAB report had noted that, "a disproportionately large percentage of returning adults are originating from these holdovers."

NOAA Fisheries and the Columbia River Inter-tribal Fish Commission approved the assignment with the understanding that the ISAB would consider their additional questions.

The ISAB, an 11-member board, provides independent scientific advice and recom-

mendations to the Council, NOAA Fisheries, and the Columbia River Basin Tribes. The board will be reviewing the data and analyses of fish and wildlife agencies, the Fish Passage Center, and others. The Council has asked that the ISAB review this information for its scientific soundness and, if appropriate, suggest ways the analyses could be improved. The ISAB is also expected to highlight uncertainties that affect the analyses. The ISAB should complete its review by mid-January 2006. [CCQ](#)



## NW/Q&A: Gary Loomis, Founder of Fish First

This is the first in a series of interviews about salmon and steelhead harvest. The winter edition will feature Steve Fick, a seafood processor from Astoria.

**G**ary Loomis started G.Loomis, located in Woodland, Washington in 1982. The company specializes in high performance fishing rods and tackle, and grew out of Loomis' love of fishing and talent for building the well-made tool. After serving as a journeyman machinist in the Navy for four years, he settled in Woodland, began working at Schurman's Machine Shop, and fished every night during fishing season. Dissatisfied with his standard fishing rod, Loomis revamped it to his specifications and was soon out-catching the other fishermen. Word of mouth spurred demand for the unique rod and after several more years of experience, Loomis launched the company. Along with his famous fishing gear, G.Loomis has built products for the military, the Los Alamos Laboratory, Boeing, and NASA.

After being diagnosed with cancer in 1995, Loomis sold the company and since then has devoted his energies to Fish First. The organization supports stream restoration activities to help wild and native salmon and steelhead.

You've been involved in salmon recovery for a number of years now having founded Fish First in 1995. In your opinion, what are we doing right and what should we be doing that we aren't?

First of all, we haven't looked at what the real problem is. Let's say the real problem is the four "Hs" (hydropower, habitat, hatcheries, and harvest). If we say hydroelectric dams are the biggest problem, why, over the last 130 years, have the salmon populations declined in rivers without dams at the same rate as the rivers with dams? Dams without fish ladders, yes, they're very bad.

As for habitat, they want to blame it on the water conditions, no woody debris, and the spawning gravel. They think the



spawning gravel is so compacted from logging. Well, let me tell you, the compacted gravel is because no fish have been spawning in the streams for seventy years. We harvest them, and in doing that we stopped the food source for the baby salmon that are hatched in the gravel. Eighty-seven percent of the body mass of the smolt after 14 months in fresh water heading for the ocean is made up of the body mass of the adult salmon that spawned them.

they could produce all the fish that mankind would ever need, we don't need the wild, native fish. And so in some cases, the hatcheries almost tried to get rid of them.

So we have continued to harvest at the maximum for 130 years with no selective harvest so now we have 15 groups of listed salmon and steelhead in the Northwest and more to come. What ends up happening is the number of salmon spawning in the river are over-harvested in the ocean and the river until they decline, decline, decline, and until we are where we are today. Now they want to blame it on everything but harvest. Not that the other three "Hs" are not contributing to the problem, but they aren't the overall biggest problem. So I always say, if you don't work on the problem, you're never going to solve it. If you have a bottleneck, once you improve that bottleneck, a lot of other things will go away. But we've never really worked on the problem. We have to let the native adult salmon get back up in the river to their spawning grounds to spawn so their carcasses can help feed the young coming out of the gravel, and the cycle is restored where they are able to do everything themselves.



Hatcheries, well into their past, have had their problems, but without them today, we would have no fish. They would have all been harvested by now. The only fish that can create recovery is the native fish from each river. We cannot take a native fish from one river and put it in another river and have that river create recovery. This is what the hatcheries have been doing over the years, moving them all across the basin. It's wrong. When we lose the last native fish from each river, it's over. Back in the 1930s, 40s, and 50s the hatcheries said that

You've expressed strong opinions about harvest practices in the past. How do you think harvest practices should change?

Up until now, we haven't looked at the real problem of getting these fish back. And getting these fish back means practicing selective harvest to the point where the native fish come back to do what they do best. The highest harvest that we ever had in the Columbia River was in 1886, the last year before the collapse of the spring Chinook salmon from over-harvesting. After

that period, we started harvesting what they called the inferior salmon.

I'm not against commercial fishing, we need to have commercial fishing; we just need to change the way that we're commercial fishing. Do you know any company that is still profitable that hasn't changed the way it's done business for 130 years? That's why they're not profitable; they haven't changed the way they do business. This year, the Copper River salmon just overwhelmed them on the choice for the restaurants and the choice of the chefs. The Copper River salmon is not better than the spring Chinook, but we still harvest the spring Chinook in the same way that we've harvested it for 130 years.

#### How does the way you catch fish affect its quality and value?

In answering this question, it will look like we're attacking the gill-netters, we aren't. We're only talking about their process of harvest. Gill-netted fish don't bring the price of a trolled fish from the ocean, because as soon as they get it in, they bleed it, they gut it, they pack the belly with ice, which stops the decay process, and they put it in the hold. With gill-netting, they may catch the fish in the early evening and it lays in the boat with the stomach in it until the next morning. Then it goes to the buyer, then the ice gets on the outside of it, and it travels many hours to the processor. The fish is not in prime condition, and that's why they don't get the money out of it. Copper River salmon, as soon as that fish comes out of the water, is gutted and the belly is packed with ice. So this is why they're getting so much more money, and they're now the fish of choice.

The only way to harvest selectively that I know of, is to do it the way they used to, by using fish wheels or fish traps. The fish would swim into the fish trap, they could elevate it, take all of the incidental catch – steelhead, the upriver Chinook from the Snake River – let them go right through. The other ones they want to harvest, they put them inside pens and hold them alive to process. I'm sure if you took the commercial fishermen and gave them some incentive to come up with a better way, they could. When President Kennedy said in 10 years we'll be on the moon, he didn't tell them

“We need selective harvest or we'll look up in a very few short years and the native salmon in the Northwest will go the way of the dinosaurs.”

Gary Loomis, Founder  
Fish First

how. These wild fish in Europe are going for \$30 to \$50 a pound. Pen raised fish are at \$16 to \$24 per pound.

#### What kind of work does Fish First do?


Fish First is a 501(c)3 group. We started the group in 1995 with the motto “More & Better Fish” in what I saw were the worst returns of fish since I moved in to the area in 1964. We partnered with many other companies and groups, then started working for the fish. The first real project that we were allowed to do was to install net pens in the North Fork of the Lewis River and ISRs (egg boxes). Net pens relieved the pressure off the hatchery ponds when the smolts were getting so crowded that they were getting diseased and their growth stunted. We were also able to imprint these fish to other parts of the river. So when they returned they all would not go straight back to the hatchery.

The egg boxes were a way to get a start back into some of the creeks that haven't had any salmon in them for 50 years, since our roads went to culverts instead of bridges. We cleaned up the culverts by replacing them with “fish friendly” culverts. We started a nutrition plant of salmon carcasses (food for the baby salmon coming out of our egg boxes) in the creeks. Cedar Creek for example, the main creek below Merwin Dam on the North Fork of the Lewis River in 1992 had only 32 silver salmon counted going through the fish ladder. Fish First took over Cedar Creek in 1995 after Washington State Fish and Wildlife gave up on it. For the last two years, we've had over 15,000 adult native salmon return to spawn

and we doubled the outgoing smolts each year. It shows we can save and turn around the native fish if we have the desire to do it. We do about a mile of in-stream restoration, along with 6,000 to 15,000 salmon carcasses placed in our streams each year.

#### Are there other areas you've visited that have problems similar to the Columbia River? Are there things we could learn from them?

All of the areas in the world have had the same problem as we are having when they had gill-netting. These nets are “kill-nets.” Everything that swims into them is killed: fish, birds, seals, etc. California stopped the gill-netting and then the Sacramento River was restored with the salmon; in Southern California the flounder and white sea bass came back; in the Gulf of Mexico they stopped gill-netting and back came the sea trout and red fish; Florida stopped and restored the snook and bone fish. One guide told me this year, he was born in Florida and hasn't in his whole life seen the snook fishing so good. The East Coast stopped the gill-netting and back came the striped bass. The Columbia River should have been the first place to stop the gill-netting because there are too many species of fish at one time in the netting area going too many places in the Columbia River at the same time.

It may sound like I am against the gill-netter. I'm for the commercial fisherman, just against their method of harvest. We need selective harvest or we'll look up in a very few short years and the native salmon in the Northwest will go the way of the dinosaurs. 

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# Subbasin Plans, Intended to Implement the Council's Fish and Wildlife Program, Are Proving Useful in Other Ways, Too

(continued from page 2)


"The subbasin plan is really important to use in applying for grants," Ireland said. "It demonstrates stakeholder buy-in and a collaborative approach to addressing watershed problems."

And in Montana, Lynn DuCharme, watershed coordinator for the Confederated Salish and Kootenai Tribes of the Flathead Reservation, said the tribes have used the Flathead River subbasin plan in support of grant proposals to the U.S. Fish and Wildlife Service for habitat improvement projects on the reservation.

"We pulled some language out of the plan regarding habitat requirements for bull trout and cutthroat and why we're trying to protect the species. We've also used the subbasin plan's watershed ranking results to support habitat work in drainages noted in the plan to be high priorities for protection and/or restoration," DuCharme said.

She's been successful.

One application, for funding through the Fish and Wildlife Service's Cooperative Conservation Initiative, resulted in \$320,000

for habitat improvements in the Jocko River watershed which flows through the National Bison Range, a federal refuge located within the boundaries of the reservation. Other grants where the subbasin plan proved useful are grants through the USFWS Tribal Landowner Incentive Program. The tribes received two grants totaling \$150,000 to conduct habitat work in the Flathead Lake and Valley Creek drainages. 

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# Scientists Recommend Ways to Improve Management of Harvest

(continued from page 3)

Despite the complexities, however, the ISAB complimented current harvest management, noting "significant progress" in recent decades to improve decision-making. The ISAB noted that fish and wildlife agencies have made progress in defining independent fish populations and establishing criteria to account for their variability. The United States and Canada signed the Pacific Salmon Treaty in 1985, updated in 1999, to address ocean harvest of Canadian-origin fish by Americans and American-origin fish by Canadians. The ISAB also noted the role of the Pacific Fisheries Management Council in limiting ocean-fishing impacts, the role of the states in renewing fishing agreements for the Columbia River, and the role of the Council in coordinating an effort to better understand how the impacts of hydro-power, hatcheries, habitat, and harvest affect salmon production.

In response to the 14 questions, the ISAB made four broad recommendations to improve harvest management:

- Harvest managers need better information about fish production, both at hatcheries and in the wild. Without knowing how many fish are being produced it is difficult for managers to understand trends in abundance and, therefore, set harvest rates.
- Harvest managers also need better analyses of fish production — scien-

tifically peer-reviewed analyses of how well production matches goals, how the information about production was gathered, analytical methods that underlie conclusions, and so on. This will improve the quality control of harvest management planning.

- Guidelines for estimating and accounting for biological uncertainty, such as the variable numbers of fish produced year-to-year, impacts of ocean conditions, and natural mortality, should be developed and applied in managing fish populations that are listed for protection under the Endangered Species Act. This is a means of accounting for survival risks so that harvest won't reduce the likelihood of recovery.
- Harvest managers should adopt an adaptive-management approach, which the ISAB defines as continually improving management by learning from the outcomes of decisions. This, too, is a means of accounting for annual fluctuations in fish populations and the many risks to fish survival besides harvest.

The ISAB report is posted on the Council's web site, [www.nwccouncil.org](http://www.nwccouncil.org). 



# Success Stories — StreamNet Library

## *Fish and Wildlife Library is a Regional Resource*

**O**n the ground floor of an office building in Northeast Portland, librarians are steadily compiling an impressive collection of analyses, reports and research data about Northwest ecosystems, including information on fish, wildlife, water and forests. Not only is the StreamNet Library a unique resource for scientists, it is open to the public as well.

“This is something a lot of people don’t know about, but it is one of the real fish and wildlife success stories in the region,” said Dr. Peter Paquet, manager of wildlife and resident fish at the Northwest Power and Conservation Council. “The StreamNet library is building a national and international reputation as one of the best repositories of fish and wildlife documents and data.”

StreamNet is the name of a partnership among fish and wildlife agencies and Indian tribes in the Northwest that provides scientific data and data services in support of efforts to manage and restore fish and wildlife. The StreamNet website has a variety of information and links to other sites with information about fish and wildlife management and restoration. StreamNet is funded by the Bonneville Power Administration through the Council’s Columbia River Basin Fish and Wildlife Program and administered by the Pacific States Marine Fisheries Commission.

The library, located in the headquarters building of the Columbia River Inter-Tribal Fish Commission, is connected to other libraries and library systems and is able to provide and receive interlibrary loans of materials. Thus, in addition to its vast collection of books, reports and journals, the library also is a repository of environmental data collected by scientists in the Northwest and, through Internet connection, literally anywhere in the world.

The on-site collection is impressive. Want to see a report by the U.S. Commissioner of Fisheries from the 1890s? It’s there. Want to look at hand-colored maps produced during salmon-spawning surveys on Columbia River tributaries in the early

20th century? They are on file. So are entire sequences of volumes of major and minor research journals addressing fish, wildlife, water quality and other ecosystem matters.



And the collection is growing. The library staff, Regional Librarian Lenora Oftedah, Assistant Librarian David Liberty and Library Technician Gabe Sheoships, are reaching out to universities, fish and wildlife agencies and private individuals in their continuing search for publications, maps and other materials. The library’s reputation is growing, too. Researchers have viewed library collections recently, in person or electronically, from universities in Oregon, Washington and Idaho, as well as from Canada and Chile. Students from a Portland Montessori school visited to look at old maps of Indian reservations in the Northwest.

“My philosophy is, electronic versions are well and good for wide distribution, but somebody has to have the hard copy,” Oftedah said. “I want the hard copies!”

**S**ince its inception in 1995 the library has been steadily growing in content and, as a result, usefulness to scientists and other researchers. The library responds to a specific challenge for researchers: gathering and sharing information across the vast Columbia River Basin, an area that includes parts of seven states and British Columbia. Entities like the Council, universities, the Bonneville Power Administration and other government agencies all have libraries, but the StreamNet Library provides a single location where information can be gathered, held, linked and shared.

“We all have broken-up collections of journals, and now they all are in one place,” Dr. Paquet said.

To a visitor, the library appears as one would expect — bookcases arranged in aisles and labeled by content, a computer station for Internet research, an information desk (materials generally don’t leave the library). Less visible is something that makes the library unique — its collection of “metadata,” the raw data collected by researchers in the field. Metadata underlies the scientific analyses that inform policy decisions regarding environmental issues, and there is a growing interest among the public and elected officials to see and understand the raw data in order to understand, for example, the success or failure of fish and wildlife mitigation and recovery projects.

Oftedah intends to continue gathering materials and information for the library, including links to cultural and scientific information held by the region’s Indian tribes and better access to collections in university libraries. Currently she and Liberty are cataloging the Johnson Creek Watershed Council’s research collection and will host the collection on the library’s website. Oftedah said she hopes to work with other watershed councils around the Northwest to catalog their collections, as well. This will enhance their ability to share information.

The work of building a library can be considered boring, such as when Oftedah peruses bibliographies for titles she’d like to acquire, but there also is the occasional surprise. Recently the Portland Audubon Society offered a collection of information on birds, and a retired newspaper reporter offered his private collection of books and papers.

She said yes to both.

The library is located at 729 N.E. Oregon Street. Its website is [www.fishlib.org](http://www.fishlib.org).

## Council Decisions

(continued from front page)

projects to implement the Columbia River Basin Fish and Wildlife Program in fiscal year 2006. This is the expense portion of the budget. The Council also recommended capital projects totaling \$55.8 million. The expense planning budget assumes that only about \$139 million actually will be spent in the fiscal year, consistent with the amount Bonneville has announced it plans to spend. Based on past experiences with the differences between the planning budget and Bonneville's actual spending, the Council concluded that a start-of-year planning budget for expense funding of \$157.1 million is appropriate and will not result in Bonneville spending more than \$139 million. A list of the projects recommended by the Council is on the Council's website at [www.nwccouncil.org/fw/budget/2006/](http://www.nwccouncil.org/fw/budget/2006/)

### Findings and Response to Comments on Subbasin Plans

September

The Council approved the findings and response to comments on the adoption of subbasin plans into the Columbia River Basin Fish and Wildlife Program.

The plans were adopted into the program in groups earlier this year. All of the plans are posted on the Council's website at [www.nwccouncil.org/fw/subbasinplanning](http://www.nwccouncil.org/fw/subbasinplanning). Adopting the findings and response to comments, which were prepared by the Council's legal staff, was the last step in the amendment process.

### Fiscal Years 2007-2009 Project Selection

October

The Council approved a document to guide proposals for projects that would be funded through the Columbia River Basin Fish and Wildlife Program for three years beginning in fiscal year 2007. The Council issued a solicitation for project proposals on October 21. The guidance document describes the project selection process and includes a link to an electronic copy of the project proposal form. The guidance document is posted on the Council's website at: [www.nwccouncil.org/fw/budget/2007](http://www.nwccouncil.org/fw/budget/2007). The deadline for submitting project proposals is 5 p.m. January 10, 2006.

### ISAB to Review Spill Effectiveness


The Council asked the Independent Scientific Advisory Board to review the biological effectiveness of spill operations at lower Snake and Columbia river dams in 2005. The ISAB will be able to take up the matter at its next scheduled meeting, December 6 and 7. In a reply to the Council's request, ISAB Review Chair Tom Poe said the board could finish an initial evaluation report by January 16, 2006, but that a final evaluation of the effects of the 2005 spill could not be completed until the smolts that migrated to the ocean in this year return as adults to spawn in several years.

## Notes from the Chair

(continued from front page)

One of the most persistent notions about conservation is that it means doing with less and changing our behavior. But this narrow concept is not really what we mean by conservation. When the Council talks about conservation, we don't mean self-sacrifice. We define conservation as doing more with less. It means increasing energy efficiency with advances in technology, from compact fluorescent light bulbs to improved heating and air conditioning systems. These are painless, invisible ways we can reduce demand.

The proponents of the Northwest Power Act understood the importance of conservation as a way to stretch the valuable energy resources we currently enjoy. Saving megawatts through conservation can delay, perhaps forever, the need to build costly new generation. Today, in a time of ever-increasing fuel costs, investment in energy efficiency makes more sense than ever before. But its greatest benefits come through a steady, long-term investment over time, a strategy the Council has recommended in its latest power plan.

Call it conservation or call it energy efficiency, it has proven to be an effective tool to manage costs, reduce risks to the environment, and secure our power supply. I call that smart. 

# Calendar

## Calendar of Council Meetings and Other Events:

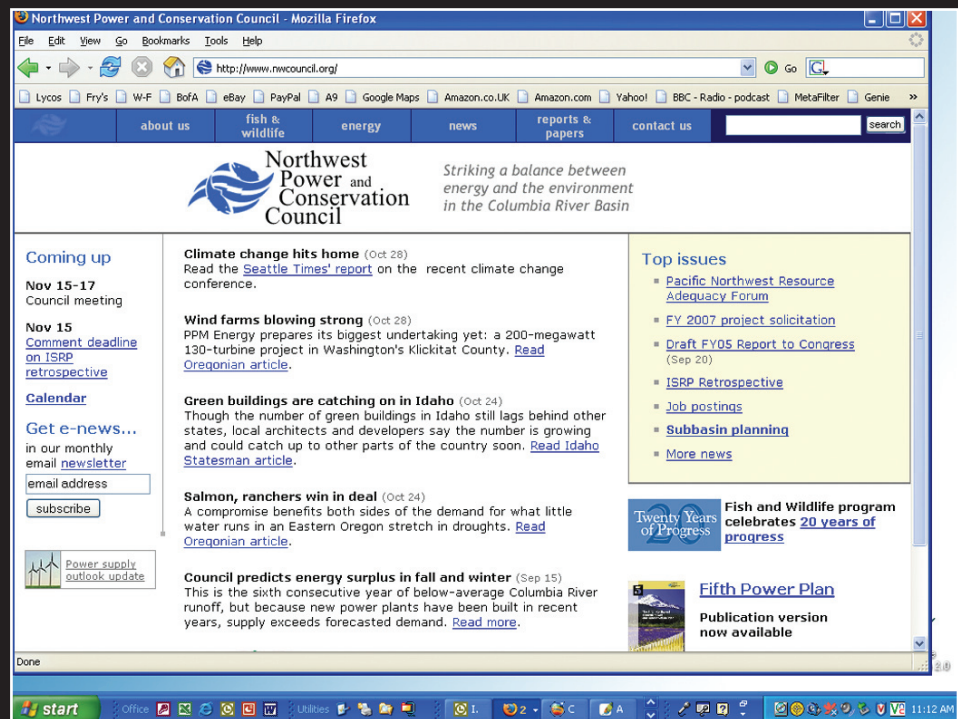
- November 17: Public Power Council Regional Road Show, Eugene, Oregon, area. Information at [www.ppcpdx.org](http://www.ppcpdx.org).
- November 15-17: Northwest Power and Conservation Council meeting, Coeur d'Alene, Idaho. Information at [www.nwccouncil.org](http://www.nwccouncil.org).
- November 17-18: Columbia River Inter-Tribal Fish Commission meeting, 729 N. E. Oregon St., Suite 200, Portland. For information contact Sandra Peterson, 503-238-0667.
- December 1: Public Power Council Annual Members Meeting and Executive Committee Meeting, Sheraton Inn at the Airport, Portland. Information at [www.ppcpdx.org](http://www.ppcpdx.org).
- December 13-15: Northwest Power and Conservation Council meeting, Portland. Information at [www.nwccouncil.org](http://www.nwccouncil.org).
- December 15-16: Columbia River Inter-Tribal Fish Commission meeting, 729 N. E. Oregon St., Suite 200, Portland. For information contact Sandra Peterson, 503-238-0667.

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