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This issue's cover illustration is by Larry Milam.

From the CHAIR

The smart people who advise New York Governor Mario Cuomo made news in March when they urged him to drop plans to purchase power from a proposed Canadian dam. Cuomo took their advice and pulled out of the \$12.5-billion deal in favor of a much better and cheaper alternative—energy conservation. Environmentalists and Indian tribes, who had opposed construction of the Great Whale Dam because, among other things, it would flood an area bigger than Rhode Island, applauded the governor's decision as an environmental victory. It could stop the dam.

But the governor's people say the choice was based only on the bottom line. The New York Power Authority studied the relative economics of buying the Hydro-Quebec output or conserving the energy at home and concluded that the best buy for New York is efficiency. Sound familiar?

On the other side of the planet, the Chinese government decided to go ahead with construction of *their* giant dam, the world's biggest and likely to be the most environmentally devastating. The dam was approved, but—and here's the silver lining—in an unheard of show of dissent in today's China, about a third of the legislators either abstained or voted against the dam for both economic and environmental reasons. This was the largest opposition vote in recent history in China. I count this as one step forward in a country that has made running in reverse its practice. It took courage.

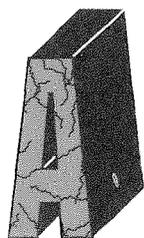


Here in the Northwest, where historic energy and natural resource decisions are *our* practice, we should be bolstered by the courage and wisdom of our distant neighbors. We tread the same path.

Tex Hallor

by John Harrison

Snake River reservoir lowered in salmon experiment.



Along the Snake River shoreline west of Clarkston, Washington, a ghost railroad rises from the water. The old ties break the surface in neat precision, forming a long, sweeping curve like the vertebrae of a dinosaur suddenly exposed to view.

Across the river and downstream a few miles, the foundation of an old house emerges from mud flats near Chief Timothy State Park. The park's broad pond is reduced to a thin stream where no lifeguard is needed to stand watch.

Neither the railroad nor the house have been seen since the mid-1970s, when the Snake River was about 30 feet lower than it normally is now. They were visible in March because the U.S. Army Corps of Engineers lowered the level of the reservoir behind Lower Granite Dam, about 32 miles downstream from Clarkston, Washington. The Northwest Power Planning Council called on the Corps to conduct a test of the

reservoir drawdown to observe the structural and environmental impacts of releasing water from the dam to aid young salmon.

Drawing down the river reduces the size of the reservoir behind a dam and increases the speed of the current. On the Snake, this should help speed juvenile salmon migrating to the ocean. In the future, the river may be drawn down for several months each year to help fish migrate and improve their survival.

Snake River sockeye salmon were placed on the federal en-

dangered species list last November; Snake River spring, summer and fall chinook salmon are expected to be added to the list at any time.

The Power Council views Snake River drawdowns as an important part of a long-term strategy to increase Snake River salmon survival. That strategy also includes improving environmental conditions in spawning and rearing areas used by wild fish, better hatchery management, stricter controls on fish harvest to protect depleted salmon runs,

and improvements in fish bypass systems and in barging young fish past the dams.

There have been impacts from the drawdown—stranded fish, sloughing banks and marinas without water, for example. Eastern Washington Council Member Tom Trulove said he is concerned about the impacts. But he said it was a good idea to conduct the test in order to gather information.

Lower Granite is one of four dams between the communities of Lewiston, Idaho, and Clarkston, Washington, and the confluence of the Snake and Columbia rivers at Pasco,



LOWERING GRANITE

Washington. It was completed in 1975, the last of four dams on the Lower Snake River. The dams turned the once free-flowing Snake into a series of large impoundments where water moves slowly.

In his March, the Corps dropped Lower Granite Reservoir about 28 feet. That brought the pool behind the dam to 705 feet above sea level. The pool behind the next downstream dam, Little Goose, was lowered 16 feet. Lower Granite reservoir then was lowered another nine feet—to 696 feet above sea level, or some 37 feet below its normal operating level. Both reservoirs were back to normal pool levels by April 1, which is about the time that young salmon and steelhead migrating to the ocean begin appearing at Lower Granite.

The Corps of Engineers chose March for the drawdown test because there are few adult or juvenile salmon in the river at that time. To lessen the economic impact, the Corps scheduled the test to coincide with its annual two-week lock maintenance program.

In mid-March, members of the Power Planning Council and the Columbia/Snake River Drawdown Committee, who were appointed by the Council to coordinate analysis

On the Snake, this drawdown should help speed juvenile salmon migrating to the ocean.

of the drawdown, toured the dam and observed impacts of the drawdown along the shoreline.

Ihey saw cracks in the pavement of Down River Road (Washington Highway 193), which runs west from Clarkston along the north shore of the Snake. The cracks probably were caused when the road bed settled as the water level dropped. Culverts that once car-

ried water under the highway and the relocated railroad are high and dry.

Sarah Wik, the Corps' environmental coordinator for the drawdown, said beavers lived in some of the culverts before the drawdown.

"Now they're looking for new homes," she said.

At the dam, workers used a toboggan-sized basket net to dip early migrating juvenile steelhead, spring chinook salmon and kokanee (freshwater sockeye salmon) from slots in the dam called gatewells. Under normal conditions, fish swim to the top of the gatewells and into the bypass system that leads them around the dam.

During the drawdown, however, the gatewells were only partially filled with water. Fish couldn't reach openings to the bypass channel.

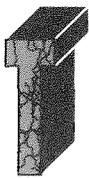
"We're rescuing fish from the gatewells twice a week," Wik said.

In addition, the Corps is measuring the amount of sediment

the river is carrying, the impacts on recreation, the amount of dissolved gasses in the water, the presence of contaminants and the reaction of fish that normally live in the reservoirs, such as squawfish—a salmon predator—crappie and bass.



As the level of the Snake River went down, so did the docks at the Red Wolf Marina in Clarkston.



he Corps also is studying the

speed of the current. On March 17, U.S. Geological Survey hydrologists dumped 285 pounds of pink dye into the gray-green water just below Clarkston and then followed its progress and dispersion down the river.

Even Lower Granite Dam itself is being studied. Various combinations of spill over the dam and water depth in the tail-race—the basin below the dam—are being studied. High-velocity spill—more than 100,000 cubic feet of water per second—appears to create a backwash at the base of the spillway capable of hurling two-foot diameter rocks against the submerged face of the dam, said Wayne John, the Corps' drawdown coordinator.

"At 60,000 cubic feet per second, we're right on the border of being concerned [about damaging the dam]," John said. The average annual flow of the river at the dam is 49,800 cubic feet per second, but it can get up to 100,000 cubic feet per second during the spring runoff.

High-velocity flows also froth the water immediately below the dam, a condition that can be deadly to young fish. Nitrogen ingested from the turbulent water can kill fish from a condition similar to the bends in humans—



Bass left stranded by receding water.

nitrogen in the bloodstream. Young fish also can be injured or become disoriented from the beating they take in the rough water.



o Corps biologists carefully monitored turbulence and the concentration of atmospheric gases in the water below the dam as the spill tests continued.

There have been impacts from the drawdown: stranded fish, sloughing banks and marinas without water.

Meanwhile, as the exposed railbed showed, impacts of the drawdown test spread far the dam.

"This is what it looked like here last year at this time," said Bob Gilchrist, owner of the Red Wolf Marina in Clarkston. He showed Council

members and staff a handful of snapshots of boats moored at the picturesque marina. During the drawdown, the docks sat on mud several hundred yards from the river. A large fishing boat and a houseboat are up on blocks in the boat launch; the docks themselves are collapsed like so many limp, brown ribbons.



ilchrist said he doesn't know how much repairs will cost. He said he plans to make an inventory when the water level is back to normal.

Downriver a few miles at Chief Timothy State Park, boat launches and swimming areas also are dry and distant from the water. A solitary, landlocked sign warns that no lifeguard is present.

The Snake is a popular recreation destination in the Lewiston-Clarkston area. Chief Timothy Park averages about 114,000 visitor trips per year, but that is only a small percentage of the total number of visitor trips to Lower Granite Reservoir, accord-

ing to figures compiled by the Corps of Engineers, which owns the land.

Meanwhile, the lowered river revealed further secrets, including a human skull and other body parts, two stolen cars, a Cessna 150 airplane with the bodies of a Lewiston man and woman—the plane flew into power lines just upstream from Lower Granite Dam on a flight from Spokane to Lewiston in February—several stolen cash register drawers and safes, and a number of firearms. A newspaper report said the body parts were identified as a Lapwai, Idaho, man who was believed murdered in 1988.

The receding water exposed beds of freshwater clams and mussels, and trapped bass, carp and crappies in ponds. Volunteers rescued some of the stranded fish; other fish died.



Drawdown opponents, which include the ports of Lewiston, Clarkston and

Whitman County, initially said they would go to court to stop the drawdown. Instead, they backed off and decided to organize opposition to future drawdowns. They are concerned that shutting down the river to navigation while the reservoir is lowered will force job cuts and higher transportation costs for products that normally would be carried by

Drawdown supporters have argued that a two-month shutdown won't seriously harm the barge lines or ports.

barges from their port facilities. Drawdown supporters have argued that a two-month shutdown won't seriously harm the barge lines or ports.



The Council's Columbia River Basin Fish and Wildlife Program says that the Snake River drawdown strategy should be implemented by April 1995 unless it is shown to be structurally or economically infeasible, biologically imprudent or inconsistent with the Northwest Power Act. ■■



At a restaurant in Clarkston, encouragement for salmon.

THE NEXT SALMON ACTIONS

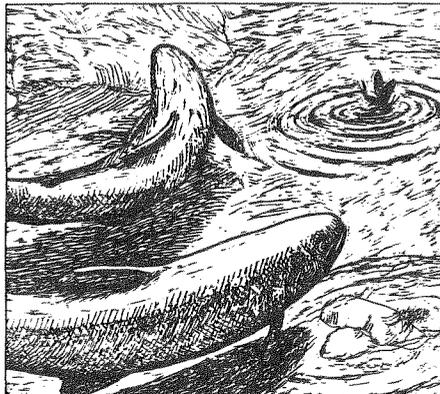
This spring and summer, the Northwest Power Planning Council is continuing its Columbia River Basin Fish and Wildlife Program amendment process to address weak salmon runs. Focus now is on the environment of the fish and production practices.

An important part of this work is establishing a rebuilding schedule and biological objectives for Snake River spring and summer chinook salmon.

The Council has proposed three objectives concerning the natural environment where salmon spawn and are reared: 1) maintain the quantity and productivity of all existing and potential salmon and steelhead habitat; 2) improve the productivity, where appropriate, of salmon and steelhead habitat; 3) ensure that habitat improvements are coordinated throughout each watershed.

The current amendment process comprises the third phase of a multi-year effort. Phase one, completed last August, included a number of priority measures to bring immediate aid to depleted salmon runs. Phase two, completed in December, included measures to increase spring and summer flows in the Snake and Columbia rivers to speed the migration of young fish to the ocean, and harvest controls to increase the protection of returning adult fish.

In phase three, the Council is addressing a number of issues, including fish production, both in the wild and in hatcheries, and improving spawning and rearing habitat. A plan that analyzes each of the nearly three dozen subbasins in the Columbia Basin for their potential to boost fish production also will be reviewed in phase three. The plan was prepared for the Council by the Columbia Basin Fish and Wildlife Authority, an association of Indian tribes and fish and wildlife agencies.



The Council began meeting with fish and wildlife agencies, Indian tribes, environmental groups, utilities and other interested groups in January to discuss issues that would be covered in this amendment process.

In February, three issue papers were released for comment (see inside back cover for availability). The Council heard comment on the papers in March, while it continued to meet with groups interested in the amendment issues.

A draft amendment document was released for public comment in April. At that time, the Council also released for public review an inventory of the anticipated economic consequences of the Council's phase two amendments. The Council is seeking public comment on the legality of providing compensation for these impacts.

Here is the continuing amendment schedule:

May and June

Public hearings are being conducted on the draft rule in each of the four Northwest states. Public comment is expected to be closed on June 26. The following hearing dates had been set by the time this edition of *Northwest Energy News* went to press:

- May 18—Pendleton, Oregon, Blue Mountain Community College, 7 p.m. to 10 p.m.

- May 19—The Dalles, Oregon, Tapadera Inn, 7 p.m. to 9 p.m.
- May 20—Warm Springs, Oregon, Community Center, 7 p.m. to 9 p.m.
- May 27—Portland, Oregon, Council central office, 5 p.m. to 9 p.m.
- June 2—Pasco, Washington, Red Lion Hotel, 1 p.m. and 5:30 p.m.
- June 3—Great Falls, Montana, Sheraton Hotel, Aronson Room, 3 p.m. to 7 p.m.
- June 4—Missoula, Montana, Holiday Inn, Ballroom B, 3 p.m. to 7 p.m.
- June 4—Boise, Idaho, Owyhee Plaza, 7 p.m. to 9 p.m.
- June 10-11—Post Falls, Idaho, Templin's Resort Hotel, during the Council's regularly scheduled meeting.
- June 16—Salmon, Idaho, Community Center, 7 p.m. to 10 p.m.
- June 17—Seattle, Washington, Holiday Inn, Sea-Tac Airport, 1 p.m. and 5:30 p.m.

July

Council deliberation on the amendments.

August

Final action on the amendments.

September

Adopt a response to public comments and make it available to those who commented. Begin phase four, which will address wildlife, resident (non-seagoing) fish, and integration of the new fish and wildlife program. ■■

—JAH

by Dennis Bleything

NAILING DOWN A HOUSING DEAL

This spring and summer the Northwest's 18 housing man-

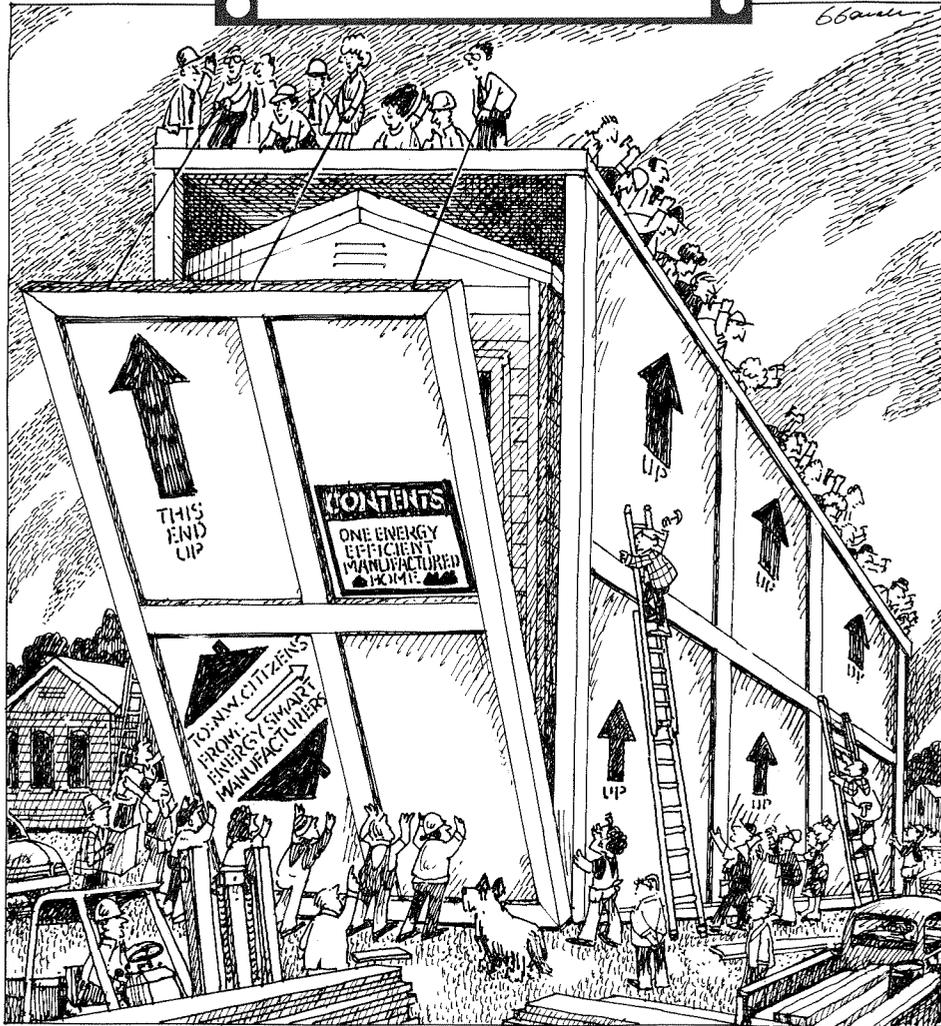
ufacturers will begin building the most energy-efficient electrically heated manufactured homes in the United States. These homes will be so well built that, together, they'll be saving the region enough electricity each year to supply the power needs of 5,000

additional homes. Each one will consume less than half the electricity for space heat than a conventional factory-built house.

New owners of these electrically heated manufactured homes will cut an average of \$200 from their annual combined mortgage

payment and heating bill, while increasing the comfort of their homes. The manufacturers will receive \$2,500 for each energy-efficient, electrically heated home they construct that is sited within the region.

ufacturers seated around the table at the Bonneville Power Administration's large conference room were varied: some had seen utility programs come and go, and had weathered many years in the business. Others were new, coming to hear about the deal



It's a deal that seems to satisfy nearly everyone who participated in its making. But the current satisfaction masks a full year of negotiations, during which the program that pulled together the 18 manufacturers, Northwest utilities and four state energy agencies died, or was in peril, numerous times.

One year at the table

The faces of the home man-

Utilities and housing manufacturers unite to package a great new program.

that was finally cut and would change their industry forever. A few days earlier the region's utilities had a similar meeting to learn the nearly final contractual changes that Bonneville was suggesting.

There were two distinct differences between this pair of meetings and sessions held more than one year earlier. Fewer people came to those early meetings where the deal was made. And now, the faces were more than a year wiser and, if anything, more relaxed, because the guts of the negotiations had gone so well.

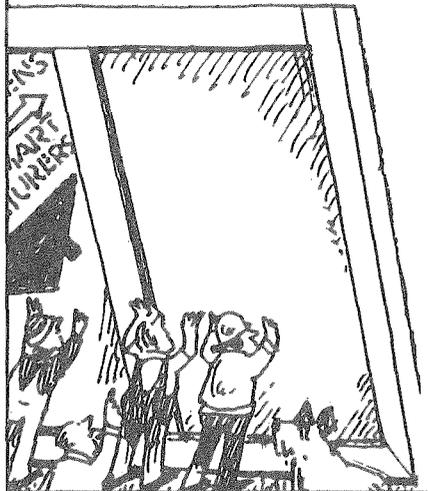
Why create a new program?

A program to acquire energy savings from manufactured housing was called for in the Northwest Power Planning Council's 1991 Northwest Power Plan.

Nearly 30 percent of all electrically heated homes in the Northwest are constructed in factories rather than built at the home site—a total of 10,000 to 13,000 homes each year. The Council had calculated that annual energy savings from building these homes to high levels of efficiency could amount to between 7 and 9 megawatts, enough electricity for 5,000 homes. Yet the electricity acquired through this conservation effort would cost the region only about two-thirds as much as the same amount of power from new generating plants (6.5 cents per kilowatt-hour compared to 11 cents per kilowatt-hour for new generating plants).

But developing a program to cost-effectively capture those savings was not an easy matter.

This spring and summer the Northwest's 18 housing manufacturers will begin building the most energy-efficient electrically heated manufactured homes in the United States.



According to Tom Eckman, the Council's conservation manager, "A program that could buy the energy savings directly from the manufacturers offered the most efficient means of securing this resource. Instead of trying to convince thousands of home buyers to purchase more energy-efficient manufactured homes, the utility industry only needed to negotiate the right to buy the energy saved by those houses from 18 manufacturers."

Getting the manufacturers, four states, Bonneville and most of the region's utilities to reach an agreement was easier than convincing more

than 10,000 home buyers, but not by much, according to Eckman. "The manufactured home market is already over-regulated," Eckman explained, "and they perceive utilities as just another branch of government. Only through steady give and take was trust built between the two."

For traditional site-built housing in the Northwest, the Council maintains that more efficient building codes are the easiest route to saving energy. But factory-built homes are regulated at the federal level, not locally, because they are marketed and sited across state lines. And existing federal standards, devised by the U.S. Department of Housing and Urban Development (HUD), are inefficient and pre-empted the states' rights to enact their own codes for factory-built homes.

Even the most recently proposed federal standards would only achieve 40 percent of the savings that could be secured under the new regional program. It was essential that Northwest manufacturers voluntarily adopt the new standards for the region to garner all of the energy saving potential from the industry.

Out of frustration with the inadequacy of the federal standards and concern about their rapidly growing power needs, individual utilities, such as the Mason County (Washington) public utility district, had adopted a \$2,000-service hookup fee for manufactured homes that did not meet high levels of efficiency. Like Bonneville, the public and private utilities wished to ensure adequate supplies of energy in

the region without constructing a new power plant.

"It was clear that HUD was not going to upgrade its standards in time to meet the needs of Northwest utilities, Bonneville and the Council," said Julie Flansberg, residential services manager for Central Lincoln (Oregon) People's Utility District. "The public utilities saw a large savings potential in an industry that is almost 100-percent electrically heated, and the federal code fell short of insulation levels required by even the older state building codes."

In the approaching shadow of hookup fees, manufacturers began discussing a voluntary nationwide plan as early as the spring of 1990, said Joan Brown of the Washington Manufactured Home Association. In the fall of that year, Brown wrote to Ted Bottiger, one of Washington's representatives to the Council, to request assistance in getting discussions going for the program. Meanwhile, the state energy offices were drafting their proposal and submitting it to Eckman.

Hookup fees make for poor public relations, and so even while investigating using the same stick, most utilities hoped to find a carrot they could use instead to acquire the energy they needed.

"The Manufactured Housing Acquisition Program [or MAP, as it is referred to by its sponsor, Bonneville] first appealed to the investor-owned utilities because of the inherent logic of going after the resource through negotiations carried out by a small group of key decision-makers," said John Graham, building codes and appliance standards manager for Portland's Pacific

Power and Light. "The old utility way of sending out an army of people to weatherize homes is not the way of the future," he added.

Build what? For how much?

Manufacturers were first shown a set of draft technical specifications developed by Bonneville and the states, and asked if they could build to it regardless of cost. "Yes," the answer came back, "it's do-able."

The next question was more difficult. In a meeting planned for a full day, but lasting only until noon, utility representatives asked manufacturers to build in the

Getting the manufacturers, four states, Bonneville and most of the region's utilities to reach an agreement was easier than convincing more than 10,000 home buyers, but not by much.

efficiency measures for \$1,500 per home.

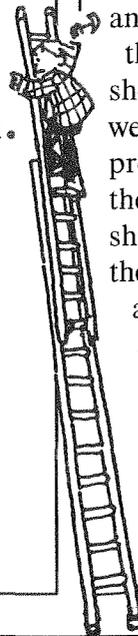
The manufacturers withdrew for a conference and utility representatives waited tensely, sipping coffee and occasionally hearing loud but muffled comments from the adjoining room. After their caucus, the manufacturers returned to politely suggest that the utilities call when they were willing to offer a sum high enough to offset the costs of the energy measures. Otherwise, manufacturers felt that their customers would be better off with the hookup fees.

The majority of manufactured homes are purchased by first-time buyers or those with limited incomes, and increased costs of even a few hundred dollars could move the homes beyond the reach of these customers.

The cost of the conservation was a sticking point for about three months, until one all-day shirtsleeve session where Eckman and the manufacturers' technical staff met to crunch numbers.

"This was real-time computing," Eckman said. "The manufacturers' people would run cost analyses, and then I would plug them into my laptop spreadsheet. By the end of the day, we were only \$50 apart. I was impressed," Eckman added "that the manufacturers were able to share figures about what it cost them to do business, and reach an agreement, while carefully avoiding the subject of prices to consumers."

"All in all, the process was very friendly and handled with good will," Brown said. "The meat of the negotiations, in terms of what manufacturers



would do and how much the utilities would pay, was settled by October 1991." Since then, most of the discussions have involved contractual matters with Bonneville.

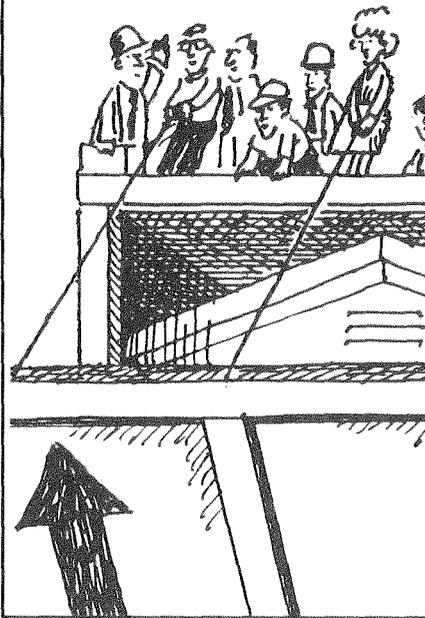
The program required a regional broker to pay the manufacturers and collect from utilities across the four states, a role filled by Bonneville. To begin the program with a minimum start-up time, manufacturers needed to order materials before the start-up date. Utilities, however, could not cover expenses incurred before they had signed contracts with Bonneville.

Bonneville agreed to cover manufacturers' start-up costs. "The manufactured housing program provided a particularly exciting opportunity to follow [Bonneville Administrator] Randy Hardy's lead to take a little risk and aggressively go after conservation resources," said Don Davey, Bonneville's acquisition program manager.

Utilities expressed a strong concern over in-plant quality control that would deliver the savings they were going to buy. The state energy offices agreed to coordinate in-plant inspections through the use of state agencies and private contractors. Energy office staff also arranged for utility representatives to tour manufacturing facilities so that quality control concerns could be addressed first hand, and modern manufacturing practices could be observed and understood. For their part, manufacturers agreed to incorporate the program specifications in their quality control manuals.

Utility participation is essential to the success of this program. Manufacturers cannot

Even the most recently proposed federal standards would only achieve 40 percent of the savings that could be secured under the new regional program.



afford to build a variety of efficient models to suit the requirements of each utility district. For two investor-owned utilities that have been traditionally independent of Bonneville conservation programs—Idaho Power and Washington Water Power—cooperating with Bonneville on this program is a first.

Broad benefits

"It's a good deal," said Curtis Richards of Guerdon Industries, an Oregon manufacturer. Speaking at a breakfast meeting held to introduce the new program to housing retailers, Richards said that manufacturers worked with

utilities to "come up with a win-win program. Assuming that the technical calculations are correct, the manufactured housing program is a far more efficient way, both financially and environmentally, to meet the region's needs than to build a new power plant," Richards said, adding, "This is the type of common sense approach that we should take both within the region and across the country."

The Northwest's economy should benefit from the program beyond just acquiring the low-cost energy savings. In Idaho, for example, new window manufacturing facilities required to supply more efficient windows for these homes will create 20 new jobs, according to Ken Eklund, from the Idaho Department of Water Resources.

Additional economic gains are predicted by Michael Lubliner, of the Washington State Energy Office. The utilities' annual investment of \$25 to \$30 million in new manufactured homes built in Northwest factories is far better for the region than a new power plant built on a single site and financed outside the region, he suggests.

The Council shares this view. "I'm convinced we can use energy conservation as a means to create jobs and enhance industries," said Ted Hallock, Council chairman. "This is one of the best examples of regional cooperation that I can imagine." ■■

Dennis Bleything is a Portland, Oregon, writer.

**Point
of
View**

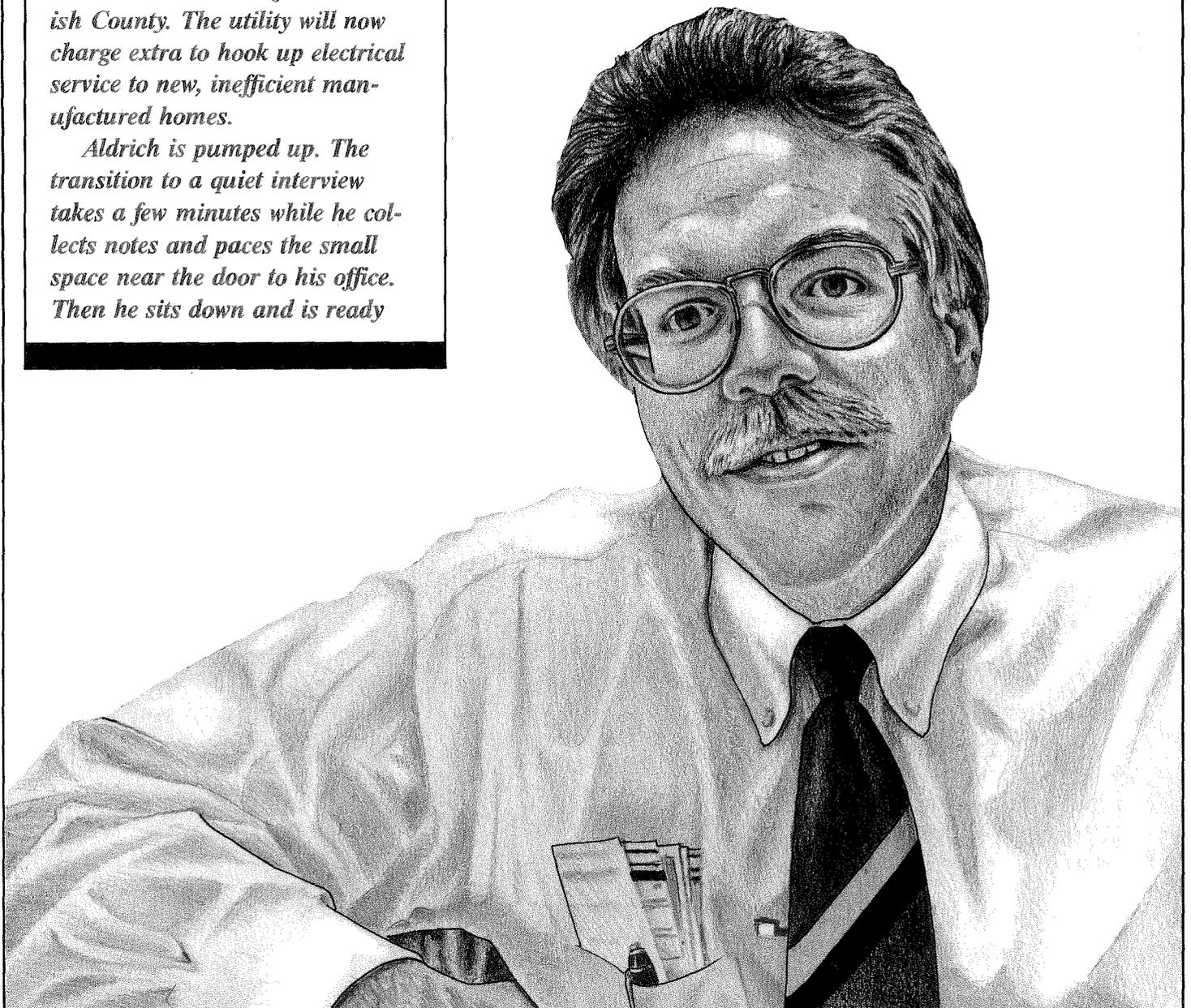
with
Carlotta
Collette

Al Aldrich

Snohomish County's point man for conservation makes it seem easy.

Al Aldrich spins around the corner and comes into view, breathless from a utility commission meeting where he has just helped push through another conservation innovation for Snohomish County. The utility will now charge extra to hook up electrical service to new, inefficient manufactured homes.

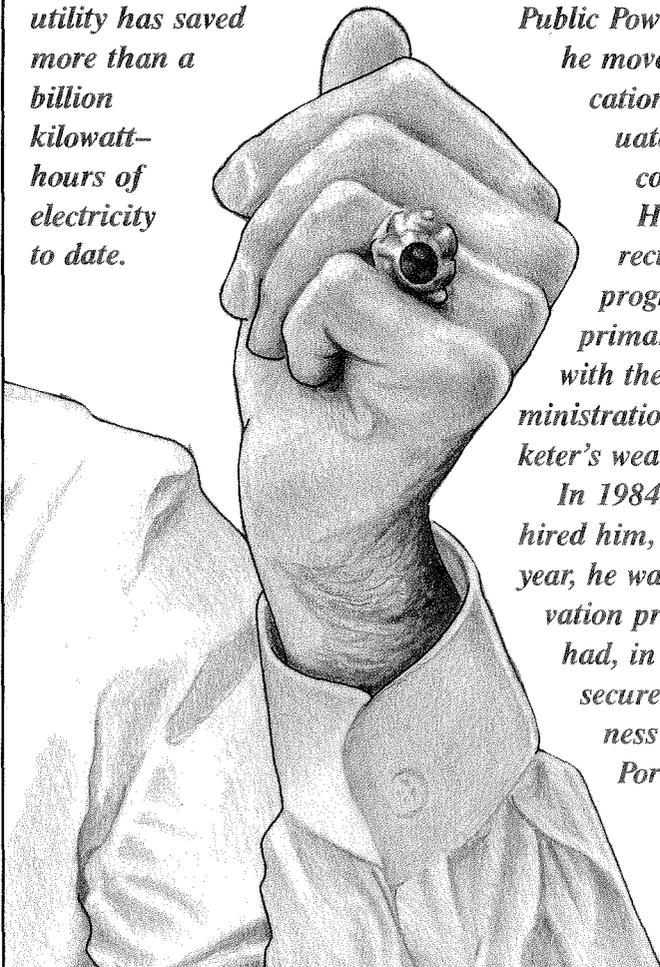
Aldrich is pumped up. The transition to a quiet interview takes a few minutes while he collects notes and paces the small space near the door to his office. Then he sits down and is ready



Portrait by Jerry Kruger

to talk about his eight-year tenure at the utility that serves communities north of Seattle in Snohomish County, one of the fastest growing areas in the Northwest.

From the second big push for conservation in the region early in the 1980s, (the first was in response to oil shortages in the 70s) Aldrich has been one of the Northwest's most consistently creative thinkers on conservation. His utility has saved more than a billion kilowatt-hours of electricity to date.



Aldrich grew up in Chehalis, Washington, not far from the shadow of the Centralia Coal Plant. During the summer of his junior year in high school, Aldrich got a job as a tour guide at the Centralia facility. From that time through college, he worked for utilities most summers—Washington Water Power, Pacific Power and Light, and Tacoma City Light.

Soon after college, Aldrich went to work for the Northwest Public Power Association, where he moved from a communications job (his undergraduate major) into work on conservation programs. He quickly became director of conservation programs there, working primarily on negotiations with the Bonneville Power Administration over the power marketer's weatherization program.

In 1984, Snohomish County hired him, and within about a year, he was manager of conservation programs there. He had, in the intervening years, secured a Masters in Business Administration from Portland State University.

The customer service and marketing focus of that education has influenced

his approach to conservation. "Utilities have to remember they are part of regular society," he says. "Customers will compare you to the other businesses they deal with. We can't all be Nordstrom, but we can try. As utilities, we have to work harder to listen to our customers and understand what they want."

If he hasn't had sufficient opportunity to put that theory into practice so far, he will now. In a recent reorganization at Snohomish, Aldrich was promoted to director of customer communication and services development. In that role, among other tasks, he will serve as the "architect" of conservation programs.

"A goal of the reorganization," he explains, "was to move in a direction where it would become part of everyone's job to achieve conservation. The thinking was that as long as there was a separate conservation department with 60 people over there, the rest of the 850 or so employees would figure that conservation was being taken care of. That's what we want to avoid. We want to communicate to everyone at Snohomish that they are part of the conservation team."

Lest one assume that Aldrich is a man obsessed with energy conservation, he will quickly contradict. "I'm your average, environmentally sensitive Northwest kind of guy," he says. "I'm not way out there. You don't have to be on the lunatic fringe. If it took that to be serious about conservation, we couldn't do it. We've mainstreamed it here. Folks are ready for it."

Q. *Let's begin with the early days of Snohomish's conservation efforts. What was the impetus behind your utility's focus on energy efficiency?*

We've been active players in conservation since the '70s. Our data bases all started in 1980, but my boss points out that we were doing things earlier in the 1970s that were conservation related.

But early in the '80s, the real focus and drive was opportunity from Bonneville and customer-driven reactions. Like practically every other utility in the Northwest, we got involved in the WPPSS projects [Washington Public Power Supply System nuclear power plants] in the '70s. We happened to have had the largest shares of most of the plants. We're a big, growing utility, and that was the way to go in the '70s.

The rate effects hit us in the early '80s, when we essentially quadrupled rates. As a consequence, we changed commissioners. We have three locally elected commissioners. The current ones, and we've had them since the early '80s, are very supportive of

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conservation. Matt Dillon is the one who comes to mind first. But, really, all of the current commissioners—Chuck Moon, Pete Newland—also are very supportive of conservation.

At about that time, Bonneville geared up its weatherization program, partly to offset the rate hikes. The weatherization opportunities provided by Bonneville were very attractive.

Additionally, as Bonneville's largest customer, we're always aware of our need to do our part for the regional good. Those of us who were around in the early '80s, really thought we had a [power] deficit. We spent money like crazy, and we weatherized like crazy. That was pretty much the conservation game back then.

We achieved some *significant* results. Then we discovered in 1985 that we really had surplus electricity.

Q. *What's the incentive now? Why has Snohomish kept increasing its conservation effort?*

At Snohomish we have a pretty firm belief that there are several good reasons to do conservation. Number one, it's our job. It's in the law. If you look up the revised code of Washington, the statutes that set up public utility districts, conservation of resources is one of the key statements in there in terms of what our charter as a public utility district is and every other public utility district in the state.

Number two, conservation helps minimize just about every significant problem that electric utilities have today. Conservation helps take pressure off the siting of transmission and distribution facilities. It takes pressure off the EMF [electro-magnetic fields]¹ issue. It takes pressure off environmental concerns, because conservation is widely considered as the resource with the least negative effects on the environment. You avoid the whole issue of damming of the rivers, in terms of the scenic quality of the rivers or fish and wildlife problems. You avoid the whole issue of siting central station plants, especially nuclear, which is still a very hot potato. It just helps take pressure off of all those problems.

The third thing is it's the least-costly resource available to us in quantity, and that's very important. As a public utility, our basic role is to keep customer bills down. That's a pretty key

1. Electro-magnetic fields are given off by most electrical appliances as well as by power lines. In recent years, there have been concerns that these fields could be linked to cancer in humans.

concept that not all utilities have completely sorted out for themselves. But that is our job because we don't have separate stockholders that we need to answer to. Folks that are our customers are our owners, so our interest is their interest.

Q. You mentioned your commissioners' support, who were the key people who sent the signal to conserve energy?

Clearly it starts at the commission at our utility. We have active commissioners. We have commissioners who generally understand our business. They're technically part-time commissioners, like all public utility commissioners are. But they put a lot of hours in. They're very interested in their job, and they're very motivated to do the right thing. We're fortunate in that regard. And they're in support of conservation.

They clearly set the tone on conservation. You've got to start with the guidance, the policy from the commission.

Then we have management that's very supportive of conservation, also. The general manager, Charlie Earl, has been here since 1985. His team is a nice mix of folks who've been around for a long time and folks who've been here half a dozen years or less. For example, my boss, Mark Schinman, has been here for more than 20 years. We have very high quality management.

We also have a very large number of talented staff here at Snohomish. Many of them have been around six, eight, 10 years. They really care about customers, and they really know what they're doing in conservation.

In the statutes that set up public utility districts, conservation of resources is one of the key statements.

Finally, we have customers that are oriented to conserve. We've done some market and customer research, and the results that we see are that we have more customers interested in conservation compared to either national averages or even Puget Sound area averages.

Q. What else makes it work at Snohomish?

You've got to have some financing packages. Money talks. We have had some incredible successes with our zero-interest loan packages that we've been running for a number of years here. These are in addition to the incentives we, and other utilities, offer.

We've got more than \$34 million invested in loans, and \$23 million has already been repaid. These are loans for weatherization. You can either weatherize your entire house using a zero-interest loan from us, or, if you qualify for some Bonneville funding for part of the cost, you can borrow the rest from us.

Having complete financial packages is real important in getting people to sign up to do the work. If you think about it, it's not that much different from the rest of society. One of the cornerstones of American consumer practices today is easy financing. Who do you deal with when you're buying anything costing more than a couple of hundred dollars that doesn't offer easy financing? Practically everything you buy comes with a financing package.

We think loans are a very good investment. Our zero-interest loans for weatherization are achieving a resource for us at around 1.8 to 2.0 cents a kilowatt-hour. Actually we don't understand why other utilities don't do that kind of financing.

We don't borrow money for our loans. We could, but we don't. We just take it out of revenues. They repay quickly. It's a 10-year life, but the average repayment is more like seven years, because if they sell the house, they have to repay the loan.

It is somewhat paper intensive, and, therefore, people intensive. But that financing package makes a big difference to customers.

Q. Snohomish has a reputation in the field for being innovative. Why?

We like to try stuff. We're real big on pilot programs. We're not afraid of saying that something didn't work right, or the way we thought it was going to work. It's easier to roll out a pilot program, run it for awhile, let the customers tell you how it's working and then make the adjustment. That's

one of the key ways we learn around here.

We don't just use incredible new technologies, although new technologies are important. Our commercial programs, for example, rely on very new lighting and motor technologies.

But what we do more often is to package things together. For example, our mobile home retrofit program. It's taking what we learned in weatherizing site-built houses, and it's taking what we know about financial packages and the attractiveness of those to customers, and applying it to a new segment of our customers—people who live in mobile homes.

We've always recognized that conservation should be treated like any other resource analytically. However, it is different from other resources because it happens out at hundreds, thousands of individual sites.

That's different from almost every other resource, whether it's central station thermal, big solar or wind-power developments—whatever it is—combustion turbines, cogeneration—those things tend to be centralized.

In almost all cases, conservation *depends* on the cooperation of your customers. So in that sense, it's *always* going to be a hybrid. It's got to be approached from the customer service point of view as much as from the resource side.

You've got to think of the customers, understand their needs, create essentially a partnership with them. It's not a unique, brilliant Aldrich idea. You've got it in all kinds of businesses, everybody from guys who sell you light bulbs to whatever, trying to use that approach. But it certainly matters in our case, because we do have a

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electric
utilities
have today.**

long-term relationship with those customers, unlike, perhaps, car salesmen

And we think we've done a pretty good job. We do treat conservation very, very straight up on resource analysis. In fact, it's really the cornerstone of what we're doing in resource development here at Snohomish. And we have a great customer service ethic here. We have great feedback. The customer research we've done indicates very high satisfaction and approval rating from our customers.

We're not really interested in building resources, per se. We're not interested in large thermal. We think conservation can meet a good share of our growth. It cannot completely meet our growth because we're such a large utility, and so to grow 3-1/2 percent a year for us, that's a bunch of megawatts. But we intend to meet as much of it as we can with conservation.

Q. You may not be interested in building any large thermal power plants, but I understand you're planning to build a "conservation power plant." Tell me about that.

That's the big one for us. In August 1990, the PUD commission asked a number of conservation experts to come in and tell us what they thought we could do with conservation. How conservation could be used to meet our load growth and our utility needs.

They basically said, after meeting for a day and a half, that they thought that we could meet all of our new resource needs with conservation in the next 20 years.

The board and the general manager asked staff to take a look at it, try to put some numbers to it, see what we thought. So we analyzed it for a few months, built on the prior planning we had already done, and came back and said, "Over 20 years, we think we can meet about half our load growth with conservation" at a cost that was proportionally higher than what they had said.

That is a significant deal, to meet half our load growth, because we're so big. So we said, "That sounds pretty good. Let's package it up, and take it down to Bonneville." Bonneville's been talking about how they want customers to develop proposals, and they need more power and all that. So we started talking with Bonneville in the spring of 1991.

From our point of view, the key features of the proposal were: it captured all of our conservation efforts—or almost all—within one umbrella contract, and it pro-

vided us with a lot of flexibility about what we do. We would design the programs. We would adjust the programs based on what our customers tell us, what our customer needs are. We think we know Snohomish County customers better than Bonneville does.

The bottom line ought to be usage. Our performance measure ought to be average use per customer. If it declines the way we think it's going to decline, great, Bonneville should pay us per kilowatt-hour of usage that goes down. That's the other key feature that shouldn't be surprising: as a public utility that places its load on Bonneville, we thought Bonneville ought to pay the going rate for conservation.

So we started negotiating with that package, but Bonneville couldn't get comfortable with

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measuring the results on average use per customer. They threw that part out, but kept most of the remaining pieces.

Some of the flexibility is gone, which we don't like. It could hurt our conservation success, but it still should achieve 38 average

megawatts of conservation in the proposal's seventh year.

We know from our analysis that we cannot achieve the same savings with the Bonneville contracts we currently have. We have done some analysis of that, and we can only get about half the savings with the current Bonneville contracts we have. We're prepared to go in and invest in conservation resources that Bonneville is uncertain of, or is still doing an analysis of: mobile homes weatherization, heat pumps, residential lighting retrofits with compact florescent lamps, just to name a few. There's nothing in here that is not transferable to other utilities.

It's similar to how the [Northwest Power Planning] Council approaches conservation planning. The Council's always said, "We



think you can get 80 or 85 percent [involvement in conservation efforts] over a long period of time if you used all the tools available to you." That's a difficult argument to refute. I'm not sure I endorse it in every instance, but it's a difficult premise to refute, I think, generally.

We're a little nervous that seven years may not be enough time to fully put all of the tools to work. But in general, we think if we have the flexibility, we have the experience to build from, we clearly have the motivation, the region apparently needs the power. It looks to us like pretty much all of the elements are in place.

The way it's set up now is we'll get \$25 million from Bonneville for the early conservation, while we go and get financing for the rest. The total investment in conservation is \$155 million. Bonneville will repay our debt assuming satisfactory performance by us. A number of details still have to be worked out.

It is a good deal. We understand that. Bonneville's people have been sincere in working with us. But we're a little frustrated because it's taken as long as it has. We could start implementing this fall, if we can get the contract approved. That's our goal.

As near as I can tell, there are only two utilities in the region that have any firm plans or clear sense of how they're going to meet their proportional share of Bonneville's conservation or the regional conservation targets that the Council set [in the 1991 Northwest Power Plan]. That's Puget [Sound Power & Light] and us. And we haven't got ours in place because we don't have a contractual vehicle with Bonneville yet.

You've got to think of the customers, understand their needs, create essentially a partnership with them.

It causes us some anxiety that the rest of the utilities haven't identified how they're going to reach those goals, and yet we're all pretty sure the analysis says we ought to be able to get there. But there's always that jump from the analysis to doing it.

I think the Council's current focus on "a time to act"—implementation rather than planning—is in the right place. We know a lot about how to implement conservation, but there's a lot we don't know. And, frankly, there aren't very many utilities that are running flat out as near as I can tell.

Q. How have you viewed Bonneville's role in this?

Bonneville seems to agree conceptually that they just have to get more flexible about how they implement conservation. Their classic, centrally designed approach has some flaws. It obviously works. Look at all we have achieved. But when it comes to ramping up, the administrative structure and burden on Bonne-

ville would be tremendous. They simply can't afford to staff up to get the kind of megawatts they need using the current employees-per-megawatt ratio.

One of the key things about our power plant proposal is that it changes that whole relationship with Bonneville for us administratively. It makes life a lot easier on their end, and we just don't have the kind of complex contracts that we're all used to.

I think there's a role for centrally designed programs and the kind of centrally designed analysis that Bonneville does. But right now that's what drives the process, and we're pretty sure that's not the way we want to do it. I think they need to take more risk. I think they need to allow the utilities to pick up more of the responsibility.

We don't need Bonneville's central staff to design every program. I think they would tell you that if you talk to them, also. There are some utilities that prefer that Bonneville do that, and that's fine. I think there's plenty of room to use all those tools.

A lot of the large public utilities are waiting for the right economic signals and cash flows from Bonneville. We've either got to find a way to speed that up or make it not be the central feature that it is today between Bonneville and the public utilities on conservation programs. ■■

Snohomish's "Can Do" Conservation

They like to experiment with conservation programs at the Snohomish County Public Utility District, north of Seattle. "We like pilot programs. We tend to create them from scratch, run them for awhile, then look at the numbers to see how we're doing," says Al Aldrich, director of customer communications and services development (see interview) at the utility that serves more than 220,000 customers in the suburbs and small cities that make up Snohomish County.

Snohomish is the Northwest's largest non-municipal public utility and the biggest single buyer of the Bonneville Power Administration's electricity. About 6 percent of Snohomish's investments go to energy conservation. The national average for utilities investing in energy efficiency is 2 percent.

In the 13 years since the utility set up its first conservation department, it has saved more than a billion kilowatt-hours of electricity, completing nearly a quarter of a million energy saving projects, mostly in residences in the county. More than 49,000 homes have been weatherized.

Last spring, the utility spent one month working with Washington Natural Gas, the area's gas utility, to test whether joint marketing of a program that invited customers with electric water

heaters to switch to an efficient gas water heater would be an effective electricity saving opportunity. The two utilities included each other's marketing materials in joint mailings and sent one of each utility's staff auditors to each participant home. They found that responses were far more favorable than when Washington Natural Gas had approached customers on its own.



Now both utilities are studying the resulting numbers to see if they want to continue the project, and, if so, how they would refine it.

Under its latest innovation, the "conservation power plant" it has appealed to Bonneville to fund, Snohomish could conduct a variety of conservation programs. "We like this idea," says Aldrich. "It is simple. It gives us the flexibility to do our thing."

Aldrich admits that the utility is just beginning to truly tap the energy saving potential of the commercial and industrial sectors

of his community. The utility recently received a package of some 20 energy saving projects that the Boeing Company, the utility's biggest customer, would like to undertake. The total cost of just three of the projects could be as high as \$2.3 million.

"We won't be paying the whole cost of these," explains Aldrich, "but there are some significant projects in there." Any of these, and others under consideration by Snohomish's second biggest power user, the Scott Paper Company, could fall under the auspices of the conservation power plant idea.

Snohomish was also one of three Northwest public utilities to agree to sell its energy savings to another utility, Puget Sound Power & Light, in the first "conservation transfers" program in the country. "We're doing conservation in our service area and selling the offset power to Puget," Aldrich says. "In return, they're paying us to help offset our costs of doing the conservation." The idea came from the Northwest Power Planning Council, but "nobody could figure out how to do the darn thing," Aldrich adds. Snohomish did. ■■

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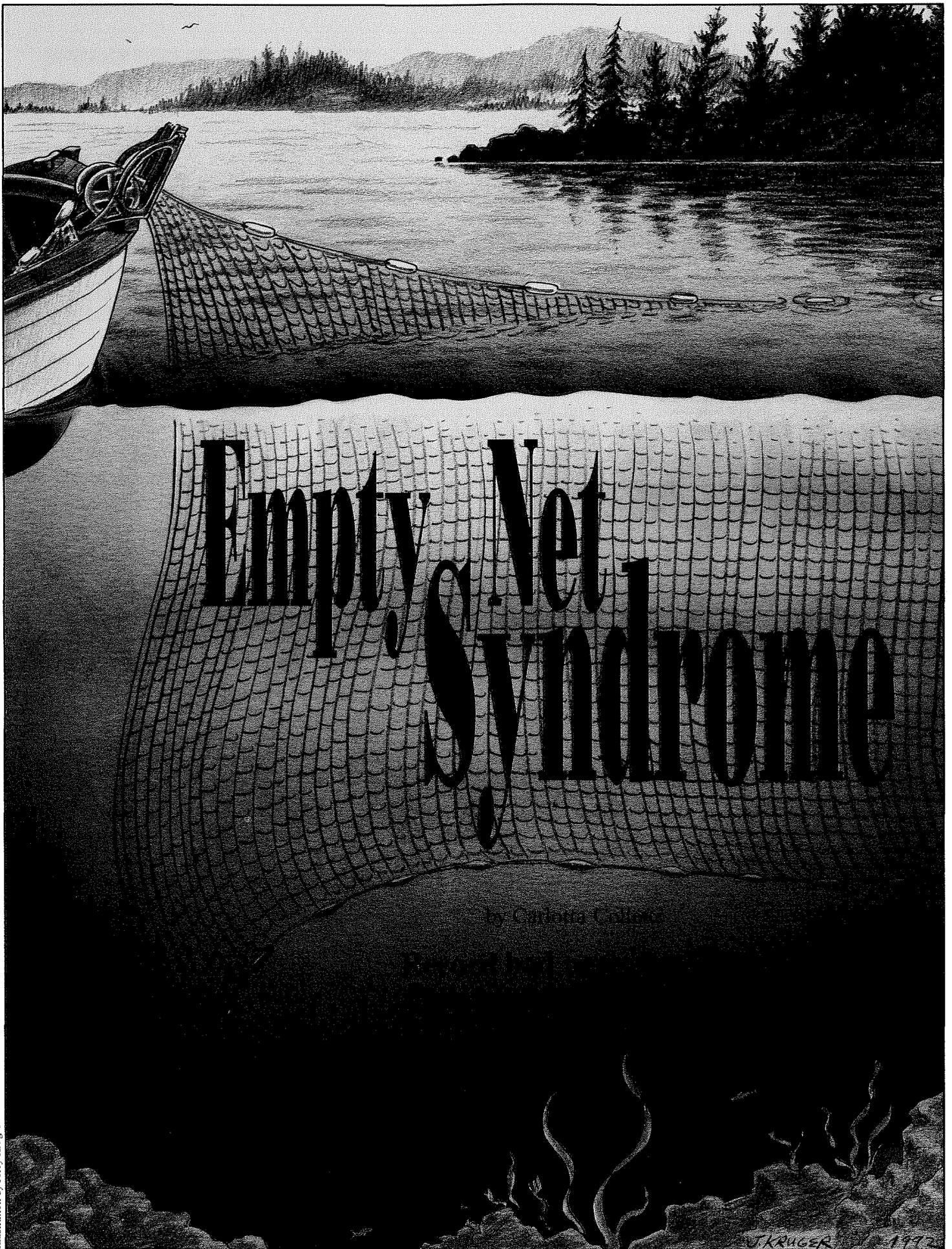


Illustration by Jerry Kruger



Wednesday,
February 26, 1992

Just two days short of the end of winter gillnetting for chinook in the lower Columbia River, the Columbia River Compact is meeting to consider extending the harvest season by another two days—from noon Friday the 28th, till noon on Monday, March 2. So far, fewer than 4,000 salmon had been caught in the entire 1992 lower river winter gillnet fishery. With steady fishing, another 1,100 or so could be caught in the next two days.

If the estimates of technical advisors to the Compact were close, 3,200 more salmon could be caught during the weekend extension. But about 377 of them were expected to be Snake River-bound. Maybe 122 of these could be wild Snake River salmon: fish whose numbers have so declined as to call into play some of the toughest government action permitted to protect natural resources—the Endangered Species Act.

The Compact is an alliance formed in 1918 by the states of Oregon and Washington as a forum for managing commercial fishing in the Columbia River. Among all of the complex and overlapping jurisdictions where the harvest of various species of fish is managed, the Compact may be the simplest. Two people make the decisions. They take guidance from fishery management plans developed by Indian tribes, and fish and wildlife agencies from each state, but they

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have the authority to make the decisions. Fishers who like dealing with the Compact say they like it because, with only two people, at least decisions *are* made.

On February 26, the decision is made by default. After hearing technical reports on the number of fish caught to date and taking comment from the public (one theme: just let us fish till we get our quota), Bernie Bohn, from the Oregon Department of Fish and Wildlife, makes the motion to extend the season. The member from Washington, Department of Fisheries Director Joe Blum, refuses to second the motion. The motion dies. There's no vote. Come Friday at noon, the winter gillnet season on the lower Columbia would end.

It is clear that the decision is an onerous one for Blum. Not much loved by harvesters who contend that he favors sportfishing and is trying to eliminate the commercial fishery in the lower river, Blum, nonetheless, threatens to "get physical" if he hears again that "harvest is the problem" with the Columbia salmon

runs instead of the Columbia's dams. "But it's time to step up to the seriousness of the situation with spring and summer chinook on the Columbia River," he acknowledges. "Here's our chance to prove we're stepping up to the table."

The table Blum alludes to was set by the Northwest Power Planning Council. The Council argues that both the harvesters and the dams have contributed to the decline—as have destructive logging, mining and roadbuilding processes; cattle grazing in streams; and diversions of water to farms and cities, which left creeks dry.

"Most of what society did in the last hundred years here helped kill off the world's greatest salmon fishery," says Power Council Chairman Ted Hallock, of Oregon. "We're too far down the road now for easy solutions," he adds.

The Council, moved both by congressional mandates in the Northwest Power Act of 1980 and by the urgency of endangered species declarations on some Snake River salmon stocks, is attempting to put in place a package of measures to repair the damage, rebuild the runs and distribute the costs fairly among water users in the region.

With the support of the four Northwest state governors, the Council took the better part of last year, and plans to take all of this year amending the Columbia River Basin Fish and Wildlife Program, which it first devised in 1982 and has been adjusting and refining ever since. Because program actions are funded primarily by revenues from the sale of Columbia River hydropower—

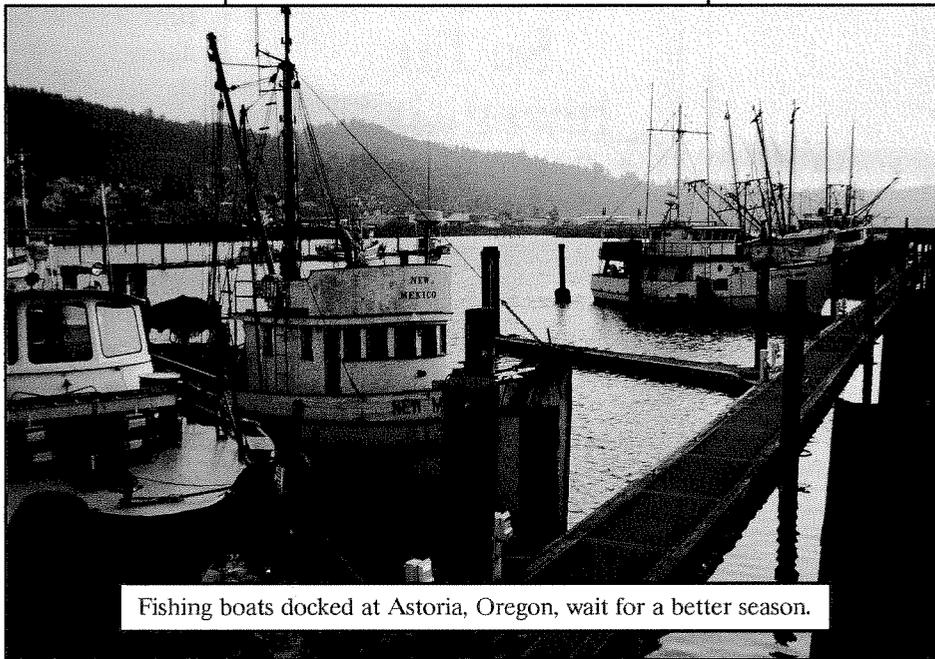
costs that are passed on to ratepayers—every change in the program requires broad public scrutiny and debate.

In the first phase of the amendment process, completed last August, the Council called for immediate screening of irrigation withdrawals where

salmon had been washed out into fields, and repair of important upriver habitat, to increase spawning opportunities for those salmon that *do* return.

In the second phase, on which a decision was reached in December, the difficult questions of harvest restrictions and salmon survival at the Columbia's dams were attacked. (See "Lowering Granite" on page 3.)

Although the Power Council has no specific authority to influence harvests of salmon, the state governors closed ranks behind the Council, directing their state fish and wildlife agencies to cooperate. The Council asked for further cuts in ocean and river harvests, including a voluntary program to buy out or lease back gillnet licenses, and for exploration of additional ways to focus harvests on those runs of salmon that are still thriving, while survivors of the more vulnerable runs are allowed to escape back up the river to reproduce.



Fishing boats docked at Astoria, Oregon, wait for a better season.

The closure of the winter gillnet season and subsequent early cutoff of recreational fishing in the Columbia, even before catch limits were reached, are viewed by the Power Council as signs that harvest managers are indeed cooperating to bring back the salmon.

The Council is now in phase three of its salmon amendments, where a detailed study of tributaries of the Columbia is being examined to determine the best ways to support increased

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production of the prized fish. (See "The Next Salmon Actions" on page 7.)

"If any parts of the program are going to draw blood," says Hallock, "it'll be over the dams or the harvests. This affects everybody to some degree. Elec-

tricity ratepayers could see an increase in their bills because we need to move the fish—and therefore the water—through the system faster. We'll lose some power to do that.

Farmers and ranchers who irrigate from the Columbia system will feel the bite. But the people who live directly off the salmon might be the worst off in the short term. Of course, if the program works, the harvesters will also be the greatest benefactors—the ones who are left."

**Thursday,
February 27, 1992**

The last day before the close of the winter gillnet season, Jack Marincovich, a third generation gillnetter with a heritage that matches his name and goes back to Yugoslavia where his ancestors fished, sits at his father Andrew's table. Andrew is the mayor of Clifton, Oregon, about 20 miles upriver from Astoria. Being mayor of Clifton is not a taxing job for the 80-something year-old man. Can't be more than 10 people total in Clifton these days.

Mostly gillnetters lived there, and, like the salmon, gillnetters are disappearing from the river.

Together the two men stare out the broad kitchen window to the Clifton Channel just below. About an hour ago, their neighbor had headed upstream in his one-man boat to set his net. Jack plans to follow him out, but because the channel is narrow, and there are certain to be very few fish, he waits till his neighbor drifts back down past the Marinovich homestead before heading out himself. In the main channel of the Columbia, several boats can fish at once, but the Clifton Channel is not much wider than a fully spread net. Two boats would likely tangle.

While they wait, the men talk about Clifton when it was a young town, when the Greeks, Yugoslavians and Italians built three small communities linked by the common fishery. There was a cannery there and two dance halls. A small general store and post office joined the half-dozen "commercial" structures that were the center of town life.

"In those days," recalls Andrew, "We could fish for 10 months of the year." The season just ending lasted *nine days*. For the past two days, Jack has only caught a few fish, includ-

This first 1992 fishing season for Columbia River salmon was a harbinger for the rest of the year and the rest of the fisheries.

ing a sturgeon. Today when he finally hauls in his net it is empty.

"It hardly looks like I'm a great danger to the fishery," he laughs. "I should probably get a subsidy," he suggests, wryly. Already he is beginning to look forward to the fall harvests, when

gillnetters have their biggest catches.

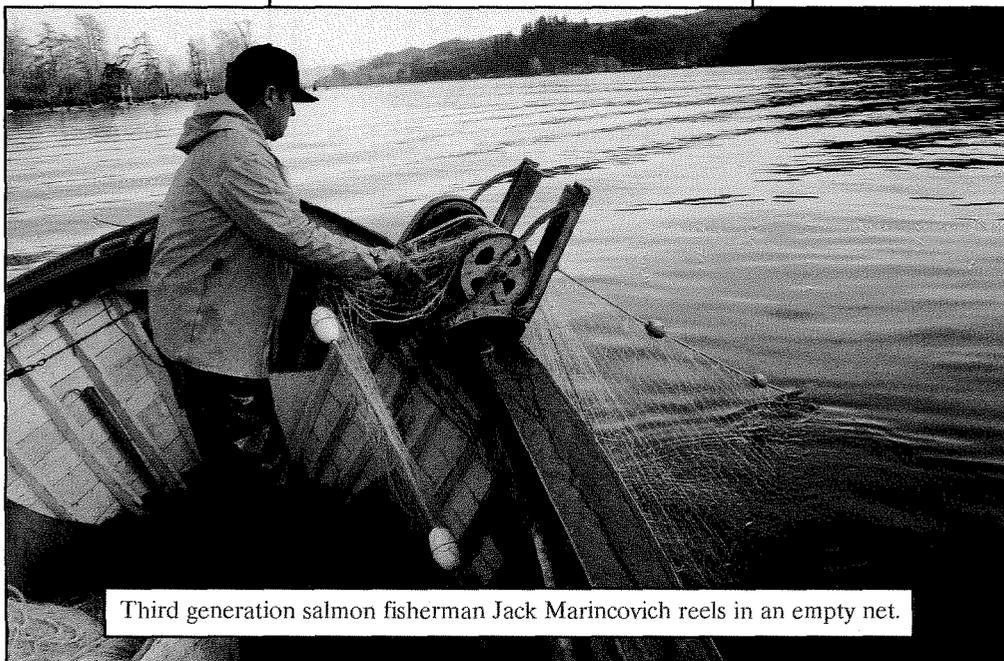
Downstream at Astoria, for the past two weeks (minus the weekends when fishing was curtailed) the gillnet fleet left the docks at dinnertime, heading upstream. Spanning out till each harvester reached the place more or less assigned to him by a convention of long-standing, the fishermen would ease out their 1,200 foot-long nets and begin the long, quiet drift home.

Throughout the night, they would motor upstream and drift back down, hauling in the nets at the bottom of the ride and casting them again at the top. They fish at night because the fish can spot the nets in daytime and may move deeper to avoid them.

Fish-processing ships are positioned among the small gillnet boats to buy the catch as soon as it is brought up, so the harvesters can stay out on the river all night and not have to return to shore to unload. There is too little time.

Now days, almost none of the

gillnetters lives solely off the lower Columbia seasons. Most of them head north to Alaska to reap the bounty of that fishery. If Marinovich's wife didn't work and he didn't go to Alaska every year to fish, the family would never make a go



Third generation salmon fisherman Jack Marinovich reels in an empty net.

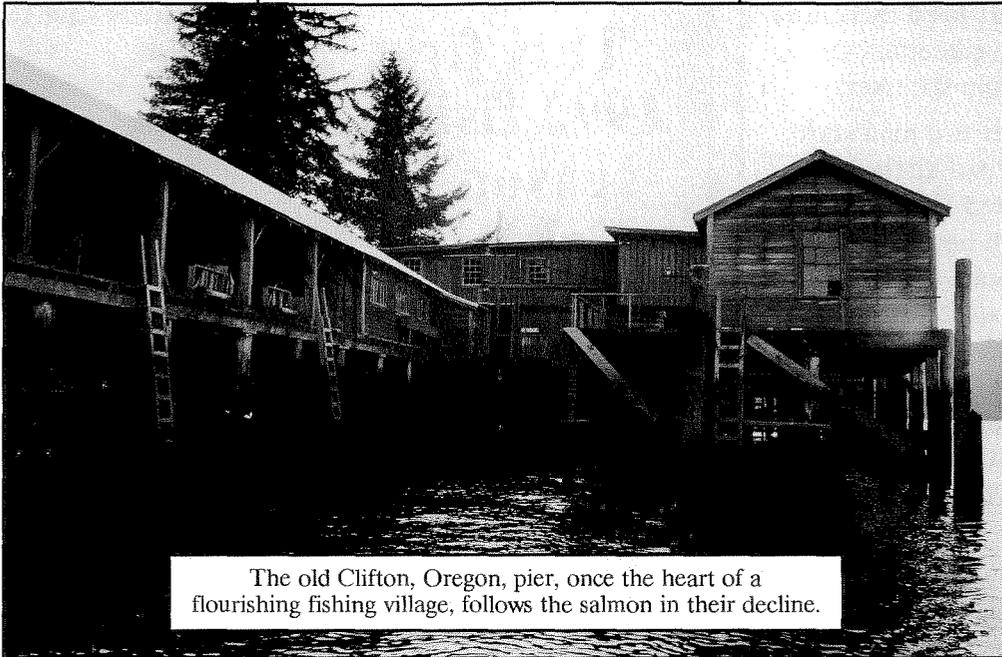
of it. So far, at least, the Alaskan fishery is still good. In 1991, fishers in Alaskan waters caught about 10 percent more than their quotas of chinook.

March 9 through 13, 1992

One more skirmish would be fought to extend the gillnet harvest, but it too would fail. In fact, this first 1992 fishing season for Columbia River salmon was a harbinger for the rest of the year and the rest of the fisheries. The seasons would be short, the harvests small and the nets and hooks would be mostly empty.

While the numbers vary widely from stock to stock, harvesters of salmon originating in the Columbia River Basin could see one of their worst years in 1992. Preliminary pre-season forecasts suggested declines by more than 50 percent under 1991's runs for late season salmon and even worse for spring and summer runs.

That was the message delivered throughout the week of March 9-13, when the Pacific Fishery Management Council convened in Seattle, Washington, to design what are called "options" for the continuing 1992 fisheries on the West Coast below the Canadian border.



The old Clifton, Oregon, pier, once the heart of a flourishing fishing village, follows the salmon in their decline.

Pacific Salmon Commission, the Canadian Department of Fisheries and Oceans, the Alaskan Board of Fisheries and the North Pacific Fisheries Management Council rule. Within three-miles of shore, each state

sets its own limits. Management plans developed by state and federal fisheries agencies and Indian tribes establish long-term goals and short-term objectives for most of the salmon species in most locations, but the harvest quotas are determined by the harvest managers. Their process is remarkably complicated and admittedly imperfect.

By virtue of a treaty between the United States and Canada signed in 1985, the Pacific Salmon Commission, on which sit representatives from the tribes, the United States and Canada, makes the first cut in the shrinking pie that is the Pacific salmon fishery. The treaty set limits on the taking of Columbia River Basin salmon in their northernmost migrations, and the benefits of those restrictions were expected to be passed through the Oregon and Washington fisheries to serve instead as what is known as the "escapement," those fish that make it back up the Columbia to spawn.

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The Pacific Fisheries Management Council, with its teams of biologists and other technical advisors, picks up the fishery at the Canadian border. The Council seats 13 voting members, including: chief fishery officials from Oregon, Washington, California and Idaho; the regional director of the National Marine Fisheries Service; and eight citizen members appointed by the U.S. Secretary of Commerce from recommendations by each state governor.

The Fisheries Council is not quite as facile at decision-making as the Columbia River Compact is. The Council makes recommendations for salmon quotas, releases these for 30 days of public review and comment, revises and refines the options based on review, and submits these to the Secretary of Commerce for a decision. For salmon and certain other fish, this whole process begins in March and must be completed by May 1st for the ocean fishing to begin.

At its meetings in March, the Fisheries Council listened to its

staff report on the 1991 harvests: how many fish of each managed stock were predicted for each segment of the coast-line and how many were caught. The most critical piece of the staff report is the number of salmon that were

able to return to spawn in their upriver streams. Staff and committees have been kept busy over the winter assembling the data and attempting to interpret it. They have also been scouring new figures, trying to calculate what 1992 returns will look like so that new catch limits can be set.

The key to the whole system is cutting off the harvests early enough to reach escapement targets—getting enough fish back to the spawning grounds to produce adequate numbers of progeny to continue the species. But some targets haven't been reached in years. And 1991 was disastrous for most Columbia River stocks contributing to the ocean fisheries.

Upriver summer chinook, for example, were predicted to have an escapement run of 80,000 to 90,000 fish passing above Bonneville Dam, some of them heading for spawning grounds in Idaho. Even the Fishery Council admitted the number was "not attainable." Instead, only 18,800 upriver summers were counted.

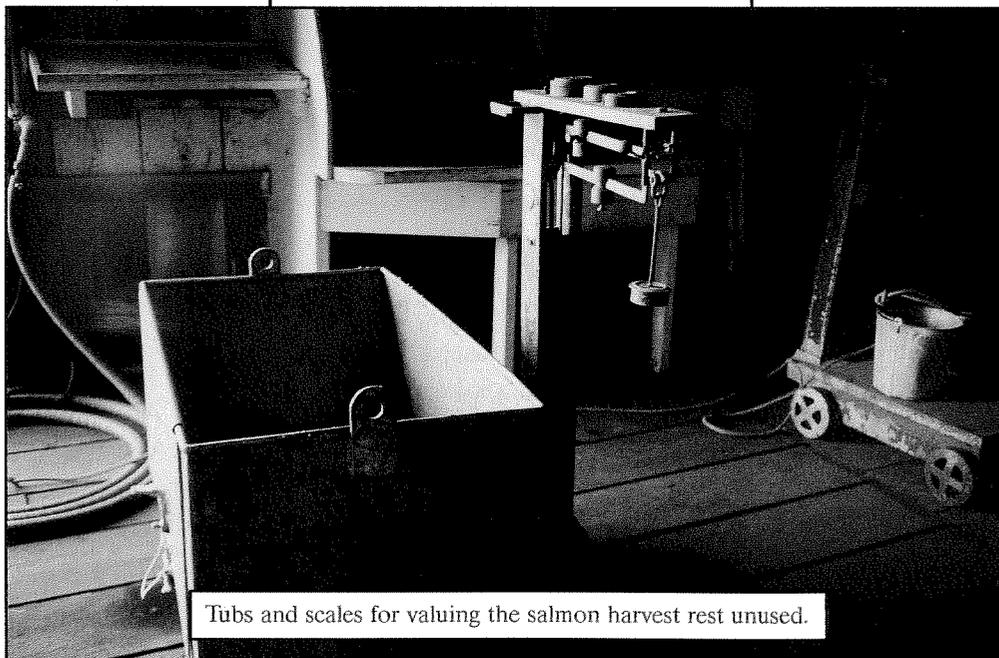
Similarly, upriver spring chinook reached only about 19 percent of their escapement goal.

Staff and advisors to the Fishery Council have used computer models, analysis of marked fish, sampling of catches, counts of early returning fish and numerous other means to determine how many of each stock can be expected in coming seasons. Despite all of this, the process is still flawed.

"We're doing all this fine regulation," explains John Coon, Fishery Council staff officer for salmon, "but we have very little technical information on which to base it. It's real difficult and real expensive to get the data we'd need to do better. Right now," he says, "we can't even make an abundance estimate on chinook, let alone predict how the runs will be affected by harvests. There's a lot of controversy over the data," he adds.

Jim Martin, fisheries director at the Oregon Department of Fish and Wildlife, also argues against the Fishery Council's

practice of setting harvest limits based on predictions of future run sizes. "We've never been accurate on predictions before," he says. "Look at our track record. We've rarely approached our escapement floors."



Tubs and scales for valuing the salmon harvest rest unused.

What concerns Martin and other managers at the table is that even with the most sophisticated planning processes in place, the numbers simply don't add up to a healthy harvest. "We're going to have to put together a package of constraints more severe than I've ever looked at," he suggests. "Sometimes there is no harvestable surplus. We have to look at the truly long term," he adds. "The bottom line is *real* conservation."

Public commentators at the Council's meeting give the managers mixed reviews. Carol Davis a commercial salmon "fisherperson," complains, "You have successfully eliminated commercial fishermen."

But Kent Martin, an Oregon gillnetter, says that the "agencies haven't really defended their own management policies, which have been pretty good. The primary problem," he explains, "is chronic mainstem kill [at the dams]. Every time you find an ingenious way to pass a few more fish up there [the Columbia River], that just validates their issue that harvest is the problem."

"If society as a whole makes a decision to damage habitat and use water in ways we disagree with, we can't dodge our responsibility to manage the fishery," maintains Oregon's Fishery Manager Jim Martin. "We have to educate society that there are no free lunches. Improving escape-ment in the short term will help production, but only in the short term. Every single stock in danger anywhere has an environmental or habitat component."

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On the first day of the week-long meeting, the possibility of a "zero option"—no fishing in coastal waters at all—is mentioned. By the end of the week, the "zero option" is on the short list of recommendations released for public review.

First choice for the managers would be harvest quotas for coho salmon set at about two-thirds of the 1991 levels. Technically, the first option doesn't significantly change the limit on chinook from 1991 quotas. But when the coho quota is reached, the entire fishery in that area is curtailed. Generally, and the managers count on this, the season is cut off because of the coho long before chinook limits are reached, says John Coon.

The Fishery Council's second option carves back the recreational coho harvest by more than half, but only shifts around numbers of chinook and coho that could be caught commercially.

It's the third option—no harvest at all—that gets attention and some support at the meeting and in following weeks. But few people believe it will be the final choice. "I think it's highly unlikely we'll end up with the third option," admits Coon.

April 10, 1992

Coon is right. When the Fishery Council makes its recommendation to the secretary of Commerce on April 10, it is a synthesis of all three options. To protect the badly depressed Klamath River salmon runs, there will be no commercial salmon harvests in the areas that rely most heavily on Klamath stocks—from northern California to Florence, Oregon. For the rest of the West Coast fishery, the rules take some quotas from the first option and others from the second. Nearly all harvests of all stocks in all locations are reduced. For some stocks, this will be the smallest commercial catch in the history of the fishery.

"Certainly, we haven't asked anyone to shut down salmon harvests," says Power Council Chairman Ted Hallock. "Today's crisis wasn't created by fishermen anymore than it was by farmers. But fishermen *and* farmers *and* electricity consumers *and* a whole host of people helped bring down the runs, and all of us are going to have to help build them up again. It's going to take hard work. And it's going to take some time. And it's going to cost us. But we'll have our salmon back, and that will be worth the effort." ■■

Council members meet with utility regulators to push for power plan activities.

The basic outline of the Northwest Power Plan is deceptively simple: Meet growing energy needs by conserving energy. To the extent the region needs more resources, choose generating resources in a sequence that calls for the cheapest and best to be selected first. Build an inventory of additional proven resources by getting some of the preconstruction work out of the way. And, at the same time, research and develop promising resources.

So far so good. But, while the concepts may be simple, the route to implementation is decidedly complex. For one thing, there are very real barriers to carrying

out some of the plan's activities. Many of those barriers are intrinsic to the way utilities are regulated by the states. The need to explore possible changes to regulatory processes in the region was an important focus of the Council's plan.

As an important step in that exploration, the Council, in late February, invited public utility commissioners from the four Northwest states to discuss ways they could all work together.

It was a meeting characterized by candor, a certain amount of frustration about the challenges ahead, and a unanimous agreement that the commissions

and Council should work more closely together.

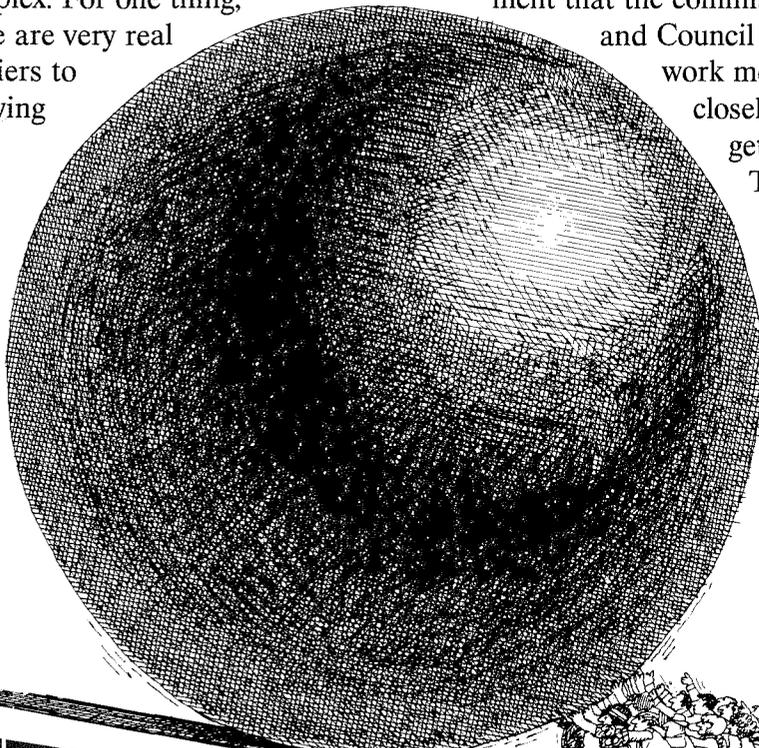
The opinions on

how to get there were wide ranging, but everyone endorsed regionally coordinating their efforts to secure the least-costly resources.

Commissioners and Council members also agreed they should get together again within six months. After that, they anticipate meeting regularly about twice a year to tackle problems that impede implementation of the power plan.

Not surprisingly, the dialogue turned up far more questions than answers. But, as the meeting's chairman, Oregon Council Member Angus Duncan, pointed out, this was an exploratory session. Its purpose was to pin down the issues and areas where it makes sense for the Council and the commissions to pool resources. As it turned out, there was no lack of issues.

"The theme of the discussion, if we were going to put a title to it, is getting signals straight," Duncan explained. "Regulatory signals are going to influence how much risk and what resource choices utility investors take." He told the commissioners, "We've done our planning, and now you're in the lead. What can we do to make your performance more effective?"



GETTING THE BALL ROLLING

by Dulcy Mahar

The commissioners responded by pointing to areas where the Council specifically could provide them with support. A key area is developing mechanisms to measure and report progress toward obtaining energy savings in ways that would be consistent and comparable across the region. Common terminology would be a good start, the commissioners said.

But the barriers to conservation were the biggest issue. Montana Commissioner Bob Anderson told the group, "I've come to the opinion we've got the cart before the horse. We've asked utilities, sometimes in very prescriptive ways, to plan as if they had a level playing field, as if conservation didn't have a disadvantage. But we haven't given them the right incentives to do that.

"Utilities have decades of selling electrons. Just telling them to do something different isn't going to get the job done. So I think the whole subject of barriers and disincentives is the heart of the matter. We have to face up to things like decoupling¹ [utility profits from sales]. Before we're going to get good performance from utilities, we've got to put these incentives in place. Otherwise all the efforts we've put into least-cost planning² will be lost."

Environmental costs of resources—or "externalities"—got their share of discussion—and controversy. While views on the subject ranged widely, there was general agreement that the Council and commissions should work together to further refine estimates of the environmental consequences of resource development.

The need to explore possible changes to regulatory processes in the region was an important focus of the Council's plan.

The way rates are structured was another area of discussion. Oregon Commissioner Mike Katz argued that "rate design and proper pricing are undervalued in demand-side management."

Idaho's Joe Miller agreed that rate design can send important signals. "Historically, rate design and resource planning were unlinked," he said, noting that there needs to be increased attention to linking the two.

Oregon Commissioner Ron Eachus outlined some of the challenges centered around regulatory treatment for utility research and development of new resources. "These research projects are considerable capital investments. Another issue is what do we do to least-cost plans to give utilities some encouragement to participate in research and development efforts?"

The dialogue also touched on some uniquely regional issues, such as energy efficiency in manufactured housing (a housing market not regulated by individual states), and the Bonneville Power Administration's Resource Supply Expansion Program, which is designed to test renewable energy resources and other innovative technologies. The commissioners agreed they should be more involved in those issues where it made sense to take a regional approach.

If no specific regulatory barrier to implementing the plan fell during the meeting, certainly the barriers to communication tumbled readily enough.

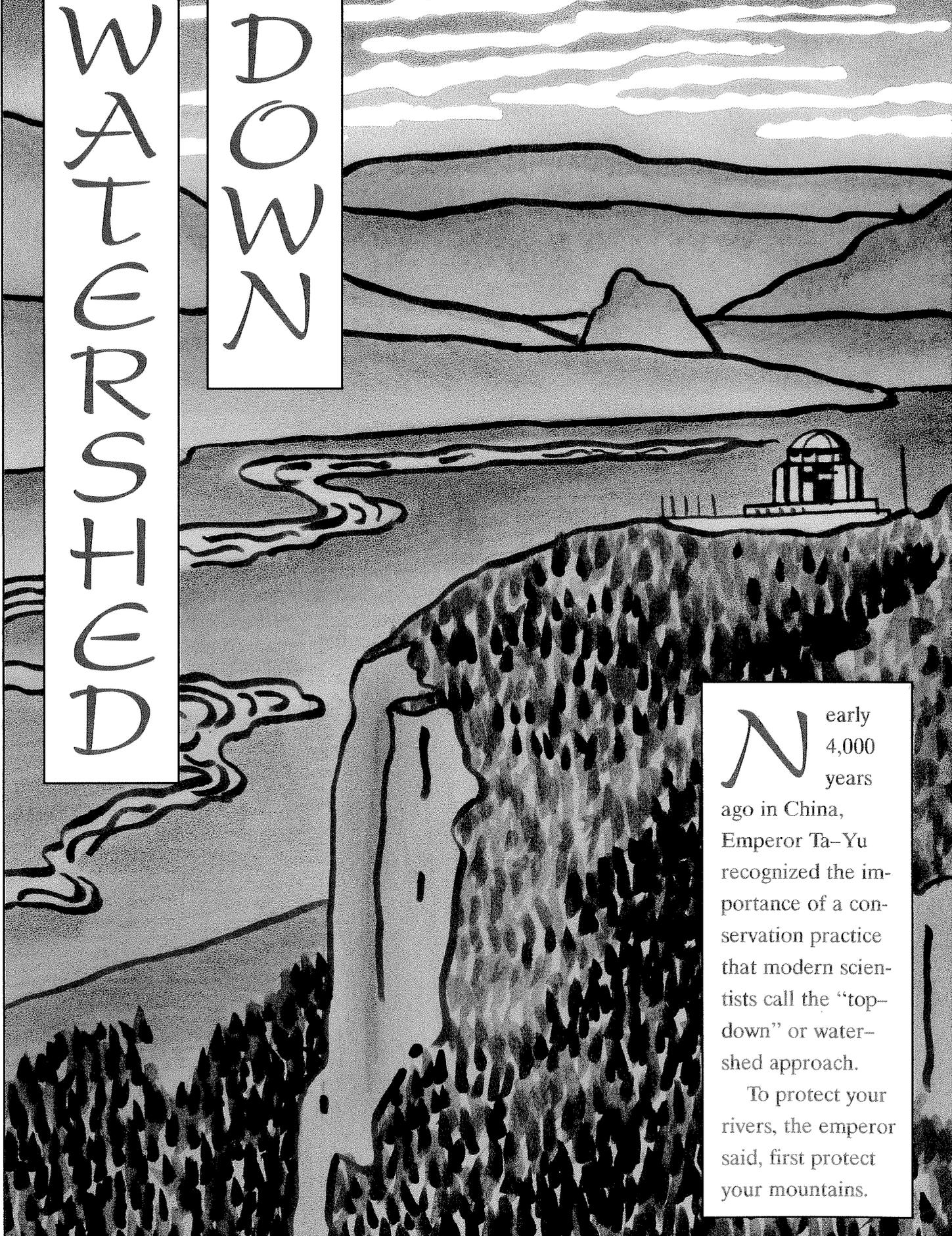
Eachus summed up the general theme throughout the day's discussion when he remarked, "Personally, I don't think the goal is for all of us to come up with the same conclusion. The goal is for us to avoid making our job more difficult by virtue of the fact that we are four different states. We do have some commonalities. We can achieve some degree of cooperation."

No one disputed that. ■■

1. "Decoupling" refers to new regulatory practices that allow utilities to base their rates on the number of customers served rather than the kilowatts sold. In some cases, utilities are also allowed additional profits if they are successful in their conservation efforts.

2. Least-cost planning is the process utilities and others use to evaluate resource choices so that the least expensive resources—in both economic and environmental terms—are developed first.

Dulcy Mahar, the Council's former director of public affairs, is now a free-lance writer.



WATERSHED

DOWN

Nearly 4,000 years ago in China, Emperor Ta-Yu recognized the importance of a conservation practice that modern scientists call the “top-down” or watershed approach.

To protect your rivers, the emperor said, first protect your mountains.

WATERSHED

DOWN

by John Harrison

Modern conservation practices follow an ancient maxim: work down the watershed from top to bottom.

Through the ages, Chinese farmers

struggled against the ravages of soil erosion, a struggle that goes on to this day. As native trees and vegetation were removed to make way for agriculture, rains

washed sediment into river valleys. Floods wiped out valuable downstream cropland.

To combat erosion in hilly areas, crops were planted on terraces. But to control downstream flooding and erosion, the Chinese learned, it was important to protect moisture-absorbing, upriver forests. In river basins where forests were left undisturbed, erosion was less of a problem than in basins where forests were cleared.

That ancient wisdom is in practice today in the Northwest. In northeastern Oregon, the Wasco County Soil and Water Conservation District uses the emperor's maxim to introduce a

To protect your rivers, the emperor said, first protect your mountains.

video about a river repair project that is underway in Fifteenmile Creek, a Columbia River tributary where fish habitat has been damaged by grazing, flooding and erosion. The video stresses the need to take a watershed approach to resource problems, beginning above the stream's source and including all the lands whose runoff drains into the stream.

Around the Northwest, other watershed protection projects are in various stages of completion and more are being contemplated. Most take the total watershed approach.

However, some projects to improve fish habitat—particularly in the last 10 years—focused narrowly on improving conditions only in the lower reaches of streams. Some were successful. Others eventually may be defeated by unresolved upstream problems such as erosion, which deposits silt in rivers and streams.

Silt is a four-letter word. It can cover spawning beds, defeat the purpose of instream structures designed to improve fish habitat, and even cause rivers and streams to change course. Silt also fills in deep pools that are critical for both adult and juvenile salmon.

"A lot of projects have been done downstream of 99 percent of the problem," said Ron Graves, district manager of the Wasco County conservation district.

He advocates the "top-down" approach.

"Treat the upper part of the watershed first," Graves said. "The upper part affects everything downstream."

That theme is evident in a watershed improvement project in southern Wasco and Sherman counties. Graves is working on the project in coordination with Stephen Caruana, Sherman County conservationist with the U.S. Soil Conservation Service. The project involves Buck Hollow Creek, a tributary of the Deschutes River.

The project had its inception with ranchers in the area, who remembered that the creek once supported salmon and steelhead in such numbers that the preferred form of fishing gear was a pitchfork. Old-timers recalled parking wagons by the stream and forking the wagons full of fish.

Over the years, intensive farming and grazing in the 133,000-acre watershed contributed to an escalating problem. Today, fish habitat is degraded. Grazing, erosion and high flows at certain times of the year contribute to reduced water quality and riparian zone damage.

Ranchers and farmers wanted to improve conditions, both for the sake of their land and for the fish. So they turned to the conservation districts, where Graves and Caruana listened to their concerns and devised a management plan. About a year ago, the first piece of the plan was approved for financing by the Governor's Watershed Enhancement

Board. The project also is being considered by the Northwest Power Planning Council for inclusion in the Columbia River Basin Fish and Wildlife Program.

Buck Hollow's management plan takes the top-down approach. The watershed is divided into subbasins that will be treated sequentially, beginning in the headwaters area. The goal is to slow and control runoff through the use of water diversions, terraces, sediment control basins and vegetation. Fencing will be built to manage livestock grazing.

Others who are involved in the project with the 52 landowners include federal and state agencies and the Confederated Tribes of the Warm Springs Reservation.

"This is something the landowners wanted," Caruana said. "We met with them, in 1989. They wanted range management, flood control, tree plantings, riparian treatments, and they wanted to integrate all of this, not just focus on one thing."

Graves said the conservation district "continually stressed to landowners that this is their project; no one was going to come in and dictate to them what to do."

The top-down, uplands-first procedure "is not some revolutionary thing that came down on a cosmic ray," Caruana said. "The engineers have been saying that for years. We realize that we'll never get back to climax conditions, what they were 150 years ago. We are going to have rangeland, cropland, people who make a living off the land producing food for the rest of us. But we are going to try to mimic those (historic) conditions as close as possible."

Silt fills in deep pools that are critical for both adult and juvenile salmon.

Elsewhere in the Columbia River Basin, other watershed management projects are being developed or already are under way. For example, the Columbia County, Washington, conservation district is following on the success of its plan for the Tucannon River (discussed in the March/April 1992 issue of *Northwest Energy News*) with a watershed project for the Touchet River, a tributary of the Walla Walla.

Here are some other projects that are under way:

Fifteenmile Creek, Oregon

Fifteenmile Creek, which flows into the Columbia River immediately downstream of The Dalles Dam, is a unique waterway because it supports the easternmost population of wild winter steelhead in the Columbia River Basin. The creek was devastated by flooding in 1964 and again in 1974.

Irrigation diversions significantly reduce the amount of water remaining in the creek in the summer. Stream channel restoration work was done in the 1970s, and habitat improvements have been under way for more than three years.

As with Buck Hollow Creek, the project is a cooperative effort of the Oregon Department of Fish and Wildlife, Bonneville Power Administration, Wasco County Soil and Water Conservation District, ranchers and farmers. The project aims to repair riverside lands, stabilize streambanks and restore habitat in the water itself.

Trout Creek, Oregon

The Oregon Department of Fish and Wildlife and the Jefferson County Soil and Water Conservation District are working to improve conditions for wild summer steelhead in Trout Creek, a tributary of the Deschutes River. Several other agencies also are participating. Funding is from the Bonneville Power Administration.

Trout Creek was devastated by flooding in 1964. Restoration work did not begin until 1985, when Bonneville funding became available.

Decades of overgrazing, logging and water diversions for farming degraded the watershed. The repair project involves fencing along the creek to keep out livestock and improvements in in-stream habitat.

Sheep Creek, Oregon

The Oregon Department of Fish and Wildlife and a private landowner are working to improve habitat along Sheep Creek, which is a tributary of the Grande Ronde River in Union County. The eastern Oregon stream supports spring chinook salmon.

The Sheep Creek watershed has been grazed heavily for 120 to 150 years by sheep and cattle. Until three years ago, when the Bonneville-funded habitat repair project started, there had been no effort at restoration.

Now, many reaches of the creek have been fenced off to keep out livestock, and instream habitat has been improved for salmon. More fencing and habitat improvements are planned in the 15-year project.

Herd Creek, Idaho

The Shoshone-Bannock Tribes are working with a landowner in the Herd Creek watershed to improve conditions for spring chinook and summer steelhead. Herd Creek is a tributary of the East Fork Salmon River in central Idaho.

Several other agencies also are involved, and the project is being financed by Bonneville. Additional labor and materials will be donated by the Shoshone-Bannock Tribes, the landowner, volunteers and the U.S. Forest Service.

The purpose of the project is to stabilize streambanks, thus reducing the amount of silt in the creek and improving

Old-timers
recalled
parking
wagons by
the stream
and forking
the wagons
full of fish.

spawning and rearing habitat for spring chinook and summer steelhead.

Salmon River, Idaho

The Idaho Department of Fish and Game is leading an effort to install and upgrade protective screens to keep fish out of irrigation water diversions throughout the Salmon River Basin. Screens would keep juvenile spring chinook, summer chinook, summer steelhead and sockeye from being diverted into irrigation ditches and onto fields. Financing is by the National Marine Fisheries Service. Landowners, the U.S.

Forest Service and the Bureau of Land Management also are involved.

Middle Fork John Day River, Oregon

Oregon's Department of Water Resources is leading an effort to restore habitat and improve conditions for fish in this north-central Oregon river. The John Day River is unique because it is undammed and supports wild populations of spring chinook salmon and summer steelhead.

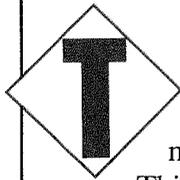
This project involves landowners and a number of county, state and federal agencies. Bonneville, the federal Bureau of Reclamation and the Oregon Department of Water Resources are financing the work.

The project aims to increase wild fish populations by increasing summer flows, moderating water temperatures, improving the quantity and quality of instream habitat and clearing fish passage. Other goals are to enhance soil stability away from the river by controlling erosion, improve streambank stability and increase recreational use while maintaining livestock ranching in the area. ■■



A semiregular update on the region's economic outlook.

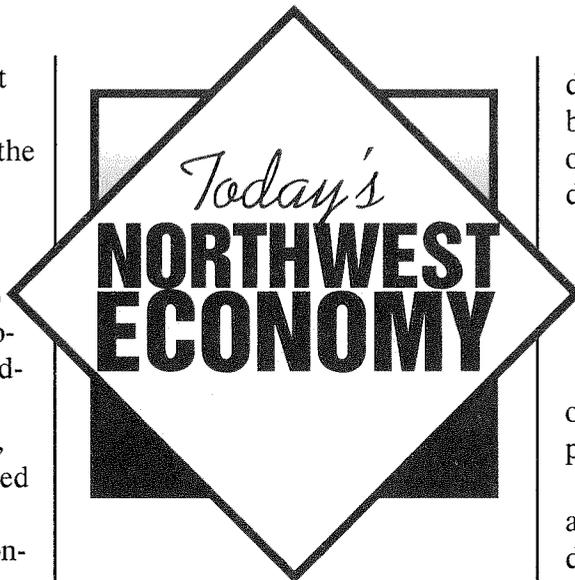
by Debbie Kitchin



The Pacific Northwest has shown much faster growth than the nation in recent years.

This pattern continued during the current recession.

However, recent revisions to employment data show that economic growth has slowed considerably in the Pacific Northwest over the past year. Nonetheless, the Northwest's slowdown started later and, thus far, has been much less severe than the national recession.

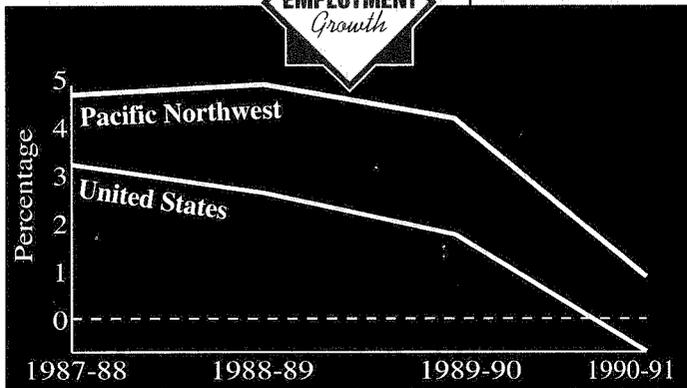


dropped by 19,000 jobs since 1989 because of the combined impacts of restrictions on harvest and a depressed housing market.

Coupled with an anemic recovery at the national level, the outlook is one of slow growth, at a rate slightly faster than 1991, but with a number of sectors continuing to show problems.

The slowdown in growth was anticipated by the forecasts underlying the Northwest Power Planning Council's 1991 Northwest Power Plan. The revised estimate for 1991 total employment is only 0.5 percent higher than the medium case forecast developed by the Council and the Bonneville Power Administration. It is 2.3 percent lower than the medium-high forecast. ■■

Debbie Kitchin is the Council's economist responsible for the economic forecast.



than 5 percent. Manufacturing is also a leading industry, experiencing declines and rebounds before non-manufacturing sectors.

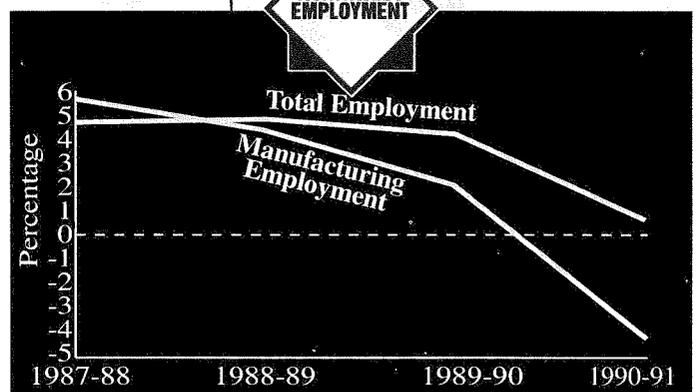
While not nearly as severe as the 1982 re-

cession, the extent of the decline during 1991 is significant and does not bode well for a rapid recovery during 1992.

The two largest manufacturing industries, aerospace, and lumber and wood products, are experiencing declines in employment. Boeing announced plans to reduce its workforce by more than 6,000 by the end of this year. Lumber and wood products employment has

One area of concern in the region's slowdown has been the performance of the manufacturing sector. Manufacturing is an important component of the engine of regional growth. Other parts of the engine include agriculture, mining, the travel industry, and business and computer services that serve out-of-region markets. It is typical in a recession that manufacturing employment is more volatile than non-manufacturing employment.

Manufacturing employment dropped more than 10 percent in the region during the recession of the early 1980s, compared to a total employment decrease of less



by John Harrison

Tribe settles dispute and celebrates the salmon.



Umatilla's

NEW FISH

Illustration by Larry Milam

On the Umatilla Indian Reservation in northeastern Oregon, there was a celebration recently to honor "new food."

"Our new food, the salmon, has returned," said Louie Dick, Jr., a member of the Umatilla tribal board of trustees.

The "new food" was spring chinook salmon returning to spawn in the Umatilla River. Salmon are important to Northwest Indian culture and religion, as well as being a source of food. The annual salmon return—the migration of adults up the river to spawn—is reason to celebrate.

Salmon also were celebrated at another recent ceremony on the Umatilla Reservation. About 50 people gathered in the Yellowhawk Conference Center in Mission, Oregon, in late February to witness the signing of documents that resolve conflicts over the provision of water in the Umatilla River.

The event was significant because spring and fall chinook, and coho salmon became extinct in the Umatilla River in the early 1900s, when irrigation water withdrawals dried up the lower reaches of the river in spring and summer.

Irrigated agriculture is big business in the Umatilla River Basin, and irrigation won the water war for years. Fish lost.

Today, salmon are making a comeback. The first spring chinook run to fight its way up the Umatilla in more than 70 years returned in 1988—13 fish were collected. In 1991, 1,330 chinook returned.

They were indicators of the success of the Umatilla Basin Project, an innovative water exchange that brings Columbia River water to the farmers. The



The annual salmon return—the migration of adults up the river to spawn—is reason to celebrate.



farmers are then able to leave water in the Umatilla for salmon.

It sounds simple, but in fact it is extremely complex because of the number of parties involved, the conflict of Indian fishing rights with farmers' irrigation rights, and the availability of water.

Disputes over how the Umatilla River would be managed nearly tore apart the water exchange program last fall. But negotiations in December, instigated by the Confederated Tribes of the Umatilla Indian Reservation (Cayuse, Umatilla, Walla Walla), led to a resolution that will allow the project to proceed.

"The Umatilla Basin Project is designed to restore stream flows in the Umatilla River and enable us to take the first steps to bring salmon back to our people," Elwood Patawa said at the Yellowhawk ceremony. He is chairman of the tribes' board of trustees.

It was the conflict between water for fish and water for irrigation that led to the Umatilla Basin Project in the first place. In the mid-1980s, representatives of the state of Oregon and the Confederated Tribes asked Congress to direct the Bureau of Reclamation, which is responsible for the irrigation aspects of the project, to devise a plan to resolve the water conflict. The water exchange project resulted from a planning effort that involved the tribes, the state, local irrigators, a citizens' committee, the Northwest Power Planning Council, the Bonneville Power Administration, federal fish and wildlife agencies, the U.S. Forest Service, and others.

The Power Planning Council included the project in its Columbia River Basin Fish and Wildlife Program in 1984 and 1987. Congress approved it in 1988.

The project is divided into four broad areas: construction of facilities to raise fish in, fish passage improvements at dams in the basin, habitat improvements in the upper part of the basin and improved flows in the river. Flow improvements are under the direction of the Bureau of Reclamation. The rest of the work is being financed by the Bonneville Power Administration under the direction of the Council's fish and wildlife program.

Flow improvements comprise about 65 percent of the project's roughly \$78 million cost. Construction began in May 1991 on the first part of the project—a means of diverting water from behind McNary Dam on the Columbia, through existing pipe to an existing irrigation canal and from

there to the Umatilla below Three Mile Falls Diversion Dam. That effort should be completed this year.

Then new pipes and canals, and a major pumping complex on the Columbia will be built to deliver water to the Hermiston and Stanfield irrigation districts.

This second piece of the project constitutes a new appropriation of Columbia River water. As a consequence, it aroused the attention and opposition of two Oregon environmental groups.

In December, the tribes brought together all of the parties in the dispute and, with the help of a private mediation service, resolved their concerns. That cleared the way for the agreement that was signed at the Yellowhawk ceremony.

Patawa said the negotiations involved "...hard work, cooperation, and a tremendous amount of determination."

But the rewards are great. Not only will farmers get their water, but the project should add 112,000 fish to the Columbia and Umatilla rivers and the Pacific Ocean fishery. Without the project, farmers would have had to forego irrigation on 49,600 acres to leave enough water in the Umatilla to rebuild the salmon runs.

At the Yellowhawk ceremony, Antone Minthorn, chairman of the tribes' General Council, placed the project in a historical context. He noted that fishing rights were guaranteed to the Cayuse, Umatilla and Walla Walla tribes by a treaty with the U.S. government in June 1855.



Spring and fall chinook, and coho salmon became extinct in the Umatilla River in the early 1900s.



"Before the Treaty of 1855, our tribes had a thriving fishing economy," Minthorn said. "Fish that we caught were traded as far as the Midwest, up into Canada and down into California. We were a wealthy, self-sufficient nation at that time. The reservation of our fishing rights meant the protection of our economy."

But over the years those rights were ignored or violated, he said, with the result that "...our economy was impacted and our people have suffered." He noted that irrigators in the basin depend on the same water that the 1855 treaty protected for the tribes.

"This has created a situation in which hostility and conflict at one time seemed unavoidable," Minthorn said. But through negotiation, the conflict and hostility disappeared.

"It was through cooperation that we got the Umatilla Basin Project in the first place," he said. "Once again, the policy of negotiation has been successful."

Bill Tofily, manager of the Hermiston, Stanfield and Westland irrigation districts, which will receive Columbia River water through the project, agreed with Minthorn. He said the relationship between irrigators and the Confederated Tribes is closer today than it has been in years.

Louie Dick, Jr., expressed the sentiment of the tribes on a more personal level: "Our people are grateful for those that return the salmon." ■■

Tracking the CAT FORCE

Conservation Acquisition Task

Conservation team tackles problem of too few staff and too much to do.

At the January Conservation Acquisition Task (CAT) Force meeting, it was agreed that means must be found for magnifying the energy savings utility staffs could secure without adding more personnel. Two scenarios for this leveraging of utility conservation staff in commercial and industrial projects were described at the February 20, 1992, meeting of the CAT Force, held at the Lighting Design Lab in Seattle, Washington.

Seventeen task force members attended the meeting, which was led by Tom Eckman, energy conservation manager for the Northwest Power Planning Council. The two scenarios for making the best use of staff and outside help were presented by guests invited for the purpose: John Nordgren of Puget Sound Power & Light Company and Art Vertner of Abacus Resource Management Company.

Using a program that encourages contractors to identify potential customers for efficient lighting retrofits, Puget Power saved 2,500 megawatt-hours in 1991 and has set a goal of 13,000 megawatt-hours for this year, according to Nordgren of the Bellevue, Washington-based investor-owned utility. Because the contractor both identifies the cus-

tomers and conducts the conservation analysis, these savings are three times what would be accomplished if utility staff handled all projects directly.

Project advantages are big. Customers benefit from reduced power bills. The contractors make a profit from their work, and Puget acquires energy at a cost of approximately 2.5 to 3 cents per kilowatt-hour.

Contractors approach the utility with a written proposal that shows the existing lighting equipment, the suggested new equipment, and the projected energy savings and costs. Puget reviews the contractor's analysis and covers up to 65 percent of the cost of an approved project. Requests are turned around within 10 days, as are payments for the energy savings, Nordgren said, noting that prompt service is essential for both contractors and customers. Puget's contract is with the customer, who in turn pays the contractor.

Turn over the energy management of one square block of downtown commercial property to a reputable energy service company and watch the savings. That's the challenge and "dream project" of Art Vertner, President of Abacus Resource Management Company of Seattle. Taking their profits from utility purchases of the energy they save, service companies can reduce both energy consumption and their customers' energy costs.

An energy service company can provide analysis, engineering, general contracting, operation and maintenance services, and financing, relieving both the utility and the customer from such tasks. Service companies take—and manage—risks that utilities may be unwilling to absorb. Because they must guarantee the energy savings, service companies work closely with customers to ensure that necessary changes are implemented to provide the expected savings.

Vertner suggested that utility conservation programs be allowed to run for several years to provide the momentum necessary for service companies and contractors to hire and train staff and implement the desired programs.



Training the new conservers

In January, the CAT Force discussed strategies for increasing education and training opportunities for new professionals entering conservation fields. CAT Force members agreed to work with the Bonneville Power Administration's existing Energy Smart Design Training Committee. The committee concentrated on training personnel who helped acquire conservation in new commercial buildings.

The newly expanded and re-named Regional Education and Training Advisory Committee will now add industrial conservation to its work; develop and help implement education and training strategies for conservation program management; and include representatives from investor-owned utilities and various related trade groups.

To expand its scope without slowing down its progress, the new committee will use a streamlined steering committee to oversee plans for training personnel for several subgroups. The subgroups are: 1) codes, 2) building and operations, 3) architecture and engineering, 4) utilities, 5) contractors and designers, 6) distributors, 7) educators and trainers, and 8) building owners, developers, lenders and occupants.

Margie Gardner of the Council staff will work with the steering committee and serve as liaison between the Regional Education and Training Advisory

Committee and the CAT Force. CAT Force members will have the opportunity to review both the outline and draft for the training committee's plan. The final plan is scheduled for September.

Turning away the Internal Revenue Service

When a utility builds a power plant, the U.S. Internal Revenue Service considers the costs as a capital investment. But spend the same amount (or considerably less) on acquiring an equal number of megawatts through conservation, and the costs are considered income to the consumer and taxed accordingly. Two bills pending in Congress could at least partially correct that situation: S-83 and HR-1007. Both bills are linked to the National Energy Conservation Act and are now in the Senate Finance Committee, and the House Ways and Means Committee, respectively.

Washington State Energy Strategy Committee

The Washington State Energy Strategy Committee will be meeting through 1992 to discuss a variety of subjects, and is soliciting help in identifying barriers that the state's utilities face in implementing conservation programs. A CAT Force subgroup comprised of Washington utility members will work with the strategy committee.

Umbrella communications plan

Marketing communications regarding utility conservation efforts could be coordinated on a regional basis to increase the savings and reduce costs to individual utilities. The Council is considering such a plan, along the lines of BC Hydro's Power-Smart Program. Interested utilities are invited to contact Eckman.

The task force met again on April 16, 1992, at the Ramada Inn in Spokane, Washington. A meeting also was scheduled for May 21, with the location to be announced. ■■

—Dennis Bleything

Dennis Bleything is a Portland writer who reports on CAT Force activities for the Northwest Power Planning Council.

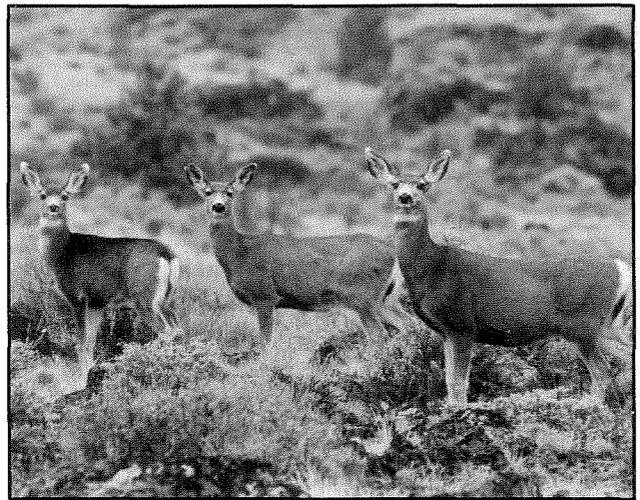
AGREEMENT SIGNED FOR DWORSHAK WILDLIFE MITIGATION

Idaho Governor Cecil Andrus, Nez Perce Tribal Chairman Charles "Pete" Hayes and the administrator of the Bonneville Power Administration, Randy Hardy, in March signed a monumental agreement to provide habitat for wildlife. The \$17.7-million pact compensates for wildlife and habitat lost because of the construction and operation of Dworshak Dam on the North Fork of the Clearwater River. This project is the largest, to date, under the Columbia River Basin Fish and Wildlife Program to address wildlife losses caused by federal hydropower projects in the Northwest.

Completed in 1973, Dworshak Dam and reservoir inundated 16,970 acres of low-elevation wildlife habitat, including more than 54 miles of the free-flowing North Fork and 13 miles of major tributaries.

The agreement calls for more than 80,000 acres of land to be set aside for wildlife and creates two trusts totalling \$17.7 million. The agreement is based on a plan developed by an interagency team that included representatives from Bonneville, the Nez Perce Tribe, the Idaho Department of Fish and Game, the U.S. Army Corps of Engineers, the Idaho Department of Lands, the U.S. Fish and Wildlife Service and the U.S. Forest Service.

One trust between the Bonneville Power Administration and the Idaho Department of Fish and Game is for \$10.6 million and includes 60,000 acres in the Craig Mountains. Also included in the agreement are 130 acres of old-growth timber along the Buck Creek drainage in northern Idaho. Another 10,000 acres of low-elevation forest and streamside habitat along the lower Clearwater River also will be protected. Elk, white tailed and mule deer, black bears, bighorn sheep and a host of other wildlife and birds call the area home and will benefit from this land's protection.



Whitetail deer will have new homes in Idaho's old-growth forests.

The second trust is between Bonneville and the Nez Perce Tribe for \$7.1 million. It calls for 10,000 acres to be acquired for enhancement of forested and riverside habitats.

Money for implementing the trust projects will not be available until Bonneville completes an environmental review of the agreement, in accordance with the National Environmental Policy Act.

The Conservation Fund, a nonprofit organization based in Arlington, Virginia, currently holds a contract for the Craig Mountain property. Bonneville will purchase the property from the Conservation Fund. Following a positive environmental review, Bonneville will deed the land to Idaho.

Governor Cecil Andrus, who has been involved in the Dworshak wildlife project since its inception, hailed the agreement as a "major step forward in conserving our natural heritage for the people of Idaho." By purchasing the Craig Mountain acreage, the state will be able to manage a large block of land specifically for wildlife.

Nez Perce Tribal Chairman Charles Hayes said the agreement "is symbolic of a new spirit of cooperation regarding the management of wildlife resources that are important to all people in this region." ■■

—Karen Nelson
Idaho Council staff

WATT WATCHERS

Three times daily, Mako Phouthavong and Melanie Andren cruise the hallways of their elementary school, peering into offices and classrooms, leaving behind happy or sad reminders to the occupants. Mako and Melanie, like many of their third grade classmates, are on energy patrol.

This time, their fellow classmates, teachers and other staff have been good. They only had to leave one reminder in the school's library to turn the lights off when the room is unoccupied. In fact, the occupants at Fawcett Elementary are becoming so good at turning off unnecessary lights and unused equipment, closing blinds at night and turning off dripping faucets, that the school was awarded \$698 in 1991 for their energy conservation efforts.

Fawcett Elementary is participating in an educational, energy saving program entitled WATT Watchers. The Tacoma Public Schools initiated the program in 1991, through monies provided by the Bonneville Power Administration and Tacoma Public Utilities. The goal was to help instill energy-efficiency awareness in elementary school students.

"The objectives of the WATT Watcher Patrol Program are to teach energy conservation to young children, to bring energy awareness to all, and to reduce the high cost of energy at Tacoma Public Schools," says Karen Kilowatt (also known as Karen Bigler),



Young WATT Watchers at Tacoma Public Schools.

energy ambassador for the WATT Watcher Program. "It's a very exciting program. The values the children learn will be carried over to their homes and hopefully will become lifetime skills."

Twenty-four schools in the Tacoma Public School District are participating in the program, as well as all 12 schools located in the Kelso School District. The WATT Watcher Program also has recently been implemented at two schools in the University Place School District in Tacoma, Washington. Karen Kilowatt operates the program as a fun, creative conservation club for students. To help build team spirit, she has designed WATT Watcher patrol jackets, badges, light switch stickers, flags, posters and "energy bucks." A newsletter containing information about the district's energy conservation activities also is offered.

But badges and jackets are not the only incentives used to encourage participation. The school districts return to the schools the first \$300 they save in energy and 30 percent of any savings after that.

"The WATT Watcher Program is a no-lose situation," says Gary Myers, Tacoma Public Schools energy manager. "We are teaching our young children about using energy wisely and, at the same time, saving vital funds for education. Our track record has proven that with a few small fixes, we've been able to have a large impact on utility management costs."

"I hope others take note of this program and consider doing something similar," says Ted Bottiger, Washington Northwest Power Planning Council member. "What if the students took what they learned from the WATT Watcher Program into their adult work place? Can you imagine the savings?"

For more information on the WATT Watcher Program, contact Karen Kilowatt at the Tacoma Public Schools, 206-596-1298. ■■

—Carol Raczykowski
Washington Council staff

NEW HABITAT FOR HUNGRY HORSE ELK HERD

If things work out as planned, more elk will soon be living in the mountains around Hungry Horse Reservoir in northwestern Montana. Biologists for Montana's Department of Fish, Wildlife and Parks are using innovative methods to offset losses of elk and mule deer habitat caused by the construction of Hungry Horse Dam.

The waters of Hungry Horse Reservoir flooded nearly 9,000 acres of prime elk winter range. According to Department studies, this habitat loss could have decreased the elk herd in the area by 175 animals.

The Department, using dollars from a trust fund established by the Bonneville Power Administration under the auspices of the Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program, has begun a project to restore the quality of elk winter habitat to pre-dam levels. Once the winter habitat is restored, the elk herd should rebound.

According to project biologist Dan Casey, several methods will be used to improve winter habitat and forage.

"We plan to create 54 openings on southwest slopes in the Firefighter Mountain area, where the best opportunities for enhancement exist," said Casey. "These openings will average about 12 acres and will be made through a timber sale offered by the U.S. Forest Service."

The small openings will be cut in dense lodgepole pine stands and offer several advantages for elk. "The edges created by the openings could be as important as the openings themselves," noted Casey. "The edge represents habitat where cover and food are close together.

Also, the openings will allow sunlight into the forest canopy which will encourage vegetative growth and diversity, and increase forage."

Another important aspect of the project will be to monitor the elk population before and after these vegetation treatments. The response of the elk herd to the various treatments will indicate which were successful and point to needed adjustments as the project goes forward. ■■

—John Fraley
Montana Department of Fish, Wildlife and Parks



Elk sporting new collars will help Montana biologists track results of wildlife project.

ACCOUNTING FOR THE ENVIRONMENT

The relationship between the top of the smokestack and the bottom line is a subject of much discussion these days in Oregon power planning circles. If staff members from the Oregon Department of Energy and the Oregon Public Utility Commission have their way, for example, the cost of environmental damage caused by power plant emissions will be more clearly reflected in future power planning.

On February 28, 1992, Department of Energy and Commission staff members released a draft proposed order recommending that the estimated costs to the environment of four air pollutants common to electric power plants be incorporated in analyses of various electrical resources.

The staff proposal would require gas and electric utilities to use the so-called "environmental adders" in their least-cost planning, resource bidding processes, assessment of conservation cost-effectiveness and in regulatory processes that help determine what rates utilities can charge their customers.

The draft order suggests that utilities should factor in costs for sulfur dioxide at \$1,000 to \$4,000

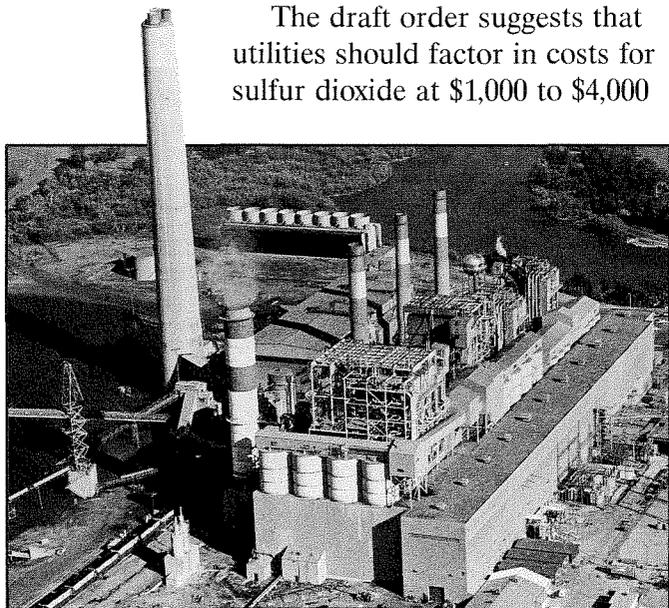
per ton released into the atmosphere, nitrogen oxide at \$2,000 to \$5,000 per ton, total suspended particulates at \$2,000 to \$4,000 per ton and carbon dioxide at \$10 to \$40 per ton.

"Utilities will be most affected by the carbon dioxide environmental costs because they are by far the largest pollutant produced by utilities," said Phil Carver, Oregon Department of Energy analysis and forecasting manager.

Nancy Esteb, Pacific Power and Light Company administrator of integrated resource planning concurred. "Carbon dioxide adders are the utilities' biggest concern," she said, explaining, "Doing the right thing is more important than having the right numbers. We want to be evaluated by our actions rather than by external adders. We want to work together with staff for a resolution involving all parties," she said.

"Many utilities and industrial customers [who could see increases in their power rates if more expensive resources are developed] are challenging whether this program is a valid public utility commission activity," Carver said. But he indicated that Oregon has laws [469.010(2)(f) and 469.020(3)(e)] that require that cost-effectiveness and environmental impacts be considered in state agency decision-making relative to energy facilities or conservation.

If Oregon approves the staff proposal, it will not be the first state to do so. Massachusetts, California and Nevada have already incorporated environmental cost accounting into their utility regulations. In fact, Massachusetts requires estimates on more than just the four air pollutants being considered in Oregon. Wisconsin is also considering imposing environmental cost factors in its utility planning reviews, as is Washington. ■■



Coal burning power plant near Centralia, Washington.

—Lisa Karnopp
Oregon Council staff

SHORTS

Former timber workers graduate as energy conservation specialists. In a program sponsored by Clallam County Public Utility District, 25 former timber workers, many of whom lost their jobs due to downturns in the timber industry, were certified by the Bonneville Power Administration as energy conservation auditors and weatherization inspectors. The retraining effort could become a model for other economically depressed communities in the Northwest. Experts predict demand for trained energy conservation specialists to boom during the 1990s. [Source: Washington Public Utility Districts Association news release, March 5, 1992.]

Study shows Energy Edge office buildings use about 50 percent less energy than comparable office buildings. The three-year study, performed by Lawrence Berkeley Laboratories, was conducted as part of the Bonneville Power Administration's Energy Edge research and development project. The project has been in existence since 1986 and will run

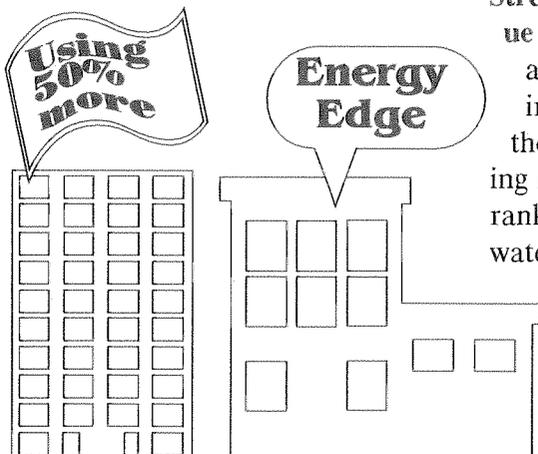
through 1992. Under the Energy Edge project, Bonneville paid the owners of 28 office buildings to make their buildings at least 30 percent more energy-efficient than the Northwest Power Planning Council's model conservation standards. The survey also showed that overall the tenants were highly satisfied. (Source: *Journal*, Bonneville Power Administration, March 1992.)

Capitol rotunda displays historic sockeye. In the summer of 1991, only four sockeye survived the 897-mile journey from the Pacific Ocean to Redfish Lake in Idaho to spawn. Two of those sockeye were preserved by taxidermy and put on display in the state's capitol rotunda. Idaho Governor Cecil Andrus, along with Idaho Department of Fish and Game Director Jerry Conley and Idaho Fisheries Bureau Chief Steve Huffaker, dedicated the salmon display, which will remain in place through 1992. [Source: Idaho Department of Fish and Game news release, February 24, 1992.]

Streams, rivers and lakes top value list for Oregonians. When asked by a private polling firm in Portland, Oregon, to rank the values of the benefits of living in Oregon, Oregonians ranked the outdoors, forests and waters at the top. Education, fire and police protection, and the state's fish and wildlife followed close behind. [Source: *Oregon Wildlife*, March-April 1992.]

We're the worst! American Rivers' annual listing of 10 North American waterways with "endangered status" lists the Columbia and Snake rivers at the top. The report, published annually since 1984, is compiled to encourage the protection of undeveloped stretches of rivers. Studies referenced by American Rivers suggest that 200 salmon stocks and at least 214 other native fish species are imperiled along the heavily dammed Columbia system. American Rivers also lists 15 rivers as "threatened." Three Northwest rivers—the Illinois and Klamath rivers in Oregon and the Elwha River in Washington—made that list. [Source: *USA Today*, April 9, 1992.]

Potential \$60 billion could be saved by the year 2010. A recent report by the American Council for an Energy Efficient Economy claims that adoption of energy conservation policies can reduce growth in electricity sales by more than 70 percent by 2010, resulting in a reduction in consumer's electricity bills by 16 percent or \$60 billion. The report states that energy-efficient policies also would result in a decreased need for generating capacity and would hold carbon dioxide emissions to 1990 rates. The study is the latest in an ongoing series of analyses to show that economic growth can occur without continued harm to the environment and further waste of dwindling petroleum resources. [Source: *Energy Conservation Digest*, January 13, 1992.]



New Year's Day escape of farmed salmon threatens wild ones.

About one million hatchery-bred salmon escaped into Norway's rivers when a hurricane destroyed their pens and gave the fish their freedom. The farmed fish already outnumber wild salmon in a few of Norway's rivers, and scientists have warned that if more major breakouts occur, it could result in a total breakdown of the stock structure of the Atlantic salmon in Norway. Mixing farmed and wild fish may upset the genetic balance and spread diseases unknown in the wild. [Source: *Los Angeles Times*, February 2, 1992.]

Ontario Hydro plans to save 10,000 megawatts by the year 2014. In 1989, the Canadian utility released its 25-year resource supply plan. That plan showed 5,500 megawatts could be saved with conservation measures. A recent update of the plan reported that with Ontario Hydro's great successes in conservation programs and more fuel switching, the savings could get closer to 10,000 megawatts. The additional 4,400 megawatts of electricity will allow Ontario Hydro to defer construction of two nuclear power plants and other generating resources. [Source: Ontario Hydro.]

Sixty percent of U.S. homes receive enough sunlight to benefit from solar heat. Studies show that retrofitting homes to incorporate solar heat will reduce the home's energy use and increase its market value. The Conservation and Renewable Energy Inquiry and Referral Service (CAREIRS) has developed a free fact sheet to help homeowners assess the cost and feasibility factors of a solar retrofit. For more

information, call 800-523-2929. [Source: CAREIRS Information.]

After house payments, utility bills take the next biggest chunk out of a homeowner's pocket. Energy-efficient mortgages are now available to finance home energy improvements. These mortgages, sponsored by federal government housing organizations, enable the homeowner to add the cost of energy upgrades to their mortgage. CAREIRS (see previous short) has released a free fact sheet on energy-efficient mortgages. For more information, phone 800-523-2929 and ask for a complete list of fact sheets. [Source: CAREIRS Information.]

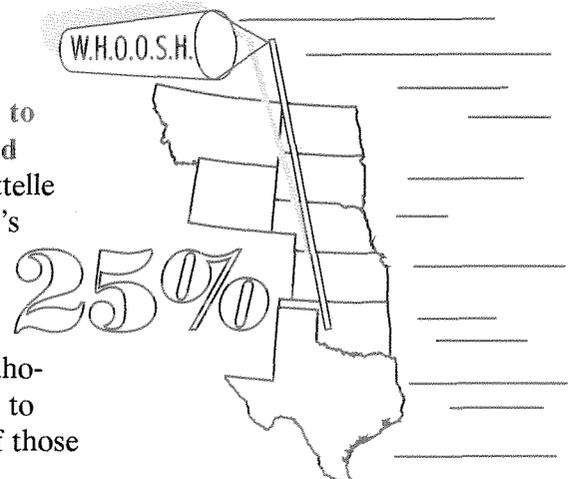
Environmental issues beneficial to Oregon's economy. A recent study by Economic Research Associates, an Oregon consulting firm, finds that companies in the environmental field pay about 38-percent higher wages than statewide averages, ranking them third in Oregon. The environmental field includes energy-efficiency, related computer software and environmental clean up. In the energy-efficiency field alone, the report estimates that there is a \$4.5-billion market available in the Pacific Northwest. [Source: Economic Research Associates news release, April 2, 1992.]

WHOOSH! could be the acronym if U.S. states unite to supply the country with wind power. According to the Battelle Memorial Institute, the U.S.'s windbelt, comprised of Montana, Texas, Wyoming, North and South Dakota, Nebraska, Kansas and Oklahoma, has enough wind power to supply at least 25 percent of those

states' energy needs. WHOOSH, which stands for the Wind Harnessing Organization of States in the Heartland, could site its capitol in North Dakota where 45 percent of the energy needs could be met with wind power. [Source: *American Demographics*, April 1992.]

Clean Air Act amendments drive Northeast agreement. A coalition of eight Northeastern states (New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and Maine) have agreed to impose extensive controls on electric generating stations to cut polluting emissions. These emissions play a major part in smog formation. The Northeast States for Coordinated Air Use Management, an organization comprised of the environmental commissioners of the eight states, seeks to cut the utility emissions by more than 50 percent. Among the states that already have pollution controls in place are California and Connecticut. [Source: *New York Times*, April 3, 1992.]

—Compiled by Judy A. Gibson



CALENDAR

May 6-8—"Changing and Innovative



Strategies for Environmental Protection," the 1992 National Association of Environ-

mental Professionals (NAEP) conference at the Stouffer Madison Hotel in Seattle, Washington. Sponsored by NAEP. For more information: NAEP, P.O. Box 1520, Alexandria, Virginia 22309-0210, phone 703-660-2364.

May 10-13—"Energy Forum '92" in



Victoria, British Columbia. The conference will address energy-efficiency, energy trade and the effect of

energy use on the environment. Sponsored by the Energy Council of Canada, BC Hydro and the Province of British Columbia. For more information: Andrew Baker, BC Hydro, 910 Burrard Street, Vancouver, B.C. V6Z 1Y3, phone 604-663-3552, FAX 604-663-2844.

May 12-13—Northwest Power Planning Council meeting at the West Coast Wenatchee Center in Wenatchee, Washington.



May 20-22—"The '90s: The Decade of Collaboration," the Edison Electric Institute's 15th Annual National Conference of Electric Utility Educators at



The Pointe Hilton at Squaw Peak in Phoenix, Arizona. Sponsored by the Edison Electric Institute. For more information, Sharron Jones, Edison Electric Institute, Educational Services Department, 701 Pennsylvania Avenue, N.W., Washington, D.C. 20004-2696, phone 202-508-5000, FAX 202-508-5759.

May 27—"Ground Coupled Heat Pumps—A Natural for the Northwest" seminar at the Airport Holiday Inn in Portland, Oregon.



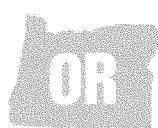
The seminar will cover energy performance, installation details and utility benefits. Sponsored by Oregon Institute of Technology Geo-Heat Center, the Bonneville Power Administration and others. For more information: Kevin Rafferty, Oregon Institute of Technology Geo-Heat Center, 3201 Campus Drive, Klamath Falls, Oregon 97601, phone 503-885-1750, FAX 503-885-1754.

May 29—"Externalities: Reckoning Environmental Energy Costs," a NewsData Western Regions Flightline Forum at the Sea-



Tac Airport Marriott in Seattle, Washington. This forum will deal with the environmental costs of power resources. Sponsored by NewsData Corporation. For more information: NewsData Corporation, Box 900928, Queen Anne Station, Seattle, Washington 98109-9228, phone 206-285-4848, FAX 206-281-8035.

June 1-3—"Metering: Your End-Use Data Needs" workshop at The Inn of the Seventh Mountain in Bend, Oregon. This work-



shop is targeted at Northwest utility and government managers who will be planning and implementing electrical end-use data projects. Sponsored by the Electric Power Research Institute, Northwest Public Power Association and others. For more information: Craig McCollom, Northwest Public Power Association, 9817 N.E. 54th Street, Vancouver, Washington 98662-0576, phone 206-254-0109.

June 1-12—"Earth Summit," the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil. In an effort to maintain the quality of the environment and achieve environmentally sound, sustainable development in all countries, the conference will address protection of the atmosphere, land and freshwater resources. For more information: UNCED, Room S-3060, United Nations, New York, New York 10017, phone 212-963-5959, FAX 212-963-1010.



June 10-11—Northwest Power Planning Council meeting and public hearing on the Council's phase three draft amendment document at the Templin's Resort Hotel in Post Falls, Idaho.



June 13-18—"Solar '92," the National Solar Energy Conference at the Howard Johnson Hotel in Cocoa Beach, Florida.



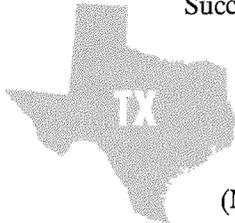
The conference will cover the latest in research and development of renewable energy. Sponsored by the American Solar Energy Society. For more information: American Solar Energy Society, 2400 Central Avenue, Suite G-1, Boulder, Colorado 80301, phone 303-443-3130, FAX 303-443-3212.

June 22-25—"51st Annual Western Conference of Public Service Commissions" at the Coeur d'Alene Resort in Coeur d'Alene, Idaho. Sponsored by the National Association of Regulatory Commissioners. For more information: Carol Cooper, Idaho Public Utilities Commission, Statehouse Mail, Boise, Idaho



83720-6000, phone 208-334-0375, FAX 208-334-3762.

June 22-25—“Building Bridges to Successful Partnerships,” the sixth annual National Low Income Energy Consortium (NLIEC) conference at The Fairmont



Hotel in Dallas, Texas. The 1992 conference topics include: successful energy education and demand-side management for low-income housing. Sponsored by NLIEC. For more information: Joan Eisenstodt Associates, 2222 “Q” Street, N.W., Suite 32, Washington, D.C. 20008, phone 202-745-0904, FAX 202-232-0016.

June 22-24—“1992 Demand-Side Management Implementation Conference” at the Sheraton Society Hill



Hotel in Philadelphia, Pennsylvania. Sponsored by Philadelphia Electric Company, Pacific Gas and Electric and others. For more information: Marybeth Paul, Synergic Resources Corporation, 111 Presidential Blvd., Suite 127, Bala Cynwyd, Pennsylvania 19004-1008, phone 215-667-2160.

July 8-9—Northwest Power Planning Council at the Outlaw Inn in Kalispell, Montana.



August 12-13—Northwest Power Planning Council meeting at the Maritime Museum in Astoria, Oregon.



August 19-20—“International Energy and Environmental Congress” conference and exposition in Chicago, Illinois. The conference will be held at the Hyatt Regency O’Hare, and the exposition will be



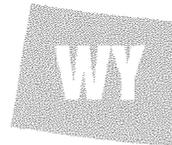
at the Rosemont O’Hare Exposition Center. The conference will cover demand-side management; heating, ventilating and air conditioning; power generation; and pollution control technologies. Sponsored by the Association of Energy Engineers and others. For more information: Ruth Bennett, Association of Energy Engineers, 4025 Pleasantdale Road, Suite 420, Atlanta, Georgia 30340, phone 404-447-5083, FAX 404-446-3969.

August 30-September 5—“Achieving Technical Potential: Programs and Technologies That Work” at the Asilomar



Conference Center in Pacific Grove, California. The American Council for an Energy-Efficient Economy’s (ACEEE) 1992 Summer Study will focus on improving energy efficiency in buildings. Sponsored by the Bonneville Power Administration, the California Energy Commission and others. For more information: ACEEE 1992 Summer Study Office, 2140 Shattuck Avenue, Suite 202, Berkeley, California 94704, phone 510-549-9914, FAX 501-549-9984.

October 2-3—“Western Regional Instream Flow Conference II” in Jackson Hole, Wyoming. The theme of the conference will be “Tools and Strategies



for the Enhancement and Maintenance of Instream Flow.” Sponsored by Trout Unlimited and the U.S. Bureau of Reclamation. For more information: Suzanne VanGytenbeek, Trout Unlimited, P.O. Box 1212, Jackson Hole, Wyoming 83001, phone 307-733-0484, FAX 307-733-9678.

A more detailed calendar of Council committee meetings and consultations is carried each month in *Update*. See order form inside back cover.

—Compiled by Judy A. Gibson

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Public Affairs Director: Steve Crow

The Northwest Power Planning Council is required by an Act of Congress to develop a program to protect, mitigate and enhance the Columbia Basin's fisheries and a regional electric energy plan that provides a reliable electricity supply at the lowest cost. For further information, see Pacific Northwest Electric Power and Conservation Act - Public Law 96-501.



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Production: Judy Gibson

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COUNCIL PUBLICATIONS ORDER FORM

Please send me a copy of the following publications of the Northwest Power Planning Council. (Note: not all publications are available immediately, but they will be sent to you as soon as possible.)

Publications

- 1987 Columbia River Basin Fish and Wildlife Program
- 91-04 1991 Northwest Power Plan—Volume I
- 91-05 1991 Northwest Power Plan—Volume II
- 91-26 1991 Annual Report to Congress
- 91-27 Priority Salmon and Steelhead Production and Habitat Amendments (Phase One)
- 91-31 Amendments to the Columbia River Basin Fish and Wildlife Program (Phase Two) on Mainstem Survival, Harvest, Production and Other Measures to Protect Salmon and Steelhead
- 92-02 Staff Issue Paper: Pelton Dam Fish Ladder Production Project—Review of Master Plan
- 92-03 Staff Issue Paper: Hood River Production Project—Review of Master Plan
- 92-04 Staff Issue Paper: Nez Perce Tribal Fish Hatchery Production Project: Review of Master Plan
- 92-05 Staff Discussion Paper: Columbia River Basin Fish and Wildlife Program Framework
- 92-06 Staff Discussion Paper: Systematic Assessment Methods for Decision-Making
- 92-07 Staff Discussion Paper: Genetics and Salmon Production
- 92-08 Staff Discussion Paper: Survey of Economic Impacts of Council Salmon Protection and Enhancement Measures
- 92-09 Proposed Protected Areas Changes: 1992 Rulemaking
- 92-10 Staff Issue Paper: Five-Year Review of Council's Section 6(c) Policy
- 92-11 Amendments and Response to Comments to the Columbia River Basin Fish and Wildlife Program on Lower Columbia Wildlife Mitigation
- 92-12 Preliminary Draft Amendments to the Columbia River Basin Fish and Wildlife Program (Phase Three)
- 92-13 1992 Directory of Organizations

Mailing Lists

Please add my name to the mailing lists for the following newsletters. (Note: do not check if you already are receiving them.)

- Northwest Energy News* (this bimonthly magazine)
- Update* (monthly public involvement newsletter that contains the Council meeting agenda, deadlines for public comment and a more detailed publications list)

Name _____

Organization _____

Street _____

City/State/Zip _____

(Or call the public affairs division at the Council's central office, 503-222-5161, or toll free 1-800-222-3355.)

IN THIS ISSUE

**NAILING DOWN
A HOUSING DEAL**

**Empty Net
Syndrome**

Today's
**NORTHWEST
ECONOMY**

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**LOWERING
GRANITE**