

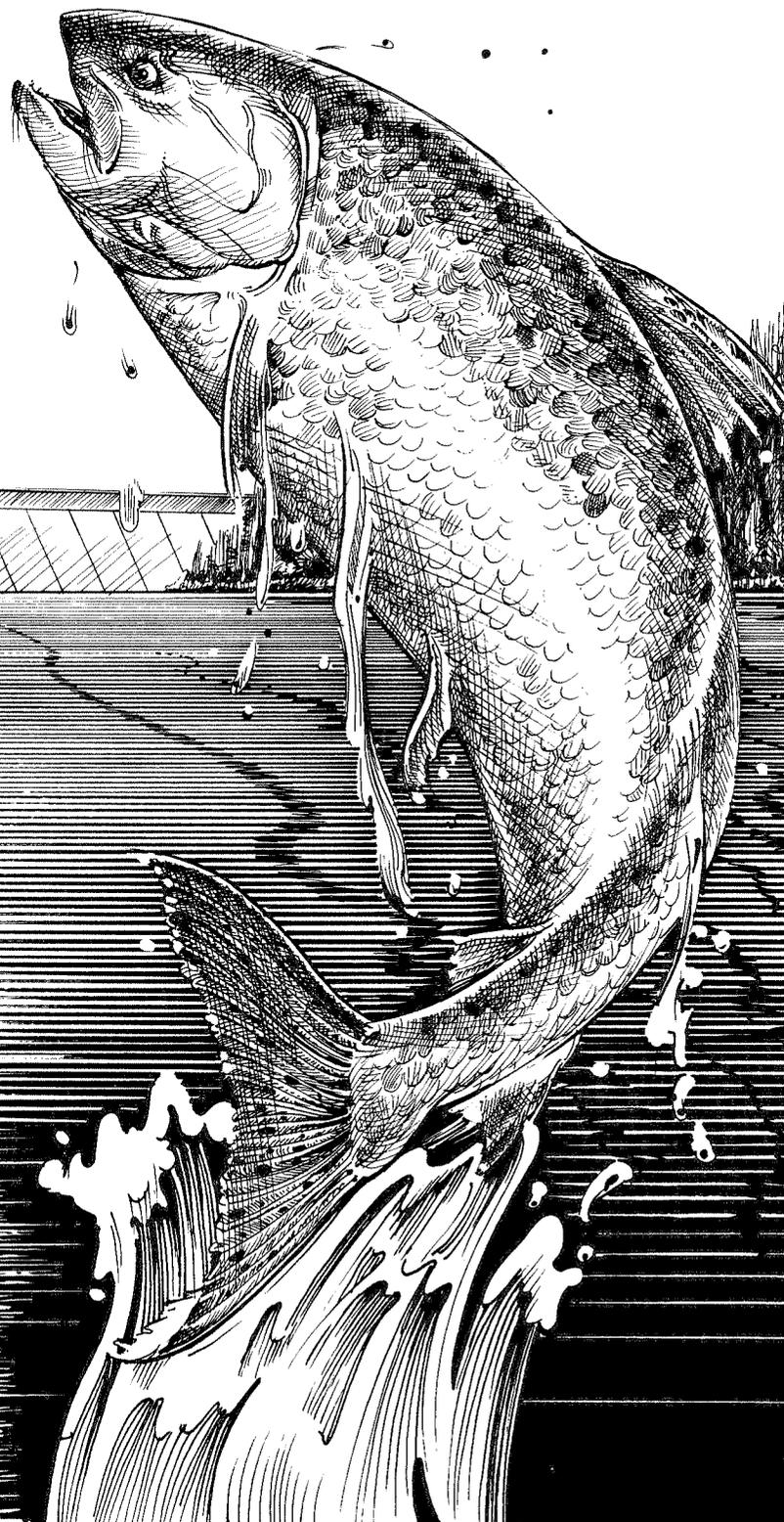
# N O R T H W E S T ENERGY NEWS

Volume 1, No. 3

Northwest Power Planning Council

May/June 1982

## TO SAVE THE SALMON



It is not the Committee's intention to make fish and wildlife superior to power or other recognized needs. But it is the intention of the Committee to treat fish and wildlife as a co-equal partner with other uses in the management and operation of hydro projects in this region.

— House Committee on Interstate and Foreign Commerce  
96th Congress, May 15, 1980.

**W**hen Congress passed the Northwest Power Act, it did something more than simply set up a new means to deal with the region's energy future. It also directed the Northwest Power Planning

*(Please turn to page 10)*

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## N O R T H W E S T ENERGY NEWS

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# N O T I C E S

## Council seeks views on forecast assumptions

What will the regional economy look like in the future? How many people will live in the Pacific Northwest? What will be the major industries?

The Northwest Power Planning Council is seeking public comment on the assumptions it will use to develop its economic and demographic forecast and the energy demand forecast that will follow. The Council is hoping to gather a variety of perspectives on the region's future, and is interested in the participation of the region's industries, irrigators, population workers, and others with views on the future of the region.

A staff issue paper is available that outlines major issues in the economic and demographic forecast, such as changes in technology and productivity of industries, housing choices, income, fuel prices, and irrigated acres.

Responses to the issue paper will be used in developing draft input assumptions. The Council will request written comments in July and oral comments at its August 4 meeting on the draft assumptions. The Council will adopt forecast input assumptions at its August 18 meeting.

Anyone wishing to comment on the forecast assumptions should contact Annette Frahm at the Council's central office.

## Comments sought on meeting rules

The Northwest Power Planning Council is seeking public comment on its proposed procedures for open meetings, notice of meetings, and closed meetings under the Government in the Sunshine Act. The proposed procedures have been published in the Federal Register; they may also be requested from Jim Fell, General Counsel, at the Council's central office. The comment period will end June 23.

# C A L E N D A R

**June 1**, BPA meeting: Impact Aid to Local Governments, 7 p.m., BPA Auditorium, 1002 N.E. Holladay, Portland.

**June 2-3**, Council Meeting, 8:30 a.m., Holiday Inn Boise Airport, 3300 Vista Avenue, Boise.

**June 5**, Passive Solar Design: Why home weatherization comes before solar, 7 p.m., Tacoma Public Utilities Auditorium, S. 35th Street and Union Avenue, Tacoma.

**June 7**, BPA Conservation Public Workshop, 9 a.m., Burley Inn, 800 N. Overland, Burley, Idaho.

**June 8**, Home Buyers Guide to Energy Conservation (a series); June 8: Buying an older home; June 10: Heat loss theory and calculations; June 15: Insulate your home; 7 p.m., Greenwood Public Library, Seattle.

**June 8**, BPA Conservation Public Workshop, 9 a.m., Holiday Inn, 1609 W. Broadway, Missoula.

**June 9**, BPA Conservation Public Workshop, 9 a.m., Sheraton Inn, North 322, Spokane.

**June 10**, BPA Conservation Public Workshop, BPA Building, West 101 Poplar, Walla Walla, Washington.

**June 11**, BPA Conservation Public Workshop, 9 a.m., Seattle Center, Mercer Forum 3 & 4, Seattle.

**June 14**, Forecasting Subcommittee Meeting (SSAC), 9:00 a.m., Council Offices, Portland.

**June 14**, BPA Conservation Public Workshop, 9 a.m., Lloyd Center Auditorium, Portland.

**June 15**, Executive Committee, (SSAC), 1:30 p.m., Council Offices, Portland.

**June 16-17**, Council Meeting, 8:30 a.m., Council Offices, Portland.

**June 17-20**, Options Northwest: Local Responses to Global Challenges, The Evergreen State College, Olympia, Washington.

**June 18**, Reserves and Reliability Subcommittee Meeting (SSAC), 9:30 a.m., Council Offices, Portland.

**June 18**, Fish and Wildlife Subcommittee Meeting (SSAC), 8:30 a.m., Council Offices, Portland.

## New troubles for WPPSS

*Editor's note: The article below was written prior to a May 29 decision of the WPPSS Executive Board to possibly resume construction of Plant 1 in early 1983.*

The Washington Public Power Supply System was handed a new script of troubles this past month as yet another act in the Northwest's power drama unfolded.

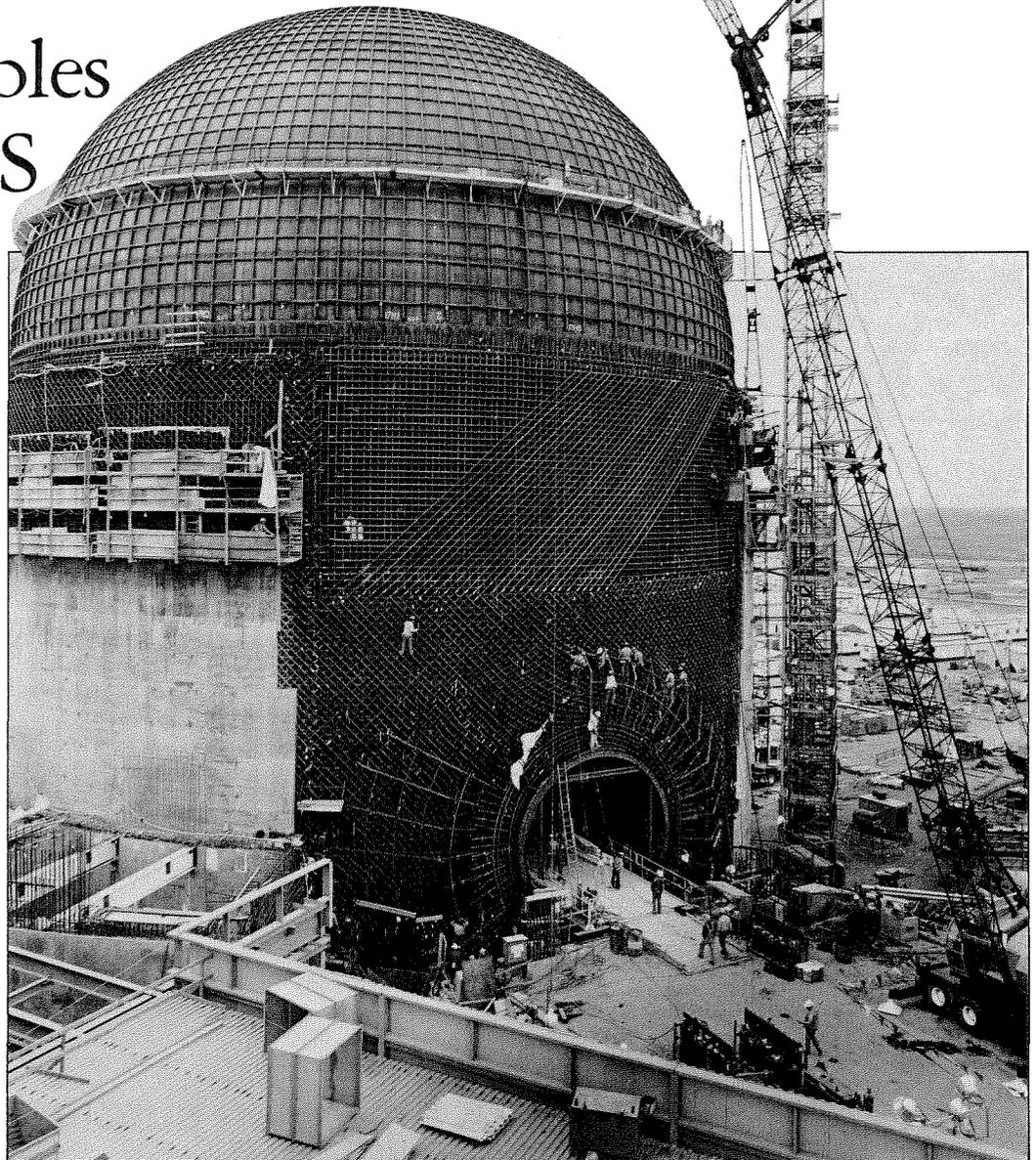
Winter had seen the beleaguered consortium finally place two of its five nuclear power projects in a deep — perhaps permanent — freeze, with Supply System officials turning their hopes to finishing the remaining plants as quickly as possible.

But even that was not to be.

Spring brought a major script revision. An energy forecast by the Bonneville Power Administration — which some had once feared would be used to justify "regionalizing" the costs of the last two, \$12 billion WPPSS plants — showed that the power from the remaining plants might not be needed as soon as thought.

While the BPA forecast received most attention, the Supply System's major hurdle was financial. Dropping forecasts, combined with the post-July impacts of Washington's Initiative 394, had made the municipal bond market, WPPSS' financial lifeline, nervous at best.

To raise enough money before the July 1 I-394 deadline to keep the three projects going until the first available vote on a new bond sale would have required more than \$1 billion, WPPSS and BPA officials estimated. And BPA Administrator Peter Johnson told the Supply Sys-



**Pre-mothball:** Some of the 6,000 workers who were laboring on WPPSS Plant 1 have already received their pink slips.

tem board that Wall Street had a one-word answer to a bond sale that large: "No."

WPPSS' best hope, Johnson said, was a \$650 million bond offer — an amount far short of the capital needed to keep building all of the plants.

Johnson, in mid-April, told the Supply System Board they had basically two options: They could get enough money for work on Plant 2 and one other, delaying the third; or they could funnel all of the

money into completing Plant 2, 90 percent finished, and delay Plants 1 and 3.

Johnson's recommendation: Fund Plant 2, which could be running by early 1984, finance the WPPSS share of Plant 3, which is jointly held with some Northwest private utilities and is 50 percent complete, and mothball Plant 1 for up to five years.

The BPA chief's proposal, which came after numerous discussions with federal, re-

gional, state, and utility officials, sent a Mount St. Helens-like rumble through the region.

The Northwest Conservation Act Coalition, even prior to the recommendation, urged mothballing both WPPSS 1 and 3. Washington State Senator King Lysen, a frequent WPPSS critic, said BPA proposed the wrong plant; Plant 3 near Satsop in western Washington should have been mothballed instead of Plant 1



**Taking to the streets:** Tri-Cities residents organized protests in hopes of saving WPPSS Plant 1.

on eastern Washington's Hanford Reservation. Robert Olsen, the newest WPPSS board member from Mason County, said Plant 3 "is 10 miles from where I live, and it is disliked and not wanted" by western Washington ratepayers.

Olsen's comments pointed to one of the odd coalitions to coalesced from the mothballing drama: anti-nuclear activists from western Washington combined with pro-nuclear construction workers and residents of the Tri-Cities, the trio of towns that have grown up around the Hanford Reservation. For once, they had a common goal — if you were going to build a plant, build it in eastern Washington.

As the WPPSS board met in their Tri-Cities headquarters to take up the BPA recommendation, more than 10,000 residents gathered outside, carrying signs saying "Save Our Town" and "Save #1." Hundreds of letters from the Tri-Cities came to the Northwest Power Planning Council, asking Chairman Dan Evans to somehow intercede and "save" Plant 1. But Evans, in an open letter to The Tri-Cities Herald, said the Council's energy planning authority simply didn't stretch to cover WPPSS Plant 1.

For the Tri-Cities, an area which has prospered from the

nuclear industry since the dark days of WWII, the ramifications of mothballing Plant 1 came clearly and quickly. WPPSS officials figured it would cost 12,000 jobs and a \$21 million monthly payroll in the Tri-Cities alone.

But by April's end, the decision was made, although some board members complained that Johnson had given them an ultimatum, not a recommendation. Layoff notices started going out on May Day, and the board set a \$590 mil-

lion bond sale for Plants 2 and 3.

Plant 1, 60 percent complete and upon which \$2.2 billion had been already spent, was headed for mothballs.

So why did BPA recommend Plant 1? There were a number of reasons; some stated publicly, some privately.

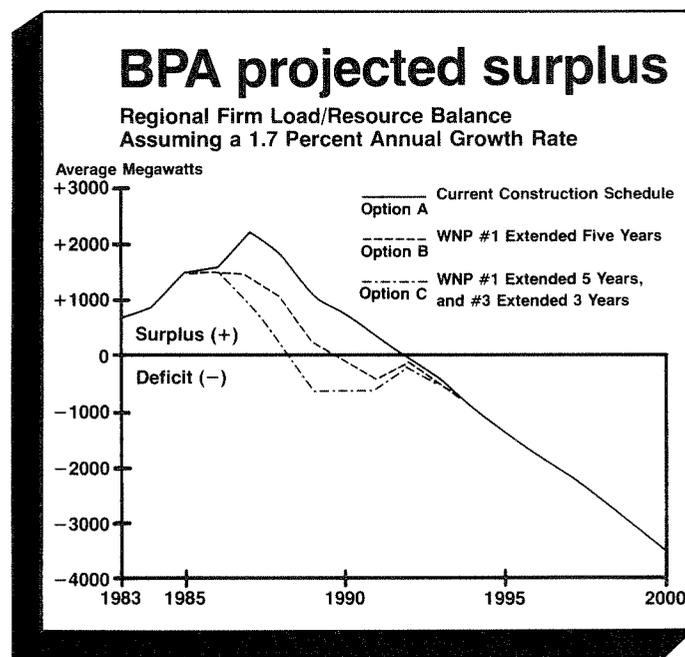
First was the split ownership of Plant 3. While WPPSS owns 70 percent, the remainder is held by four private utilities (Puget Sound Power and Light, Washington

Water Power Co., Portland General Electric, and Pacific Power and Light). To mothball Plant 3 would have required 80 percent of the ownership shares. The private utilities — some anticipating faster load growth and needing the plant operating so it could be included in their rates — turned thumbs down to any delay, various utility officials said privately.

BPA also noted that the Sat-sop plant was closer to the load centers (Seattle and Portland), meaning less power lost from long transmission lines. The federal power marketing agency said it would also be easier to restart Plant 1 because it was near a "skilled nuclear labor force."

But privately, utility officials conceded that there was also a bit of energy politics at play. If Plant 3 was mothballed, reasoning went, western Washington's attitude against nuclear power might prevent the plant from ever being restarted.

For BPA's Johnson, it had been a difficult role in an awkward play. The three WPPSS projects, financially backed by BPA through the elaborate "net-billing" arrangements, had been started in the early '70s to meet a projected swelling power deficit. Now, thanks to the projects' swelling cost and drop-



ping demand, BPA projected a growing surplus, perhaps more than 2,000 megawatts if the plants were completed as scheduled. Inside Bonneville, there were questions whether that much surplus power could be sold to the region's sole customer, California, and whether it could be sold at the cost to produce it. California energy officials had already told the region's utilities they only wanted so much power — and at a bargain price.

The mothballing saga also underscored BPA's arm's length control over the net-billed projects. BPA was banker; not builder. What BPA owned, in the terms of the net-billing accords, was the "capability" of the plants to produce power; not the plants themselves. BPA's control was ultimately on the purse strings. If the Supply System tried to override Johnson's recommendation, some utility officials speculated, BPA might just pull the strings shut.

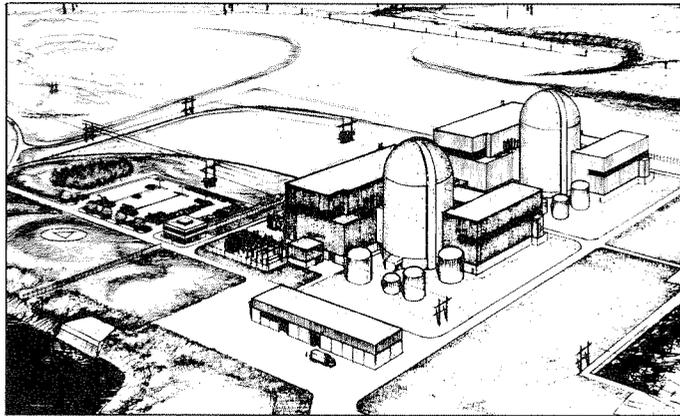
Yet the two tallest obstacles were beyond even BPA's grasp.

With last fall's approval of Initiative 394, Washingtonians gave voters in service areas of the 23 WPPSS member utilities a right to okay any bond offer after July 1. Barring a court reversal, voters will get their first chance this November.

And uncertainties — over forecasts of need and outcomes of elections — made Wall Street nervous. Municipal bonds, especially those backed by a federal agency, were supposed to be low-risk investments. Now Wall Street, once seemingly the Supply System's bottomless coffer, was turning tight-fisted. And the investment community told BPA and WPPSS there was even a limit to financing these projects — projects once considered golden.

## PGE drops Pebble Springs N-plant

Portland General Electric has withdrawn an Oregon state application to build the



**Pebble Springs:** Artist's conception of PGE's proposed nuclear plant.

proposed twin Pebble Springs nuclear plants in Eastern Oregon.

The Portland-based private utility dropped its state application in early April, one day after Oregon Public Utility Commissioner John Lobdell ordered PGE and Pacific Power and Light to write off the multi-million dollar investments as a loss.

PGE, with 47.1 percent of Pebble Springs, has invested \$134 million. Pacific Power, which holds 29.4 percent of the project, has invested \$83 million. The remaining 23.5 percent of Pebble Springs is held by Puget Sound Power and Light, which operates in Washington State. Puget Power has invested \$65.5 million.

PGE President William Lindblad told the Oregon Energy Facility Siting Council that it was in "the best interest" of PGE stockholders and customers to withdraw the company's state application for Pebble Springs.

Lindblad noted that many conditions had changed since the twin plants were proposed in 1972, and, in particular, energy forecasts were running much lower than those of the early '70s.

PGE also asked the federal Nuclear Regulatory Commission to delay or cancel a meeting scheduled originally for late April on the Pebble Springs projects.

Lindblad told reporters, however, that the utility was not ready to totally scrap the nuclear projects and withdraw its federal license application.

Meanwhile, Lobdell's order meant PGE and PP&L stockholders would have to absorb the \$183 million already spent for the project. Lobdell's order would require PGE to write off the entire \$134 million it has spent on Pebble Springs and would require PP&L, which operates in several western states, to write off \$49 million as the Oregon share.

While the loss was shifted to stockholders, it is possible that the utilities can recover some of their expenses through tax write-offs and sales of equipment already purchased for the twin plants.

## Puget Power delays Hanford N-plants

Puget Sound Power and Light Company, noting "uncertainties" over projected electric power demands, has asked the Washington Energy Facility Site Evaluation Council (EFSEC) to postpone summer hearings on the need-for-power issue related to their proposed nuclear power project on the Hanford reservation in Eastern Washington.

Robert V. Myers, Vice President of Generation Resources for Puget Power, said the utility was requesting the delay following the release of two twenty-year forecasts which suggest that the Hanford units might not be needed until the late 1990s or after 2000.

Myers noted that the forecast for the Independent Review of Washington Public Power Supply System Plants 4 and 5 "suggests that the Hanford units will not be needed until after the turn of the century." The utility executive also noted the recent Bonneville Administration forecast and said that even under the federal power marketing agency's projections, the Puget Power plants would not be needed until the late 1990s.

While the Legislature study is open to "serious question" and BPA's forecast is still in draft form, Myers said neither forecast could be ignored. Myers noted, however, that a soon-to-be-related forecast by the Pacific Northwest Utilities Conference Committee, an umbrella group for the region's public and private utilities and energy intensive industries, would show that the Hanford plants might well be needed in the early 1990s.

Puget Power proposed the plants in the early '70s and originally wanted to build them in Skagit County in Northwest Washington. A 1979 county-wide referendum, however, prevented Puget Power from renewing its building permit for the projects and forced the utility to move the proposed twin nuclear reactors to the Hanford reservation.

Puget Power's letter to EFSEC noted the general uncertainty surrounding both the forecasts and resources in the region, and noted in particular the question of whether plants 4 and 5, terminated early this year, would be sold to new owners and completed.

"In view of the still evolving uncertainties, we believe it would be premature, and probably fruitless, to conduct evidentiary hearings on the need for power this summer," said Myers. "The facts are simply not in yet. We believe that the November election and the issuance of the regional plan by the Northwest Power Planning Council in April 1983 will provide the most definitive answers to these uncertainties."

Myers emphasized that the utility nevertheless was not abandoning the projects.

## PNUCC forecasts power deficit

While the demand for electricity will be lower than anticipated, the Northwest could still face a power deficit by the late 1980s, according to a newly released energy forecast by Northwest utilities.

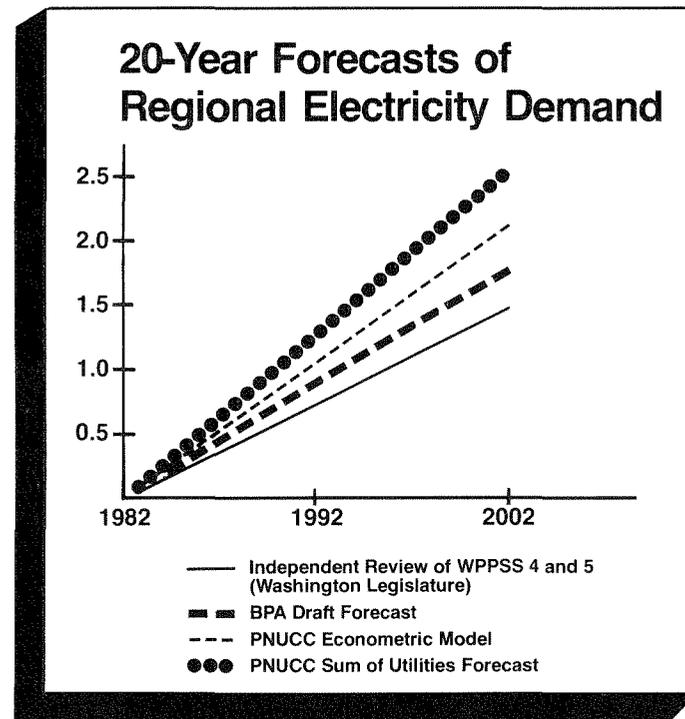
The forecast, by the Pacific Northwest Utilities Conference Committee, projects a compounded annual growth rate of 2.5 percent over the next 20 years. The utilities' latest forecast is a reduction from last year's projected growth rate of 2.8 percent, and means electric loads would be 1400 megawatts lower than previously estimated.

"The revised forecast reflects changes in economic and demographic assumptions and conservation savings," said Randy Hardy, executive director of the PNUCC. "Key among these are projections of population and employment, which are lower than last year's estimate, and electricity price, which is higher."

The PNUCC is a coordinating group for the region's public and private utilities and Direct Services Industries. The PNUCC has done load forecasts since the late '50s and has long been the primary forecaster for Northwest utilities.

The PNUCC's latest projection comes from forecasts of individual utilities throughout the region, known as the Sum of Utilities forecast. The PNUCC's econometric computer cross-check forecast comes in at 2.1 percent. Both forecasts take into consideration the termination of Washington Public Power Supply System plants 4 and 5, and delay of WPPSS plant 1 and three of the Washington Water Power Company's Creston coal facilities.

While slower load growth reduces the chance of shortages between now and 1987, the PNUCC says that the delay in WPPSS projects and in the Creston coal plants could increase the probability



of shortages between 1987 and 1992.

The PNUCC forecast also anticipates a loss of at least 490 megawatts of firm power to incorporate minimum flow requirements that fisheries agencies suggested for the Northwest Power Planning Council's fish and wildlife program, which is now being developed.

Despite all the numbers, Hardy said major uncertainties still underpin the PNUCC's or any other energy forecast.

"In view of such future uncertainties, the most prudent course of action for the present, to ensure a cost-effective and environmentally acceptable system, is to maintain current schedules," said Hardy.

"By early 1983, publication of the Council's forecast, and subsequent iterations of the BPA and PNUCC forecasts, should hopefully narrow the range of uncertainty for resource planning."

## Court overturns BPA-DSI contracts

The federal Ninth Circuit Court of Appeals, in the first court case over the Northwest Power Act, has said that long term contracts between the Bonneville Power Administration and 17 energy-intensive industrial customers are invalid.

The three judge panel said BPA, the federal power marketer for the Northwest, violated the long-standing "preference" of the region's public utilities when it offered new 20-year contracts to the direct service industries, primarily aluminum companies located in the region.

"Giving all due deference to BPA's construction of the Act," the appellate judges wrote, "we nevertheless find its interpretation unreasonable. We find that the explicit and long-standing preference retained in the Act controls rather than the ambiguous provisions relied upon by BPA."

The lawsuit, filed by 12 Northwest public utilities, centered on BPA's allocation of

"non-firm" energy to the DSIs over claims by the public utilities. Because of varying water conditions, the federal hydro system periodically generates more power than is needed to meet the "firm" loads of BPA customers. The DSIs sought through their contracts first access to this power.

The public utilities claimed that the BPA contracts, offered in August along with contracts to the region's public and private utilities, violated the consumer-owned utilities' historical right to federal power.

The federal appellate panel said the contracts violated the Act only if BPA's interpretation of the law was "unreasonable."

The panel ruled that, indeed, BPA's interpretation was unreasonable and ran counter to two provisions of the Northwest Power Act which guarantee that "all power sales under this Act shall be subject at all time to the preference priority provisions of the Bonneville Project Act of 1937." The judges also noted that preference provisions had been included in Federal Power Acts since 1906.

The DSIs' contracts provide for power interruptions under certain conditions. The energy-intensive industries had hoped to use the non-firm power to avoid possible power interruptions.

But the appellate court said "the initial allocation of non-firm power is no less subject to preference than firm power," and ruled that the new contracts between the DSIs and BPA violated the rights of the preference customers.

BPA had relied on statements in the legislative history of the Act, passed by Congress in 1980, in forming its interpretation of the non-firm power sale. But the three-judge panel said the legislative history was too ambiguous and inconsistent. "It is unfortunate that the legislative history fails to give a clear indication of Congressional intent," said the court opinion handed down in mid-April.

Northwest public utility officials said the court ruling could save their ratepayers millions over the next 20 years

by giving them preferential access to cheap federal non-firm power to be substituted for more expensive new generation. A spokesman for the City of Seattle said the ruling could save Seattle City Light anywhere from \$10 million to \$15 million annually in power costs.

Meanwhile, the DSIs have petitioned for a rehearing, seeking to have the full Ninth Circuit Court of Appeals hear the case.

## Council seeks provisions in BPA-DSI contracts

New contracts being renegotiated between the Bonneville Power Administration and the energy-intensive direct service industries should not interfere with development of a regional fish and wildlife plan for the Columbia River system, the Northwest Power Planning Council has said in a letter to BPA Chief Peter Johnson.

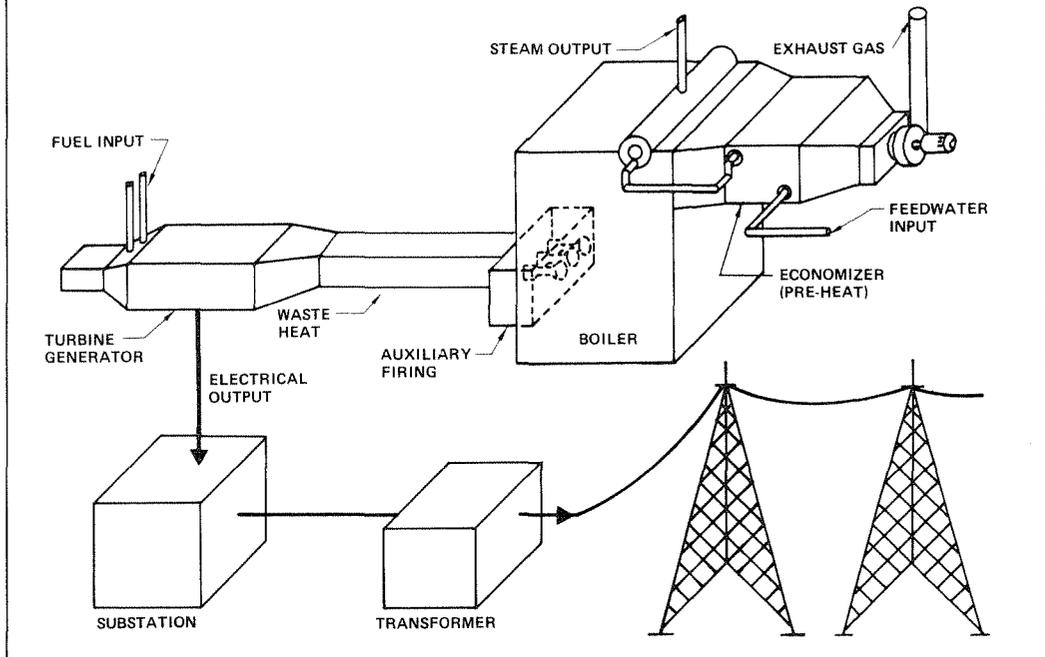
"It is imperative that BPA keep in mind throughout these negotiations the Council's role in power planning and in fish and wildlife protection, mitigation and enhancement," said the Council's letter.

The Council, charged by law to develop both a plan to aid the Columbia's fisheries and a 20-year regional energy plan, asked BPA to include provisions in its revised contract with the DSIs that would allow amendments to any power sales contract to conform with the Council's plan.

BPA is renegotiating contracts with the DSIs following a U.S. Ninth Circuit Court of Appeals decision overturning long-term contracts between the federal agency and the industries, largely aluminum manufacturers in the Northwest.

The Council's letter came in response to testimony during its fish and wildlife hearings in

## Puget Power - Boeing cogeneration unit



**Dual purpose:** Utility-industry project produces electricity and industrial heat.

March from Bruce Mizer of In-talco Aluminum Company. Mizer said the DSIs objected to stream flows in excess of minimum amounts for downstream migration of fingerlings because it might interfere with BPA's ability to deliver full power to the DSIs.

Mizer said if the Council's fish and wildlife program increased the risk of power interruption "then the Council must also adopt measures to replace lost firm power capability with firm resources which do not diminish the regional power system's flexibility to meet all regional loads."

The Council in its letter, noted it had "both the authority and responsibility" to develop a fish program. "BPA twenty year sales contracts should not in any way hinder the Council's ability to perform these functions," the letter said.

The letter urged BPA Administrator Johnson to "take action in upcoming DSI contract negotiations to assure that there will be no conflicts with the Council's discretion in designing a fish and wildlife program or an energy plan."

"The Council's responsibility is to develop resources to

meet the BPA's obligations," Brett Wilcox, executive director of the Industrial Customers of Bonneville, told The Oregonian. "It is not to tell the BPA what its obligations are."

## Puget Power, Boeing sign cogeneration agreement

Puget Sound Power & Light Company and The Boeing Company have signed an agreement for one of the largest new cogeneration projects in the region.

Designed and built by Boeing Engineering and Construction Company, the project consists of two 4.5-megawatt Allison turbine generators fired by natural gas or contaminated jet fuel. The Boeing Company is financing the cogeneration project.

Robert V. Myers, Puget Power's vice president of generation resources, said the project should be on line late this year and produce enough

energy to serve approximately 4,800 average residential customers.

The process is known as cogeneration because a single source of fuel is used to simultaneously produce electricity and heat for industrial purposes.

Myers explained that Puget Power will purchase the output on the basis of its avoided cost, which is the cost of the last 100 megawatts of power needed to meet customer loads. The by-product gases will be used to produce steam to supply the heating and manufacturing needs of Boeing's Fabrication Division in Auburn, which will continue to purchase electricity from Puget Power.

Howard C. Donelson, Boeing's utility and environmental control manager, said, "This kind of utility/industry cooperation is a productive approach in solving the region's energy problems."

If the pilot project proves successful, both companies hope cogeneration can be implemented at other facilities in Puget's territory.

# Energy concerns aired at Council town meetings

*Fish, irrigation, conservation impacts questioned*

Questions about whether we'll have enough electric power in the future and where it will come from dominated discussions last month as citizens attended a series of town hall meetings in Oregon and Idaho by the Northwest Power Planning Council.

Farmers throughout agriculturally-oriented Eastern Oregon and Idaho voiced concerns about the Council's fish and wildlife plan and its impact on water for irrigation.

"It's hard for us to conserve energy in mid-summer when it's vital to keep our pumps running," said Phil Wheeler, a farmer in Southeastern Idaho.

"You add too much more to my power bill, you're going to break me," said Wayne Winter, another Idaho farmer.

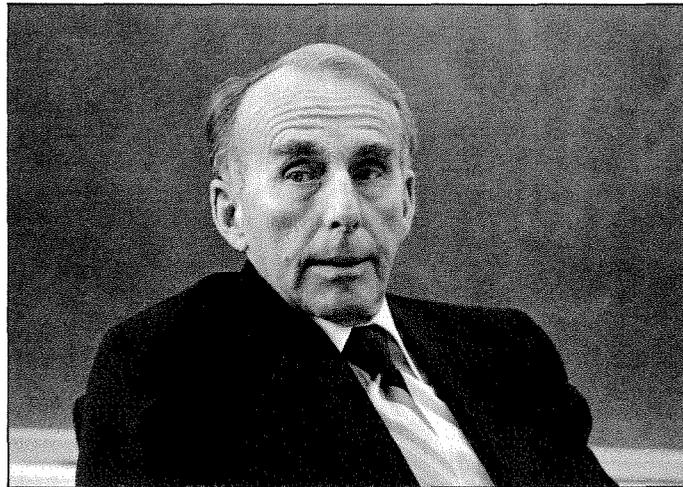
Winter's concern about the rising cost of electricity for irrigation was also on the minds of Oregon farmers when they attended a Council town hall meeting in Pendleton.

But Council Vice Chairman Bob Saxvik of Idaho cautioned the farmers that the Council wasn't looking at conservation as a form of curtailment.

"We're just looking at more efficient ways to pump," said Saxvik, adding that conservation was just good business sense.

Nevertheless, farmers throughout the Columbia River Basin area, the Northwest's fertile farm belt, said they were afraid they would be denied irrigation water in order to meet the Council's fish and wildlife plan. The Council is required by the Northwest Power Act to develop a long-range plan to help salmon and steelhead fisheries along the Columbia and Snake Rivers.

Farther west, however, citizens were concerned whether the Council was going to do enough to protect the rivers' once flourishing fisheries. At



**Town meetings:** If we can get to the moon, we can save the fish, said Idaho's Mills.

the Eugene town hall meeting, a spokesman for the Commercial Fishermen's Union urged the Council to authorize construction of fish passages throughout the Columbia with the costs worked into the Bonneville Power Administration's wholesale electric rates.

Responding to a similar statement at the Boise town hall meeting, Idaho Council member Larry Mills said, "We're going to have to have enough water to flush those little fellas (the salmon and steelhead fingerlings) out to sea."

"Seems to me if we can go to the moon," added Mills, "we ought to be able to find a computer that can figure out how to flush those fish even when we have a critical water year."

While there was concern about whether the Northwest would have enough energy, there was also considerable question about where new energy sources would come from.

One Eugene woman suggested that the Council should push ahead on renewable resources but try to do every-

thing it could to protect "the natural beauty of the Northwest."

But Oregon Council member Roy Hemmingway said that wasn't necessarily an easy trick. Hemmingway noted that one of the potential renewable resources is wind; however, the prime windmill sites in the region are along either the pristine Oregon Coast or the Columbia Gorge.

Hemmingway said development of renewable windmills at either of those sites would do little to enhance or preserve the aesthetic beauty of the Coast or the Gorge.

At the Council's townhall meeting in Longview, Washington, numerous residents raised concerns about BPA's conservation program and wanted to know whether the Council could do anything to help.

Council Chairman Dan Evans told the group that the Council's plan would clearly spell out some conservation goals which Evans felt would help accelerate the process.

A number of citizens also asked questions about the

troubled Washington Public Power Supply System and its various nuclear power projects now under construction.

"If the Power Council had been in place at the time, WPPSS wouldn't have happened," said Mills.

Council member Saxvik also cautioned about trying to pin blame for the termination of WPPSS Plants 4 and 5. "Wall Street — with all the cost overruns, labor problems, and rising interest rates — was the one who shut down the shop," said Saxvik.

Some citizens also raised concerns about regional energy forecasts, which once showed dramatic growth in demand for electricity but recently have been steadily and sharply dropping.

Idaho Public Utility Commissioner Perry Swisher, speaking at the Boise town meeting, cautioned all the forecasts must be "fair."

"You can pretend anything you want to pretend if you can get a legislative majority," Swisher said in apparent reference to the Idaho legislature's recent moratorium on inverted rates. "The mistakes that will be made will be mistakes made for special pleaders."

"But I'm not worried about the Council at all when it comes to forecasting."

# Coming to grips with uncertainty

*Council adopts planning method based on flexibility*

"The trouble with our times is that the future is not what it used to be," said the French philosopher Paul Valéry.

That's perhaps nowhere more true than in trying to forecast the Pacific Northwest's energy future. The stabilities of the past have been knocked over by towering uncertainties about the future. As testaments to that uncertainty, two multi-billion-dollar nuclear plants, not even half finished, stand abandoned, with a third in mothballs.

So how do you deal with these uncertainties which have put the region, as Council Chairman Dan Evans puts it, on a narrow path along the ridge between overbuilding new power and underbuilding?

Utilities, traditionally, have established a single-point forecast of power demand and built accordingly, figuring it is better to err over rather than under.

Forecasts are fickle, however; prone to sudden unforeseen economic, social, and technological changes and assumptions about a future far removed from the present.

To cope with the uncertainties, the Northwest Power Planning Council has adopted a planning philosophy which Council members say recognizes the inherent problems in forecasting and tries to cut the risk and cost of being wrong. The Council's planning method emphasizes a forecast range, an array of resources to meet particular power demands, and regional risk sharing.

"We've got to face it, we're going to be wrong on any long-range forecast," says Council member Roy Hemmingway of Oregon.

To avoid pinning false hopes — and plans — on any single figure forecast, says Council member Charles Collins of Washington, the Council will look at a range of growth scenarios. What's the consensus about the highest likely growth scenario? What about the lowest?

Recognizing that actual growth can fall anywhere in between, explains Hemmingway, the Council would then begin to develop a power plan, stacking resources by their need, cost, and flexibility. The Council would plan, first, for the resources to meet the low demand scenario, with the cheapest resources coming first as required by the Northwest Power Act. Then a combination of flexible resources



**Dealing with the future:** "We are here to make some judgments not only about what the future is going to be, but about how to *deal* with the future," says Oregon Council Member Roy Hemmingway.

—those which have shorter lead times for completion and/or those which can be built in increments — are stacked up to the high growth scenario, again getting in line by cost, cheapest first.

The plan would then be reviewed frequently, possibly annually, and adjusted according to changing power demand. This way resources could be accelerated or slowed, making sure the region had sufficient power at the lowest cost without facing the economic risk of having too little power or more expensive new power than needed.

In addition to the actual acquisition of resources, the Council would also look at resource options, sort of insurance policies for adequate supply. The Council could tentatively approve a particular project as a resource option. The sponsor would agree to do the initial work — such as early engineering work, siting and licensing, getting the project ready to start — and hold the project until a particular

decision date. Then the Council would decide whether to go ahead with the project, delay it, or cancel it altogether. In any case, the region would bear the cost of any option developed for the region's possible benefit.

The key to the planning method is recognizing the inherent forecasting uncertainties and trying to find more flexible ways to deal with changing conditions.

"The future is one where I believe we must look at a much wider variety of responses," says Council Chairman Dan Evans. "Perhaps the best way to put it is: we ought to be building a supermarket of electrical resources. And we ought to stock the shelves with as many different kinds of resources as we can."

The Council recently circulated a discussion paper about the planning concept, titled "The Path Along the Ridge: Regional Planning in the Face of Uncertainty," written for the Council by University of Wash-

*(Please turn to page 19)*

# To save the salmon

(From page 1)

Council to dramatically improve the lot of the Columbia River System's fish and wildlife. And this charge, tucked away amid a sea of pages about energy, may be the most overlooked and underestimated task Congress handed the Council:

Overlooked because so much attention recently has been focused on energy problems of WPPSS, rising electric bills, and a ratepayers' rebellion; and

Underestimated because repairing the badly depleted fish runs of the Columbia and Snake Rivers is no small chore, in terms of either dollars or striking a truce between conflicting parties. It is a case of balancing modern society's technological drive with that of nature's, and seems certain to require a new spirit of cooperation if fish and wildlife are to be accorded the co-equal status Congress intended.

By law, the Council must develop "a program to protect, mitigate and enhance the fish and wildlife, including related spawning grounds and habitat, on the Columbia River and its tributaries" even before putting together a plan for the region's energy future. For since the beginning of the hydro-electric development of the Columbia, fish and the river's power operation have become inseparable issues. The recommendations to the Council solicited from federal, state and tribal fish and wildlife agencies bear this out. For the past 50 years, electric power, not the salmon, has been King of the River.

**T**he decline of the Northwest's natural, once bountiful fishery began more than a century ago as settlers came westward. The settlers competed with earlier settlers, the Indians, for the West's resources — resources which must have appeared inexhaustible: mountains of timber, ranges of prairie for grazing, lush valleys for farming, and rivers teeming with fish.

The land and the river seemed to provide all the needs of the native population, whose culture was built around the fish. Northwest Indians thrived on Chinook, Sockeye, and Steelhead trout. It fed their bodies and their souls. Fish were more than a dietary mainstay; they were central to the ceremony and religion of the Indians. Harold Culpus of the Warm Springs Nation describes it this way:

"Sunday was the time that he worshipped — sometimes Friday, Saturday,

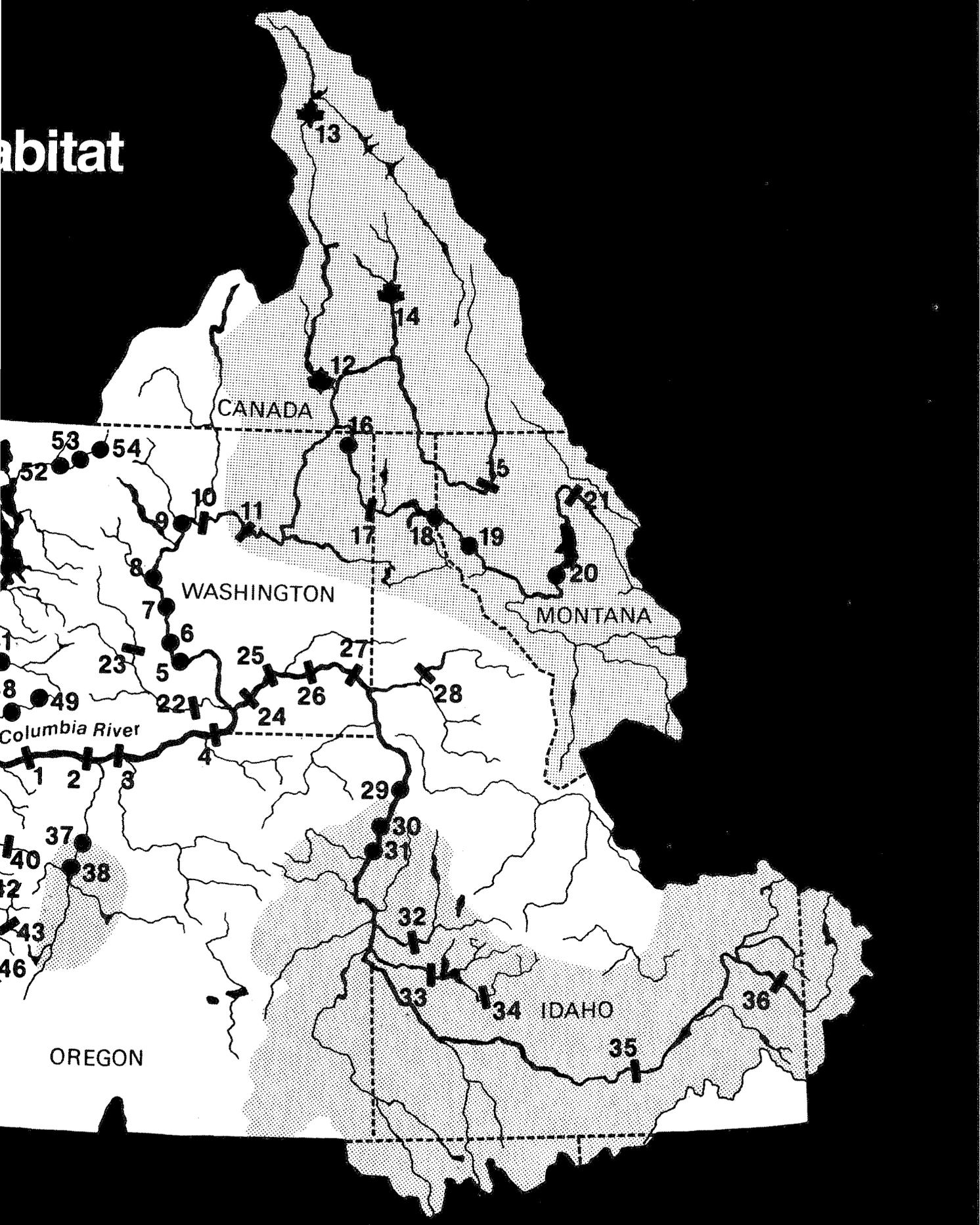
## NW dams & lost fish h

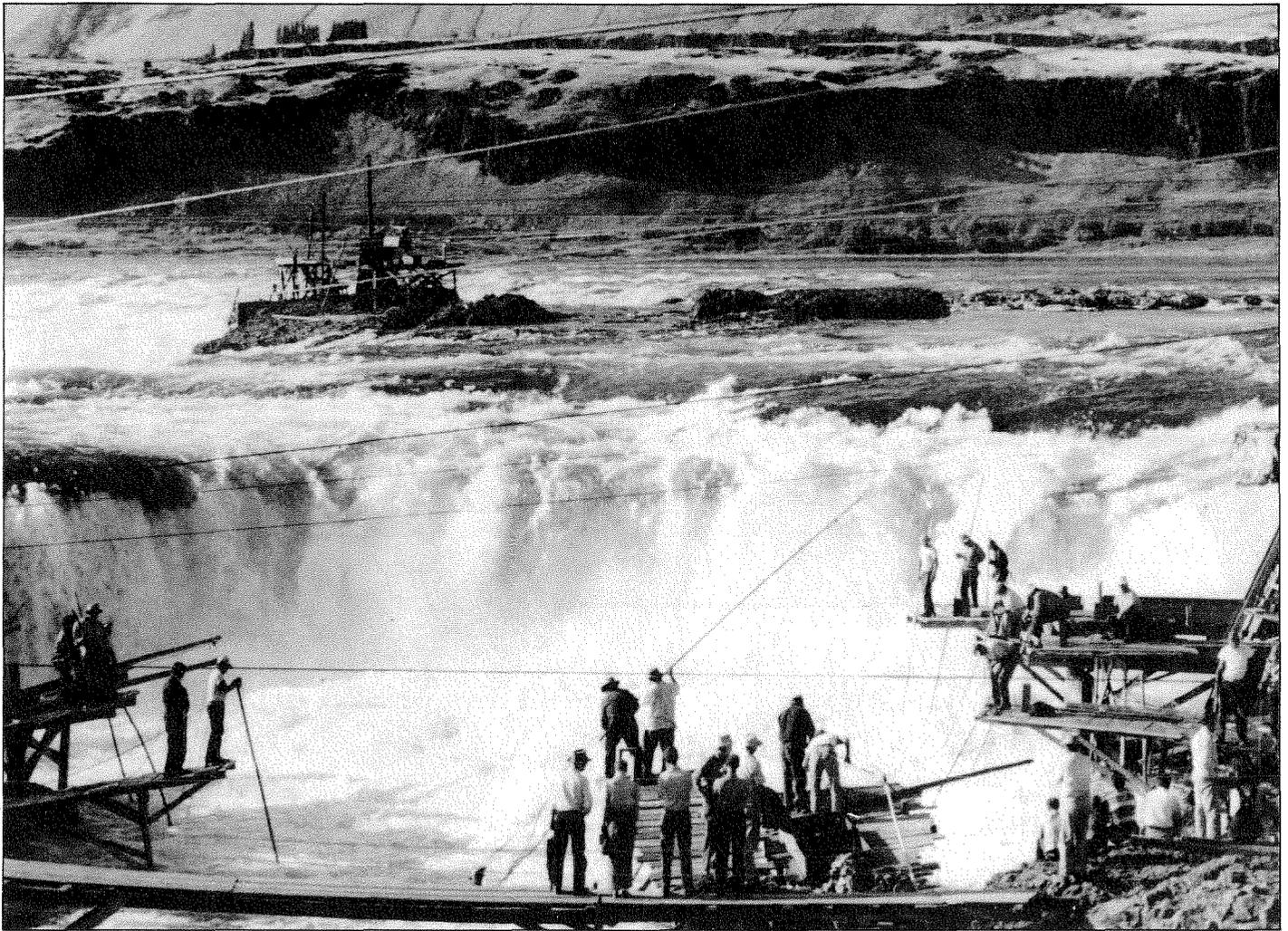
Map shows federal and non-federal dams in the Columbia River system. Shading indicates area lost to fish migration and spawning as a result of hydroelectric projects.

- |                     |                    |
|---------------------|--------------------|
| 1 Bonneville        | 29 Hells Canyon    |
| 2 The Dalles        | 30 Oxbow           |
| 3 John Day          | 31 Brownlee        |
| 4 McNary            | 32 Black Canyon    |
| 5 Priest Rapids     | 33 Boise Diversion |
| 6 Wanapum           | 34 Anderson Ranch  |
| 7 Rock Island       | 35 Minidoka        |
| 8 Rocky Reach       | 36 Palisades       |
| 9 Wells             | 37 Pelton          |
| 10 Chief Joseph     | 38 Round Butte     |
| 11 Grand Coulee     | 39 Big Cliff       |
| 12 Keenleyside      | 40 Detroit         |
| 13 Mica             | 41 Foster          |
| 14 Duncan           | 42 Green Peter     |
| 15 Libby            | 43 Cougar          |
| 16 Boundary         | 44 Dexter          |
| 17 Albeni Falls     | 45 Lookout Point   |
| 18 Cabinet Gorge    | 46 Hills Creek     |
| 19 Noxon Rapids     | 47 Merwin          |
| 20 Kerr             | 48 Yale            |
| 21 Hungry Horse     | 49 Swift           |
| 22 Chandler         | 50 Mayfield        |
| 23 Roza             | 51 Mossyrock       |
| 24 Ice Harbor       | 52 Gorge           |
| 25 Lower Monumental | 53 Diablo          |
| 26 Little Goose     | 54 Ross            |
| 27 Lower Granite    | 55 Lost Creek      |
| 28 Dworshak         |                    |



abitat





**Lost falls:** Indians once fished at Celilo Falls, since covered by water backed up by The Dalles Dam.

Sunday — and they had to have that salmon as part of the traditional way, as part of the ceremony.

“In the beginning, from the time of creation of the Indian as it is told . . . it is interpreted that food is the most sacred thing in this country — food, love and relating a person, brother or sister . . .

“That’s why the Indians, when the white man first came to this country, in the Columbia River, he spread the table out and set the food out for him, though he was a stranger.”

The “stranger” and the Indian would come to clash — one believing in his “manifest destiny;” the other believing the land was his and he was in a special harmony with nature. The wars between white man and red man ended in the mid-1800s with a series of peace treaties. In the treaties, the federal government recognized the Native Americans’ prior claim to the water and fish, giving them the right to fish in their “usual and accustomed places in common with” territorial settlers.

The treaties were an acknowledgement of the Indians’ special relationship to the

land, the river and the fish. The Indians had husbanded the land and water as integral parts of their culture and livelihood. Yet, the treaties also marked a turning point for the tribes.

“They took only as many fish as they needed, and none was wasted,” writes Anthony Netboy. “The red men were true conservationists — at least until the white men taught them that fish were salable commodities that could make them rich.”

Using new catching methods, like the fish wheel, set net and especially the “iron chink,” which revolutionized the canning industry at the turn of the century, the commercial salmon industry rapidly developed and the tribes quickly recognized the commercial value of the fish. Soon, the river was being taxed beyond its ability to replenish itself. Once conserved by the Indians, the fish runs became overharvested.

Fishing alone, however, did not deplete the Columbia’s fishery. Poor logging, grazing, and farming practices caused the land to erode, leaving blankets of silt over natural spawning beds and rendering

them useless. And irrigation extracted its price. Under the Reclamation Act of 1902, federally funded and built dams blocked up streams and rivers, storing water for flood control and irrigation. Scores of farms cropped up. Fish habitat disappeared.

Still, as the Northwest’s hydro-electric era began, the Columbia River fishery was relatively strong. But development of the river — for navigation, for irrigation, for power production — seemed certain to accelerate.

The election of Franklin Delano Roosevelt started economic recovery programs of the New Deal and gave the green light to the pet projects of Oregon’s senator Charles McNary and Washington’s C. C. Dill.

McNary wanted a lower Columbia dam for navigation; Dill wanted an upriver dam for irrigation. By the end of the first New Deal Congress in 1933, McNary got his Bonneville Dam and Dill his Grand Coulee. Four years later, Congress approved the Bonneville Power Administration, then a temporary agency, to build a

*'When finished in 1975, the Columbia River dams were the world's greatest liquid electric machine: 28 dams, 13,000 megawatts of low-cost, renewable electricity, with storage capacity of 20 million acre feet . . . But there was less water for increasingly fewer fish.'*

set of transmission lines and sell the federal power from the dams of the Army Corps of Engineers and the Bureau of Reclamation. BPA, spurred by the public power movement and better economic times, sold electricity to any and all comers. More dams were built, and the taming of the mighty Columbia was underway.

When it was finished in 1975, the Federal Columbia River Power System (FCRPS) stood as the world's greatest liquid electric machine: 28 dams, producing more than 13,000 megawatts of low-cost, renewable electricity, with a storage capacity exceeding 20 million acre feet of water. And there's more.

Dams owned by public and private utilities generate even more power. And other state and federal dams hold back even more water for irrigation and flood control. But there's less water for increasingly fewer fish.

A few numbers illustrate this unhappy result. Between the mid-1930s and the mid-1970s — as the power system fully developed — the commercial Columbia salmon catch declined two-thirds, to 6.5 million pounds from 21 million. The accessible habitat for natural spawning shrank by more than half, to 73,000 square miles from 163,000 square miles. Similar reductions occurred in the number of upriver Chinook salmon re-entering the river.

The culprits, however, were not the dams alone. Fish runs had begun to decline even before the completion of Bonneville dam in 1938 as overfishing, destruction of natural spawning beds and ocean fishing claimed a larger and larger share of the stocks.

"The once prodigious anadromous runs (migrating salmon and steelhead) of the pre-dam era were so depleted by the late 1970s that the federal fisheries agencies initiated administrative proceedings to consider whether to designate certain up-

river runs as 'threatened' or 'endangered,' thus invoking the protection provided by the Endangered Species Act," writes Michael Blumm, editor of the Anadromous Fish Law Memo.

Fisheries officials wanted redress from the power system, and focused their attention on the Northwest Power Bill which was under Congressional consideration. While Northwest Congressmen urged the conflicting power and fisheries interests to develop a legislative compromise, the fish found another friend on Capitol Hill: Michigan Congressman John D. Dingell. Chairman of the key House Commerce subcommittee and an avid sportsman, Dingell spelled out his terms for letting the bill out of his committee with unquestioned clarity: protect the fish or no bill.

John Dingell — and the fish — won.

Last summer, the Council began the process to develop a fish and wildlife program. By law, the Council was required to solicit recommendations from various fish and power entities, these proposals becoming the groundwork for the Council's eventual program. On November 15 the Council received 2,200 pages of recommendations. Chief among these was the work of a coalition (commonly known as the Ad-Hoc Executive Group) of six federal and state fish and wildlife agencies and the Columbia River Inter-Tribal Fish Commission.

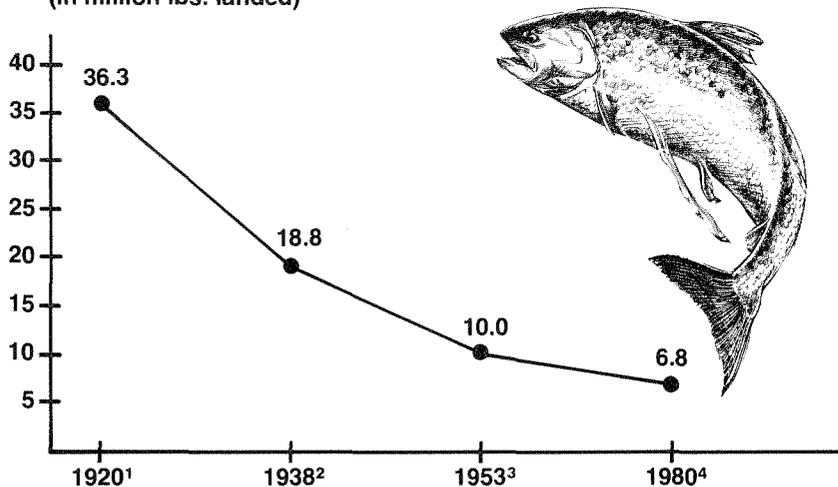
At the base of the coalition's recommendations was the proposal to restore the salmon and steelhead runs of the Columbia and Snake to their pre-1953 levels — a time before the completion of McNary Dam. The coalition's goal, which targets the highest fish levels prior to 1953, would provide the following increases:

	Current 5 year average	1953 pre- McNary
Spring Chinook	101,000	300,000
Summer Chinook	41,000	200,000
Fall Chinook	294,000	400,000
Sockeye	55,000	200,000
Coho	45,600	164,000
Summer Steelhead	124,000	400,000

To achieve the goal, the coalition said six objectives would have to be met: first, improving the survival of small fish headed downstream to the ocean; second, improving the chances of survival of adults

## Columbia's declining fisheries

Annual in-river harvest (commercial and sport) of all species of salmon and steelhead (in million lbs. landed)



<sup>1</sup>Prior to major dam development  
<sup>2</sup>Bonneville Dam completed

<sup>3</sup>McNary Dam completed  
<sup>4</sup>Most current figures available

returning to spawn; third, taking steps to improve natural reproduction through better spawning habitat; fourth, improving and increasing the hatchery production; fifth, adjusting power planning and river management practices to give fish equal status; and finally sixth, formally incorporating fisheries experts in planning, management and operation of the power system.

To give the fingerlings a better chance of survival, the coalition's state and federal members proposed minimum stream flows to carry the tiny fish out to sea, improved bypass around the dams, and efforts to reduce predation from other fish and birds. The tribes, however, sought higher, or maximum, flows to aid downstream migration.

To improve adult upriver migration, the coalition recommended certain water conditions to reduce dangers from nitrogen saturation for returning fish, and better fish ladders to help the adult salmon and steelhead make their ways to their original spawning areas.

Natural reproduction could be improved, the coalition said, by improving flows between the Snake's Hells Canyon and Lower Granite Dams, the Hanford Reach just above the Tri-Cities, and in the Willamette Basin. The fish runs could be expanded further, the group said, by improving and enlarging existing hatcheries and building new hatcheries.

But fisheries interests said they are concerned the recommendations won't be met unless some fundamental manage-

ment changes are made in the river operation.

"The current situation cannot continue," the coalition said. "Either the institutions responsible for power planning, management and operation must modify their basic assumptions for operating the river to include equitable treatment of fisheries, or the ultimate extinction of upriver runs must be accepted. Realistically, there is no middle ground."

In tandem with the management changes, the coalition urged the Council to formalize additional "fisheries" seats at the power table.

Based on the recommendations, the Council held a series of five hearings throughout the region in March. Two-hundred witnesses came forward to testify, focusing on the coalition's recommendations and particularly the proposal of setting minimum flows.

"The problem our agency sees with minimum flows," said Tim Wapato, executive director of the Columbia River Inter-Tribal Fish Commission, which supported higher flows, "is that they pose an arbitrary level of survival on the fish." Wapato said higher flows would "ensure that maximum survival occurs during the juvenile migration."

But minimum or optimum flows could pose another problem for non-migrating fish which spawn and live in the upper reaches of the Columbia River System, such as behind Hungry Horse Dam on the Flathead River in Montana. The Montana fisheries agency was concerned that flows

to help downriver migrating fish might require upriver reservoirs to be drawn down, slowing vital stream flows and eliminating natural spawning beds of the non-migrating or resident fish, said Pat Graham of the state's Department of Fish, Wildlife and Parks.

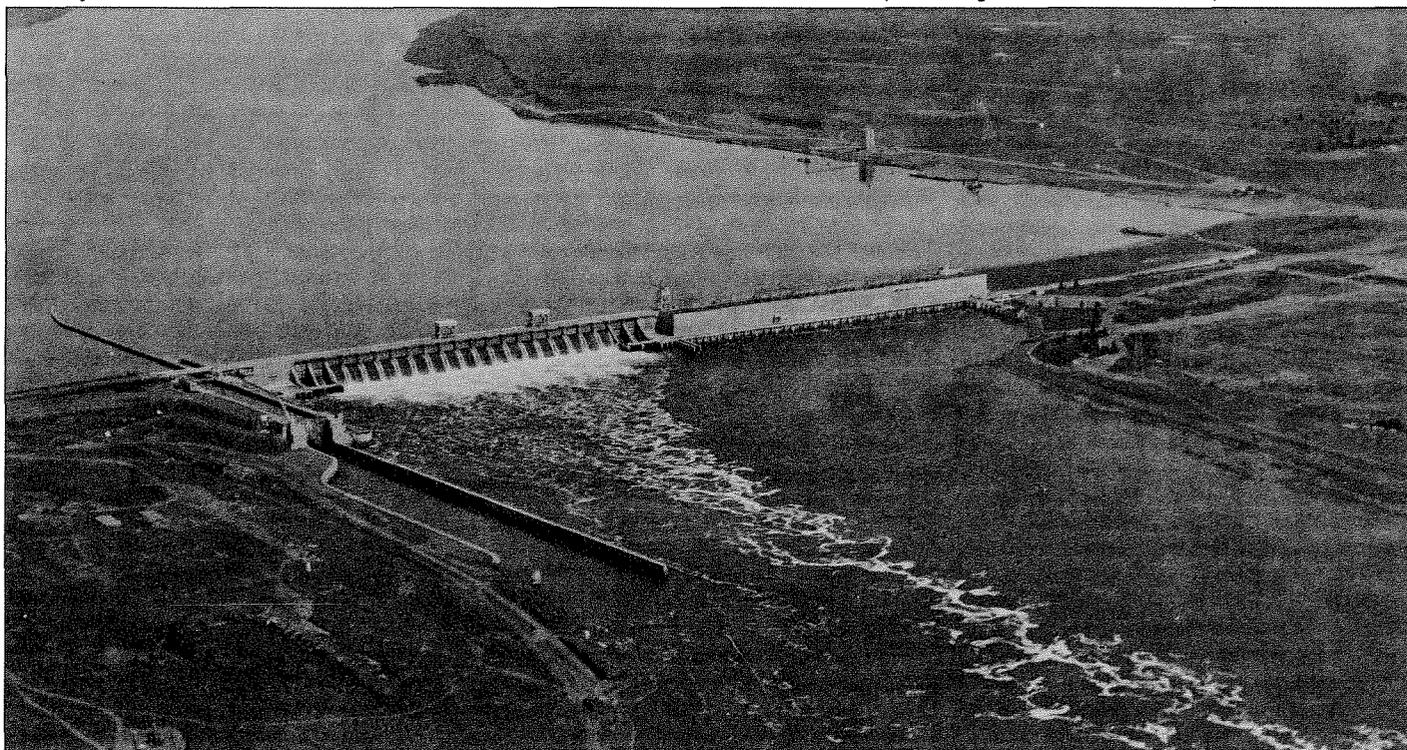
The flow issue highlighted man's intervention in the workings of the river. The dams had created a series of lakes, carefully fed one from another to gain the most out of the river's hydro-electric potential. Increasing the flows during crucial periods — actually spilling water to flush the juvenile fingerlings downstream past the dams and the potentially deadly turbines — could get more fish out to sea, to eventually return and spawn. But water spilled for fish was also water lost to spin the power turbines.

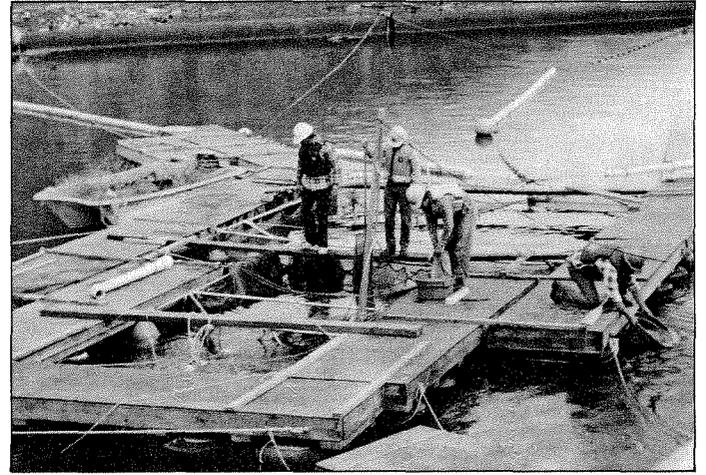
"The ability to regulate the natural stream flows is extremely important to the region's power system," warned Merrill Schultz, Director of the Inter-Company Pool of private utilities. "Without the ability to impose an artificial regulation upon stream flows, the existing Federal Columbia River Power System would produce only about one-third the electricity it now generates." To replace that power loss, Schultz said, could cost billions.

Instead, Schultz and other utility officials suggested "transportation" — collecting the fish at various points along the river and barging or trucking them around some of the dams, thus allowing the con-

*(Continued on page 16)*

**McNary Dam:** Fish coalition wants runs returned to levels before 1953, when Corps of Engineers dam was completed.





**Fish study:** Council members watch crew at Rocky Reach Dam collect fish for a migration study.

## Mid-Columbia projects pivotal to fish future

They straddle the Columbia River like Paul Bunyan-sized stepping stones, spanning the river from just below the Methow River down to the heart of the once-arid Columbia Basin.

The Mid-Columbia hydro-electric dams crank out more than 4,000 megawatts of electricity for utilities around the region and mark the final man-made obstacles in the upstream migration of salmon and steelhead.

The role of the Mid-Columbia dams, in both power generation and fisheries enhancement, brought members of the Northwest Power Planning Council to tour the facilities in early May. The Council is required by the Northwest Power Act to develop a long-range plan to "protect, mitigate, and enhance" the fish and wildlife along the Columbia River and its tributaries.

The Mid-Columbia dams, owned by the Public Utility Districts of Douglas, Chelan, and Grant Counties, are products of the Eisenhower era "partnership program," which encouraged local utilities to build facilities instead of the federal government, and are the only non-federal hydro-electric facilities on the main stem of the Columbia.

Over the years, the Mid-Columbia PUDs voiced repeated reservations about spending revenues generated by the dam for non-electric purposes, such as aiding up and downstream migration of salmon and steelhead.

Nevertheless, the Mid-Columbia PUDs are pivotal players in any effort by the Council to restore the river's declining fish runs as they are the last dams up-

stream which have any fish passage facilities before reaching the road blocks of the federal Chief Joseph and Grand Coulee dams.

Council Chairman Dan Evans, and Council members Al Hampson, Larry Mills, Keith Colbo, and Gerald Mueller, came to see the Mid-Columbia facilities first hand and to talk to local utility officials about some of the major fisheries-related issues, such as downstream river flows for migration of juvenile fish, juvenile fish passage, and hatchery production facilities.

Mid-Columbia utility officials told Council members that their facilities — Wells, Rocky Reach, Rock Island, Wanapum, and Priest Rapid Dams — pose different fisheries mitigation problems than the federal dams along the Columbia and Snake Rivers.

In fact, Wells Dam, located about 60 miles north of Wenatchee and owned by Douglas County PUD, posed even a unique problem among the Mid-Columbia hydro facilities, local utility officials said. Wells Dam had both its water spillways and power turbines located in the center of the dam, while most other dams are designed to have the spillways located near the dam's center with the power turbines off to one side.

Douglas County PUD officials said this created a problem because the fish are drawn by the speed of the river flow to head down through the turbines, where they risk being killed. The utility officials said they are conducting research to see what can be done to help fish over and around the dam and also to look at other

measures to aid the fisheries.

Douglas County PUD officials said they are currently spending \$300,000 annually on fisheries measures, or about two percent of their annual revenues of \$15 million.

Chelan County PUD officials told the Council members they were engaged in extensive research to aid the fisheries. Chelan officials are studying the migration patterns of fingerling salmon and steelhead to try to determine the best types of by-pass facilities to install on Rocky Reach and Rock Island Dams.

Grant County PUD officials told the Council that they estimated the cost of juvenile by-pass facilities for their two dams, Wanapum and Priest Rapids, could run anywhere from \$14 to \$20 million per dam and urged the Council to consider a proposal for "transporting" fingerlings from just below Rock Island Dam to a spot downstream from Priest Rapids. Grant officials estimated that nearly as many fish could be saved through the transportation methods, literally trucking the fish, at a considerably lower cost.

The Mid-Columbia dams produce 4,269.6 megawatts, with much of the electricity sold to other public and private utilities.

The Council is currently developing the draft of its long-range fish and wildlife plan, which is scheduled to be published some time this summer. Public hearings on the draft plan will be held later this year.

*'The dams had created a series of lakes,  
carefully fed one from another  
to gain the most out of the river's  
hydro-electric potential.'*

(From page 14)

tinued artificial regulation of the river for power requirements.

But some fisheries officials balk at the "transportation" notion, saying it prevents the young fish from "imprinting" their natural in-river course to the ocean. When the fish returned, fisheries people said, they wouldn't remember — there would be no imprinting — the dams and how to get around them to their natural spawning grounds.

River flow was just one tool to help fish in their downstream migration. Another problem was the power turbine blades. As the blades spin to produce electricity, they increase the flow, or velocity, of the river, creating a draw that pulls the fingerlings towards and through the blades, killing them. To save the fish, the coalition proposed installing screens in front of the turbine portals and building, where necessary, actual bypasses that would funnel fish around the dams and away from the turbines.

But changing the river's operation wouldn't be an easy trick, Army Corps of Engineers General James van Loben Sels cautioned the Council during its Boise hearing. "These recommendations," said the general of the proposed flow revisions, "conflict with one another and would seriously impact authorized project purposes such as flood control, power generation, irrigation, water supply and recreational use."

Before the Corps could comply with some of the fish and wildlife recommendations, the general said, it might require new authority from Congress for operation of the river.

## Council seeks cooperation of Corps, Bureau of Reclamation

Calling for closer cooperation, the Northwest Power Planning Council has asked the Army Corps of Engineers and the Bureau of Reclamation to weigh the fish and wildlife mandates of the Northwest Power Act in their operation of the Columbia River System.

"We are concerned that many employees in an organization as large as the Corps of Engineers may not be familiar with the fish and wildlife provisions of the Northwest Power Act," wrote Council Chairman Daniel J. Evans to General James W. van Loben Sels.

Evans said the Council, required to draw up a long term program to help the Columbia's depleted fisheries, could find its program restricted by "inadvertent actions" of the Corps. The Council also asked the Bureau to delay issuing any new water contracts until the Council's fish plan is finished.

"We request, therefore, that the Corps of Engineers adopt and immediately implement internal proce-

dures to ensure that in all of its activities (including planning, studies, operations and regulation) the Corps will take into account, to the fullest extent practicable, the purpose of the Northwest Power Act and other applicable laws to protect, mitigate, and enhance fish and wildlife resources, including related spawning grounds and habitat."

In addition, Evans said the Council was concerned that the Corps might enter into grants or agreements that could create "legally enforceable property rights in the use of water or facilities" which could interfere with implementation of the Council's fish and wildlife program.

To avoid that, the Council asked the Corps of Engineers to include language in all written contracts and grants that would allow modification of the agreements to take into account the fish and wildlife program being developed by the Northwest Power Planning Council.

The Council has asked to hear back from the Corps by June 10.

Regardless of Congressional changes, some say the Council's program is bound to trample "state-granted water rights."

"Idaho's water supply is allocated under a system of state-granted water rights and permits which has been in existence since territorial organization in 1863," asserted Ken Dunn, Director of Idaho's Department of Water Resources. Dunn said the fisheries recommendations "fail to recognize the complex issues involved in the allocation of water to numerous competing uses."

Dunn's criticisms — he characterized the six fisheries objectives as "single purpose" in scope — reflected both the changing perceptions of the fish issue as you move into farming areas, and the complexity of the task which must balance many interests. Noting either previous water rights or allocations, Dunn and others said the Council may have to look at building

new storage dams, perhaps along the Weiser River in Idaho and the Yakima in Washington, in order to have enough water to flush the fingerlings downstream.

As tangled as the issue is, the fishery issue is complicated by an already complex issue: Indian treaty rights. These rights, the coalition's proposal said, "include the right to protect the habitat of the fish" and "the tribes have reserved water rights which may be asserted to protect the fish throughout their life-cycle."

Harold Culpus of the Warm Springs Nation recounted for the Council the reaction of Chief Pip Shier during the mid-Oregon treaty negotiations. "What are you going to claim against the

United States?" the Army general supposedly asked. The chief replied, according to Culpus, "I am not going to claim anything against the United States . . ." And cupping his hands, the chief gestured to the general as if he held the river's water, "only this — which is already mine."

Those treaties, said Lionel Boyer, speaking for the Shoshone Bannock Tribe, make clear that tribal fishing rights may not be infringed. Boyer noted the Fort Bridger Treaty of 1868, and its affirmation in 1972 by the Chief Justice of the Idaho State Supreme Court that "the Indian right to share the fish commensurate with the enunciated purposes of the Fort Bridger Treaty is absolute."

"In spite of those promises," Bill Yallup of the Yakima Tribe told the Council, "power and irrigation dams have destroyed our fish runs without the slightest concern for a most solemn agreement."

**S**o what will it cost to "protect, mitigate and enhance" the fish and wildlife along the Columbia and its tributaries, and who will pay? The latter is the easiest of the questions. Congress, in the Northwest Power Act, said the cost of rebuilding the river's fish and wildlife damaged by the dams will be considered part of BPA's cost of doing business, and incorporated into the power marketing agency's rates. In the end, that means the ratepayers of those utilities which buy BPA power will be picking up the tab. But how big is that tab?

No one knows for sure. BPA officials say the optimum flows sought by the tribes can't be met. "Just simply," said Larry

Dean, director of BPA's Power Supply Division, "the available amount of space is not sufficient to meet the flows no matter how hard anyone would try."

If they could be met, Dean said, in a critical low water year the cost could run \$1.56 billion and reduce the river's power production by 2,200 megawatts, or enough power for two cities the size of Seattle. Even the minimum flows, again in a low water year, could drop 450 megawatts of power and cost between \$117 million and \$138 million, Dean said.

While the BPA cost figures are a gauge, other officials caution they may be high. For example, during a high water year, such as this one, the Columbia's hydro

system produces more power than is needed by the region's utilities or can be sold as surplus to California, meaning water is spilled over the dams. The spilled water can be used to help downstream migration at minimal added cost.

**W**hen Congress passed the Northwest Power Act, it thrust the Council into the role of mediator for many long-standing economic and social questions. The fisheries issue is no different; in fact, it is pivotal to the Council's energy plan. When and where water is stored for irrigation and power, when and where it is released, how the dams operate in relation

## At a glance: 6 key fisheries goals

When federal, state, and tribal fisheries agencies submitted their recommendations to the Northwest Power Planning Council last year, the groups outlined six objectives that were the foundation for the scores of recommendations they did make. The objectives give a quick thumbnail sketch of what the fisheries experts feel are some of the major problems for salmon and steelhead traveling up and down the Columbia River system.

### 1. Juvenile Survival

One of the major problems along the Columbia and Snake Rivers is simply getting the young fingerlings downstream and out to the ocean after they have been hatched. The fisheries group said there were three primary causes of death among the salmon and steelhead fingerlings — delay of migration downstream because the current in the river is too slow, death caused by passing the small fish through the power turbines of the various dams, and finally predation from other fish such as the squawfish or from hovering birds such as seagulls.

To help the juveniles downstream, the fisheries people wanted minimum stream flows established, screens or by-pass facilities at the various dams to guide fish around the power turbines, and some control measures exercised to stop predators.

### 2. Adult Survival

The fisheries people are also concerned about making sure that adult

salmon and steelhead make their way back to their original spawning grounds along the Columbia and Snake. To accomplish this, the agencies recommended improving adult passage over the dams on both rivers, adopting certain flow requirements for both rivers, and improving the operation and maintenance of fish ladders at the various dams.

### 3. Natural Production

The fisheries agencies said a major problem caused by the hydro-electric system is the destruction of countless acres of natural spawning grounds for the salmon and steelhead. The agencies are seeking to have those remaining natural spawning grounds improved so that more fish, from a wider variety of species, are produced, including attempts to revitalize some natural grounds, such as those along the Yakima River.

### 4. Hatchery Production

Historically, the hatcheries along the Columbia and Snake Rivers have been used to compensate for some of the lost habitat and damage to the fish runs caused by the hydro-electric system. The fisheries people would like to see additional hatcheries and development of "low-capital salmon and steelhead production facilities" which could be used to augment the natural fish runs.

### 5. River Management

If fish are to be accorded the equal status Congress intended, the fisheries groups say, management of the river system will have to be improved and coordinated more carefully. Fisheries experts argue that traditionally salmon and steelhead have received second priority over operation of the river as a power resource. The fisheries agencies propose a more coordinated power planning and river management system between themselves and traditional power interests, including the Bonneville Power Administration, the Army Corps of Engineers, and the Bureau of Reclamation.

### 6. Fisheries Interest Representation

While power planning and management should be coordinated more carefully between power and fisheries interests, the various fisheries parties said they also recognize that it is important to better understand the rivers' operation for power production and the various interlocking agreements that govern the power system.

To improve the coordinated management, the fisheries groups proposed establishing a formal review process for all fish-related decisions made by the three major power agencies. In order to support this, the groups recommended the addition of three positions to help coordinate the rivers' management to benefit both fish and power.

*'For the Council, the fish and wildlife program will represent its answer to one of today's troubling riddles.'*



**Council fish hearing:** Council members Hemmingway, Mueller, and Saxvik listen to testimony during March Portland hearing.

to other power plants, flood control, and fish must all be plugged into the ultimate solution.

By law, the Council's program must be based on the best available scientific knowledge. It may include using stream flows and the cheapest biologically comparable alternatives that complement the work of the various fish and wildlife agencies and tribes to increase fish production. Further, the program must be consistent with treaty rights.

In addition, the program must consider the fisheries damage caused by the dams themselves and allocate those costs to ratepayers, including the possible use of off-site measures such as hatcheries and administrative costs incurred in implementing the program. The law also requires the program to weigh the power loss and for BPA to proportion those costs

to the individual projects. In all, the Council's program is required to help the fish while providing "an adequate, efficient, economical and reliable power supply."

**T**here is a shade less than six months for the Council to accomplish this herculean task. By late summer, the Council will publish its draft program, holding a series of meetings and public hearings before closing the public comment period September 30. The final program will be set November 15, when it is published in the Federal Register, and will be incorporated into the energy plan due next April.

For the Council, the program will represent its answer to one of today's troubling riddles: how to preserve the marvelous, renewable resource of the Columbia's hydro-electric system, and yet restore its

once natural bounty of fish for Indian and non-Indian alike? It is the classic conflict between the needs of a technological society and the needs of a delicate ecology, now out of balance.

# Uncertainty

(From page 9)

ington Professor Kai N. Lee. The Council has received a number of comments in response to the paper.

In response to the concept of a high-low forecast range rather than a midpoint, the Pacific Northwest Utilities Conference Committee argued that "the Council is more likely to reduce uncertainty and to meet the region's energy needs if it plans resources to meet loads *somewhere* near this middle range of needs." Council member Chuck Collins responded at the May 6 Council Meeting, "We should resist recommendations to choose a middle ground. To plan for the middle is to lose our planning concept."

Norman Jacox, general manager of Northwest Public Power Association, said, "Risk management is an appealing concept; but at the least, there must be a lot of selling of the benefits of the concept if the general public and others are to accept the concept . . . People now are oriented toward the least cost philosophy, even though it involves greater risks."

Institutional barriers could undercut the idea of regional risk management, some warn. Chris Carlson, former Council Member, said, "I fear (that the risk management concept) faces an insurmountable obstacle in the implied change of role for the region's state public utility commissions . . . In effect, PUCs will be asked to certify 'maybes' and I frankly have a hard time seeing them doing that."

The Oregon Department of Energy agreed with Carlson: "It is unlikely that the various jurisdictions will abrogate to the Council their decision-making responsibilities, whether those jurisdictions are state structural code advisory boards or water policy review boards."

Financial problems also face the resource option concept. Peter Williamson, energy coordinator for the East Central Oregon Association of Counties, argued, "When the level of uncertainty becomes too great, investors will resist spending 'up-front' money to have projects developed to the option stage . . . Who wants to commit funds when the opportunity costs of these funds can be so great?"

To overcome regulatory barriers to "optioning" resources, Gary Kalich, manager of Lewis County PUD, said, "We feel it will be necessary to effect changes in state and federal regulations in order to provide flexibility and more certainty in the plan (e.g., FERC's requirement to begin construction within two years of being granted a license for a hydro-electric project)."

Opposition to proposed plant sites may also make the concept of resource options more difficult. Wendell Satre, president of Washington Water Power, argued, "It



**A wide range of options:** "We need more information. We need to profile resource options in terms of regulatory problems, likely costs, lead times. We need a wide range of options: wood wastes, policies, variable rates . . ." says Washington Council Member Charles Collins.

would be somewhat imprudent to assume less social and environmental opposition to licensing a site as an option than as a planned resource . . . The intangible costs to the utility of the adverse publicity, societal opposition, and corporate disruption of attempting to license the site may not be compensated for in the options payment."

But some worried whether the options concept would be used to build a large coal or nuclear plant. Ralph Cavanagh of the Natural Resources Defense Council suggested a different approach. "Since coal and nuclear plants don't fit the flexibility paradigm, we can either abandon the paradigm or omit the plants from our diversified portfolio. I urge the latter course . . . Once divested of the non-existent need to accommodate coal and nuclear generation, Professor Lee's analysis becomes virtually unassailable . . ."

Is it better to overbuild or underbuild resources? Which is cheaper and of less risk to the region? Larry Peterson, manager of Grant County PUD, argued, "It may be less costly overall to initially build for the median or high side forecast. If it turns out that a surplus develops, high variable cost resources could be shut down or surpluses marketed to other regions, which could nearly or fully recover the costs of overbuilding."

"California has made unambiguously clear that there are strict limits on the price it is prepared to pay," warned Cavanagh, "limits that rule out any hope of disposing of new coal or nuclear generation to the south, except at a loss."

Is the Council's approach the best way

to provide the region with flexibility and security? Ed Whitelaw, economist and member of the Council's forecasting advisory committee, disagreed. "It is hard to overstate the harm done by centralized decision-making *and* by regulated rates less than marginal costs. Such practices offer virtually no incentives for the regional market to allocate resources efficiently."

The Council discussed the paper and comments at its May 6 meeting. "We need more information," said Washington Council Member Chuck Collins. "We need to profile resource options in terms of regulatory problems, likely costs, lead times. We need a wide range of options: wood wastes, policies, variable rates . . ."

Roy Hemmingway, Oregon Council Member, said, "We need to make the decision rules for acquiring resources explicit. How do we make choices between low costs/long lead times and high costs/short lead times?"

Gerald Mueller, Montana Council Member, remarked, "The important issue is how do we decide when to acquire resources? We need to focus people's attention not on the forecast but instead on acquisition decisions."

And Hemmingway concluded, "We are here to make some judgments not only about what the future is going to be, but about how to *deal* with the future. This Council has a very real role to play in making rules about how to deal with uncertainty."

## Inverted rates nixed in Idaho

In response to a legislatively mandated moratorium, the Idaho Public Utility Commission has scrapped its inverted rate structure for most of the state's private utility residential customers and reverted to a flat rate schedule.

The action, which came after lengthy debate in the state legislature, could mean that nearly 75 percent of Idaho Power's residential customers will see a net increase in their electric bills, the regulatory panel says.

This winter the legislature passed a two year ban on inverted rates imposed by the Idaho PUC. Critics of inverted rates said that the Idaho PUC was trying to "dabble in social engineering" with adoption of the stair step rate schedule. The PUC had adopted inverted rates in October 1981, saying that the inverted rate structure would encourage residential conservation and help make ratepayers aware of the added costs of new power generation.

Under the new flat-rate schedule, all electricity will be sold at 3.675 cents per kilowatt hour.

Consumers using more than 1,730 kilowatt hours monthly will be paying progressively less for electricity. Consumers using less than 1,730 kilowatt hours monthly will be paying a higher amount than under the previous inverted rate schedule.

The inverted rate ban does not apply to Washington



**Troutdale tour:** Bill Campbell of Reynolds Metals (left) discusses the Troutdale aluminum plant's operation with Oregon Council Member Alfred Hampson.

Water Power residential customers in Northern Idaho. A number of other private utilities in the Northwest are also using inverted rate structures.

## Tentative resolve reached in Alumax suit

A suit challenging the Bonneville Power Administration's power sales contract with Alumax Pacific Corporation has been tentatively settled out of court. Under the agreement, the suit will be delayed until BPA's final forecast this summer, and then dismissed if BPA can meet Alumax's power needs with-

out acquiring major new thermal or hydro power which could hurt fish and wildlife. In addition, BPA agreed to analyze the impacts on BPA rates of serving the Alumax load.

The plaintiffs in the suit are the National Wildlife Federation, the Washington State Sportsmen's Council, the Rose City Ratepayers Association, and three individuals. The defendant is the Bonneville Power Administration, with Alumax Pacific Corporation as intervenor on BPA's side.

The suit, filed last fall, charged that BPA violated the Pacific Northwest Electric Power Planning and Conservation Act and the National Environmental Policy Act when it offered Alumax a 20-year contract for 320 megawatts of power.

The plaintiffs said BPA did not prove, as the Northwest Power Act requires, that it would have sufficient resources to meet the Alumax load. They also said that BPA did not comply with the Act's requirements for public involvement, and that the federal agency should have filed an environmental impact statement on the Alumax contract.

## NW community conference to be held

"Options Northwest: Local Responses to Global Challenges" is the title of a conference to be held June 17-20 at Evergreen State College in Olympia, Washington. Dan Evans, chairman of the Northwest Power Planning Council, Stephanie Mills, assistant editor of *CoEvolution Quarterly*, and Karl Hess, writer and activist, will speak at the conference.

The conference focuses on community issues in the Pacific Northwest, including energy, agriculture, peace, job development, values, and coalition building. Discussion sessions on these topics will be held, as well as skill-building workshops in organizing, fundraising, running effective meetings, political campaigns, managing volunteers, and other practical skills. For more information, contact the Evergreen State College at (206) 866-6001.

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