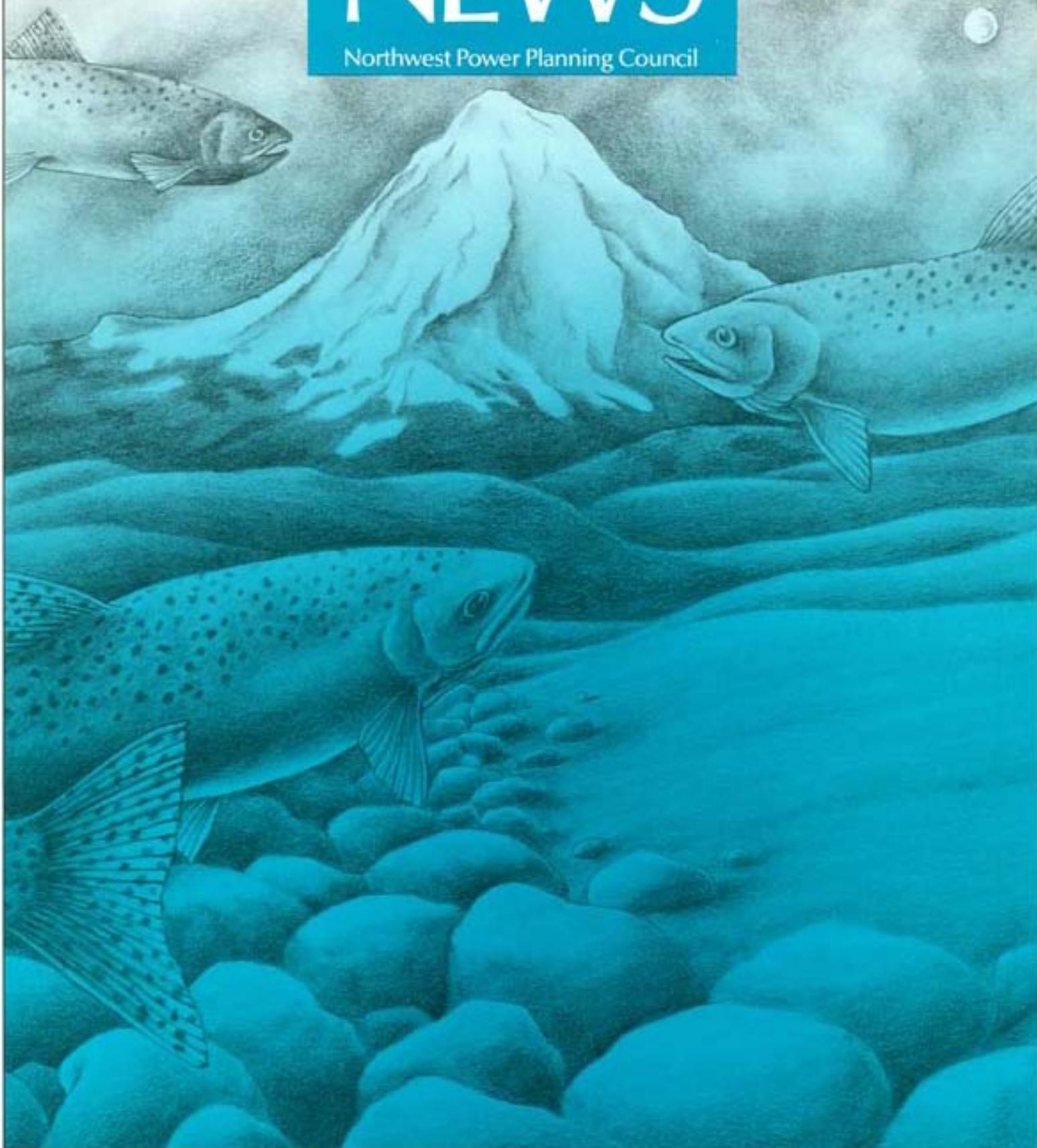


September/October 1988

Volume 7, No. 5

NORTHWEST ENERGY NEWS

Northwest Power Planning Council



CONTENTS



3 New Generation Generation

New technologies could give a 6,500-megawatt jolt to the Northwest's energy future.



17 Plight of the Homeless

Shrinking wildlife habitat: the region's next environmental challenge?



7 Beyond Reach

Council moves to protect prime fish and wildlife habitat.



22 Straight Talk at the Round Table

Frank appraisals of five years' focus on fish.



11 Interview: Sharon Nelson

Washington Utilities and Transportation Commission chief discusses power planning priorities.

26 Shorts

27 Calendar

Editor's Notes

In some ways, this is a special issue of Energy News. It was not intended. It just happened that over the past few months, the Council has heard some particularly provocative and eloquent public comment. We wanted to share some of it with our readers. Find it beginning on pages 7 and 22.

This issue is also special because it introduces Gordon Lee, our new writer, stolen away from the *Puget Sound Business Journal*.

And finally, with this issue we say goodbye to our Idaho contributor, Beth Heinrich, who has left the Idaho Council office for new career opportunities.

Between this and our next issue, all Energy News readers will be sent our 1988 Annual Report to Congress. We've had an exciting year. Read all about it.

Cover illustration is by Joan Barbour

NEW

Generation Generation



by Gordon Lee

New technologies could give a 6,500-megawatt jolt to the Northwest's energy future.

The Northwest could obtain as much as 6,500 megawatts from new technologies and conservation by the year 2005, a Northwest Power Planning Council staff analysis predicts.

Under certain demand and price conditions, that electricity—enough to power seven cities the size of

Seattle—could supply nearly a quarter of the region's energy needs by that year. Demand for energy in the Northwest could hit 26,101 megawatts in 2005, up from 14,593 megawatts in 1983, according to the Council's high-growth forecast for electricity consumption.

Illustration by Lynn Carson

Those estimates come from the update — still in draft form — of the 1986 Northwest Power Plan that the Council has undertaken this year. In its revision of the technical analysis of the power plan, the Council increasingly is looking to new technologies and conservation measures as ways the region can meet growing demands for electricity from residential, commercial and industrial customers. Such steps will allow the Northwest to obtain power without having to build costly coal-fired electric plants or buy expensive power from other regions.

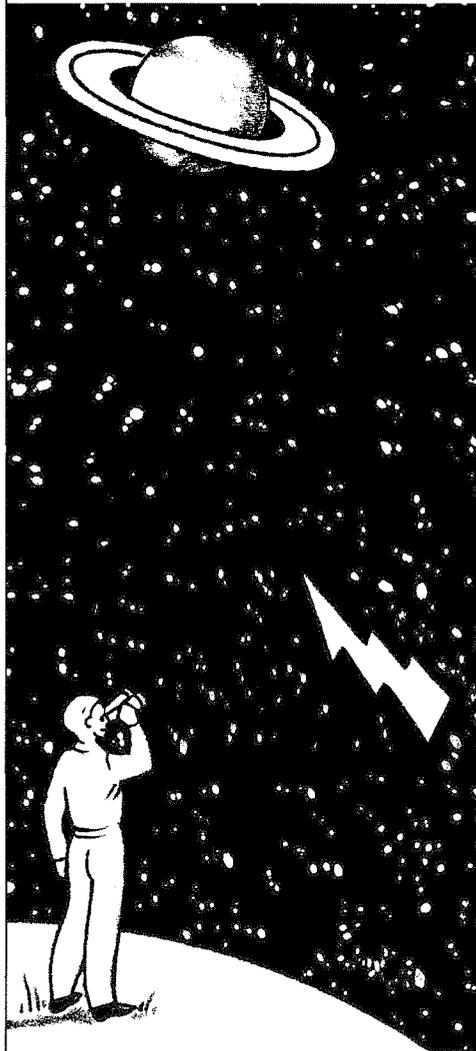
Those steps include new conservation measures, improved methods of transmitting and distributing electricity, better regulation of the voltage utilities send down their lines and new technologies that allow power to be produced more efficiently from natural gas-driven turbines or as a by-product of other industrial processes.

This isn't the first time the Council has tried to identify new sources of energy for the region. More than two years ago, the Council cataloged a wide array of potential resources for the region in its 1986 Power Plan. Since then, however, the economics of the energy industry have changed dramatically — oil and gas prices have plummeted, coal prices have flattened and some alternative energy sources — such as wind generation — have lost some of their economic luster.

Advances in energy technology also have made several generating resources more attractive today than two years ago. The industry's understanding of transmission and distribution technology has improved since 1986. So, too, has the understanding of the ability of utilities to control the voltage they send to customers. Technologies that allow utilities to produce electricity from gas-fired turbines have improved, as have those that enable industries to generate power from cogeneration plants.

Over the next few months, the Council will examine how these technological advances will change

the region's resource portfolio. The portfolio is a schedule that shows what new resources the Council believes utilities should bring on line and when. Its estimate of the most cost-effective resources for the Northwest take top billing in the portfolio. Here's a rundown of major improvements over the past two years that could have the biggest impact on the Council's portfolio and its 20-year picture of the region's energy mix.



The drop in natural gas prices over the past two years has made cogeneration a more affordable option for many smaller businesses.

Transmission and distribution improvements

Because of old and inefficient equipment, the Council estimates that about 7.5 percent of the electricity sent on power lines in the Northwest disappears during transmission. That represents some 1,300 megawatts of lost energy during the 1988-89 operating year.

However, the region's utilities and the Bonneville Power Administration might be able to recapture as much as 355 megawatts of those losses by using more efficient transformers, conductors, power lines and other new equipment, according to analysts at the Council. That much power could be recaptured at a cost of 5 cents per kilowatt-hour or less, which is the cost of building a medium-sized coal-fired electric plant. (Because of the West's large, relatively inexpensive supply of coal, these thermal electric plants are the benchmark against which the Council judges other new resources to test cost-effectiveness.)

"This is a much larger resource than we thought two years ago," said Jeff King, senior resource analyst at the Council. "Lots of these savings are available at fairly low cost. They're very attractive."

Based on a recent Bonneville study, the Council revised its estimate of the amount of savings that might come from improvement of conventional, proven transmission and distribution equipment.

That study, completed in 1987, also spotlighted several technological advancements that weren't included in the Council's estimate of power that potentially could be recaptured. New metals could go into transformers, the devices that change the high voltage needed to send electricity over long distances into lower voltage current used by customers, Bonneville officials said. Insulators, the glass cylinders that keep high voltage wires from being grounded by power poles and towers, could be enlarged and made from new ceramics.

Steps to recapture power lost during transmission and distribution are attractive because they are cheaper than most other efficiency measures available to utilities, King said. Nearly two-thirds of the savings — 237 megawatts — would cost 2 cents per kilowatt or less, he estimated.

In addition, unlike other efficiency moves that end up cutting customer demand for kilowatts, transmission and distribution improvements don't squeeze utilities' revenues. Rather, the steps cut the amount of power utilities need to buy or produce, which means that their profit margins should improve.

Most of the steps wouldn't disrupt normal utility operations because they could be accomplished as part of normal maintenance procedures. However, if they're not put into utilities' maintenance schedules, the measures represent a lost opportunity they won't be able to exploit until crews return to those lines.

Conservation voltage regulation

Council analysts figure that utilities in the region could save some 200 megawatts by better regulating the voltage that customers receive.

Most appliances and other electrical equipment in the United States are rated at 120 volts or 220 volts and work best when they receive close to, or slightly less than, that level of power. They lose efficiency when they get too much juice.

But, because of losses that occur as electricity moves over long distances, utilities have traditionally been unable to supply all customers with a constant level of voltage. Some utilities have had to turn up the dial on their voltage regulation equipment so that their most distant customers can receive at least 114 volts, the minimum national standard for a 120-volt circuit. As a result, customers located close to transformers sometimes receive as much as 126 volts, while other customers' voltage drops in proportion to their distance down the line.

Coal gasification means that utilities might be able to switch between natural gas and synthetic, coal- derived gas to produce electricity.



However, recent improvements in voltage regulation equipment mean that less voltage might be lost along power lines. That will allow utilities to lower the voltage they send from transformers, with the result that appliances will operate at the lower, more efficient end of the standard voltage range.

Compared with other potential sources of power, voltage regulation is inexpensive, King said. Most of the measures can be undertaken in small steps and don't require much preparation. More than 75 percent of that power could be saved at 1 cent a kilowatt or less, with half of it costing no more than 0.5 cents a kilowatt.

But utilities might resist some of those steps. Customers complain about flickering lights and television screens whenever their voltage drops too low and, as a result, might want to go slow on any voltage reduction effort. Moreover, by allowing customers' appliances to operate more efficiently, voltage reduction programs will eat into customer demand, which may dampen utilities' enthusiasm for the steps.

Cogeneration

Cogeneration — the simultaneous production of electricity and heat — has been around for years. Industries have produced power as a by-product of their ordinary operations or have captured and reused heat from generating power at their own small facilities for nearly a century.

Use of the resource in the United States peaked in 1950, when cogeneration supplied 15 percent of the nation's electricity. It fell after that as utilities moved to larger, more efficient power plants.

But Council studies suggest that it may resurge, thanks to new technologies and lower natural gas prices that have emerged during the past two years.

Where, in the past, cogeneration facilities were custom-built for large industrial and commercial operations, new generation equipment that manufacturers have introduced in the past two years is modular, King said. Modular construction lowers the cost of cogeneration equipment and allows it to be adapted easily to small and medium-sized operations. "Now, there are packaged, off-the-shelf plants that are as small as 65 kilowatts," he said.

In addition, the drop in natural gas prices over the past two years has made cogeneration a more

affordable option for many smaller businesses, King added. Since the newest cogeneration facilities are primarily electric generators that run on natural gas, any energy price drop makes the resource more economically attractive to businesses.

Recent Bonneville studies estimate that cogeneration could supply Northwest utilities with nearly 1,650 megawatts of energy. That's more than double the potential output of the region's 790 megawatts of cogeneration capacity today, only a fraction of which is sold to utilities. That additional power would cost 5 cents a kilowatt-hour or less, meaning that it would be competitive with the price of new coal-fired generating plants.

Based on interest in cogeneration in California and elsewhere, that estimate might be low. But cogeneration is highly cost-sensitive. Even though it may be less expensive than electricity from coal, cogeneration doesn't come cheap. The Bonneville study suggests that few industries could afford to sell cogenerated power for less than 2.5 cents a kilowatt-hour. Most of the region's potential from this resource would cost more than that to develop, which means that private industries would enter into cogeneration production only when they could sell their power to utilities a 3 cents to 5 cents a kilowatt-hour.

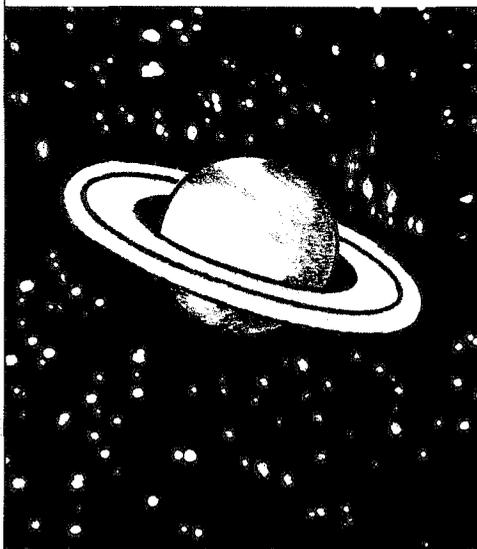
Combustion turbines

While the region historically hasn't relied to a great extent on natural gas to produce electricity, lower gas prices since 1986 and new technologies have prompted the Council to review its estimate of the role gas-fired simple- and combined-cycle combustion turbines might play in the region.

In basic terms, combustion turbines are natural gas-fired jet engines that drive electric generators. Simple-cycle units run turbines directly, while combined-cycle units use the waste heat from an initial combustion turbine to run

a second steam turbine. If they aren't used much, simple-cycle turbines are the more economical of the two technologies, but at higher levels of use, the more thermally efficient combined-cycle units become more cost-effective. The region today has about 1,190 megawatts of combustion-turbine capacity, mostly from simple-cycle units.

The draft power plan update suggests the Northwest might be able to plug into as much as 1,000 megawatts of electricity produced



by simple-cycle combustion turbines and 2,000 from combined-cycle units. Utilities would use these turbines principally during periods of peak demand or during poor water years when the region's hydro system can't handle the load. Those units — which are expensive to run full-time — would lie idle during average and good water years.

Over the past two years, manufacturers have developed more efficient versions of both turbines than those the Council considered in 1986. They use less fuel and produce more power than older models; according to King.

As a result, the Council is taking a second look at combustion turbines' role in the region. But while the new technology looks promising, the resource's weak link may be the capacity of the natural gas pipeline network in the Northwest. The current system may not be suited to deliver large volumes of gas to new combustion turbines.

In addition, the resource poses steep environmental challenges. Combustion turbines are noisy. And their use of natural gas — one by-product of whose combustion is carbon dioxide — may add to depletion of the earth's ozone layer and to global warming trends.

Coal gasification

Over the past two years, advancements in this technology — which allows utilities to squeeze synthetic gas from coal — have prompted the Council to consider adding it to the region's resource portfolio.

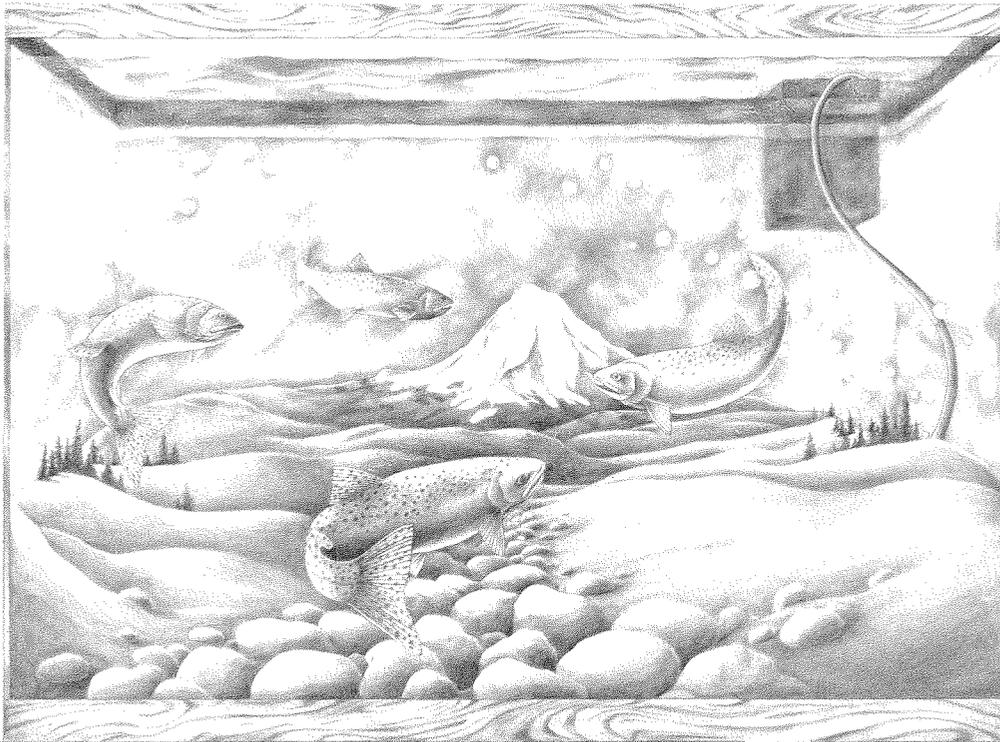
Where combustion turbines traditionally have relied on natural gas and fuel oil as their energy sources, coal gasification means that utilities might be able to switch between natural gas and synthetic, coal-derived gas to produce electricity. "The technology provides an added layer of protection in times of an energy squeeze," King said. "It provides fuel flexibility."

Gasification is attractive to utilities because the technology can be added to existing combined-cycle units. That means utilities can invest in the technology in stages, governed by electricity demand and the relative costs of natural gas and coal.

Gasification also allows utilities to use coal without the high levels of sulfur dioxide and other emissions they have had to contend with out of direct-fired coal plants. Gasification extracts synthetic gas as coal is burned under controlled, low temperatures, which results in cleaner by-products. "Gasification is more environmentally sound than a coal plant, which tries to clean up gas going out the stack," King said. "With coal gasification, the synthetic gases are cleaned prior to the point of combustion."

A combined-cycle combustion unit tied to a coal gasification plant likely would be as large as a medium-sized coal-fired electric plant, he said. However, the technology is expensive: gasification units come in above the 5 cents per kilowatt-hour, which is the estimate for the cost of building a new coal-fired plant. ■

Beyond Reach



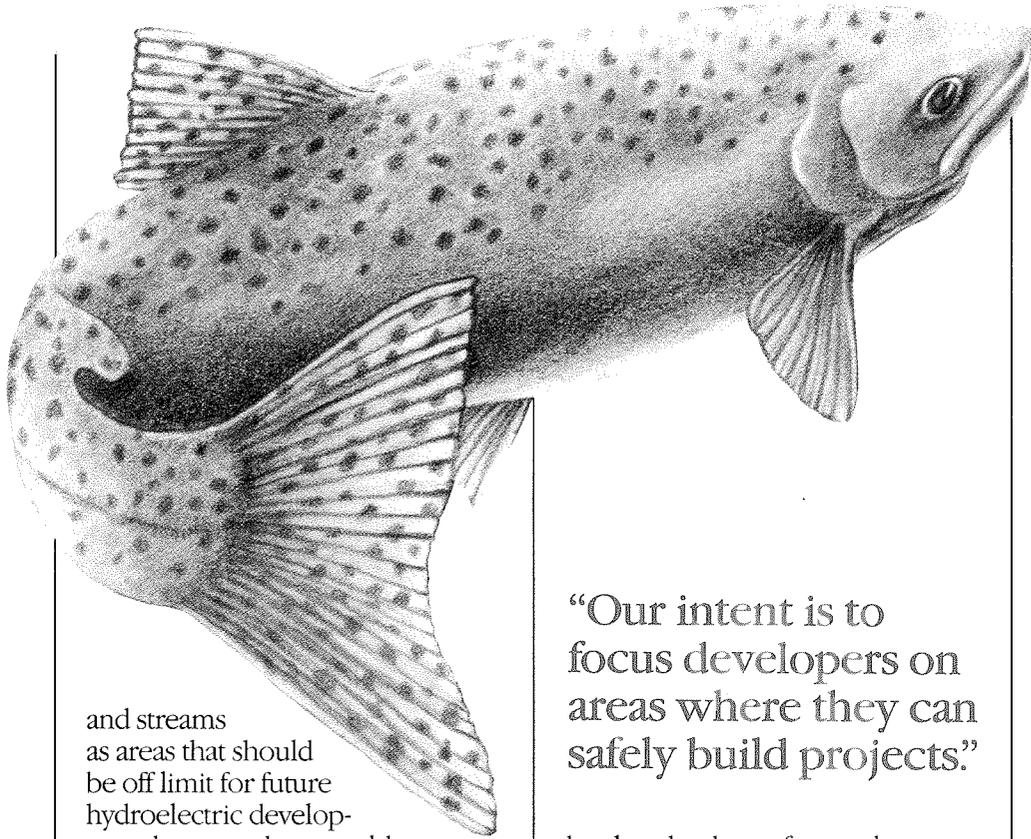
Council moves to protect prime fish and wildlife habitat.

“I remember when the great and mighty fish returned to Idaho in abundance. And I am ashamed that my government and industry have waited decades to begin the task of restoring the destroyed fish runs and wildlife habitat. The protected area amendment is an honorable first step toward restoration.”

by Ruth L. Curtis

So counseled Randall Morris, representing his children, at a public hearing in Boise on a sweeping proposal to protect critical fish and wildlife habitat in the Northwest.

On August 10, the Northwest Power Planning Council adopted that protected areas amendment to its Columbia River Basin Fish and Wildlife Program and to its Northwest Power Plan. The amendment is one of the most extensive plans to protect fish and wildlife in the United States. It designates roughly 44,000 miles of Northwest rivers



and streams as areas that should be off limit for future hydroelectric development because dams could irreparably harm fish and wildlife populations that rely on that habitat.

The protected reaches include spawning and rearing areas and migratory routes for fish, plus habitat for important or endangered wildlife.

The proposal was characterized by some parties as a "ban on dams," but the Council's chairman, Morris Brusett of Montana, says the proposal will help developers. "Our intent is to focus developers on areas where they can safely build projects. The areas designated for protection represent only a small portion of the Northwest's streams, less than 20 percent. By knowing where development is possible without serious environmental consequences," he added, "the Northwest will have a far more accurate assessment of what its hydropower potential is, which will help significantly in energy planning."

Six years ago, the Council began the process that resulted in this decision. More than two years were spent gathering data to produce the list of areas to be protected. The information was then used to

"Our intent is to focus developers on areas where they can safely build projects."

develop data bases for anadromous (ocean-migrating) fish, resident (non-seagoing) fish, wildlife and the hydropower potential in the region. Material was gathered from several sources by the Council, working with the Bonneville Power Administration, the four Northwest states, the region's Indian tribes and other parties.

At a hearing in Portland, Liz Frenkel of the Sierra Club's Northwest Regional Conservation Committee commented, "I'd like to emphasize the fact—and this is very reassuring to us members of the public in the Northwest—the inventory process rose from the states. We were involved in the process ... This was not an iron corset laid on from high. It came up from the states."

This April, with the preliminary work done, the Council voted to officially begin formal hearings on the proposal. More than a dozen public meetings were held throughout the Northwest, and comment was taken through July 8. Over 2,000 individuals and organizations submitted comments, the large majority endorsing the protected areas proposal or calling for even more stringent standards. Commentors raised many issues that were addressed in the Council's final decision.

Resolving the issues

Several issues involved the ultimate scope of the final decision. Should only streams within the Columbia River Basin be designated for protection or streams throughout the entire Northwest including coastal watersheds? Should the stream protection extend to river reaches that have recreational, historic or archaeological significance?

Tim Wapato, representing the Columbia Basin Fish and Wildlife Authority (composed of fish and wildlife agencies and Indian tribes) addressed the first of these concerns. "It is essential that the protected areas extend outside the Columbia River Basin," he argued. "Otherwise, development will be shifted into rivers of the Puget Sound and coastal areas. Important rivers for anadromous fish production, such as the Skagit, Nooksack, Snohomish, Hood Canal and Rogue drainages, will be diminished." On the other hand, Lynn Davison, with the City of Seattle, expressed concern over "whether the Council has the authority to designate protected areas outside of the Columbia Basin."

In the end, the Council decided that areas should be protected both in and out of the basin. The protected areas within the basin were designated under the authority given the Council in the sections of the Northwest Power Act that deal with the fish and wildlife program. The Council designated protected areas outside the basin, but within the Northwest states, under those sections dealing with the power plan.

Several speakers reasoned that streams should also be protected for values beyond just fish and wildlife. Washington Congressman Mike Lowry advised that "other potential criteria should include unique and rare plant communities, archaeological sites, unique geological features, historic sites, scenic values and recreational values. These criteria may be secondary to outstanding fish and wildlife habitat values, yet they are obviously rele-

vant to environmental quality and deserve consideration in the evaluation process."

Kathleen Beamer, with Recreational Equipment Incorporated, suggested that, "by including recreation as a protected area definition, you will be giving more accurate direction to utilities and hydro developers as to where they can invest in development successfully." On the other hand, some commentators wanted a narrower approach. Sherl Chapman of the Idaho Water Users Association urged the Council "to restrict any potential rulemaking to the areas of anadromous fisheries only." The Council decided to consider protecting stream reaches for values other than fish and wildlife if such recommendations are included in comprehensive plans that may be developed by the states and Indian tribes.

As written, the protected areas proposal applied only to new hydropower projects, not to existing dams. But many people pointed out that this needed more clarification. What if a dam owner wants to add hydropower facilities to an existing irrigation or water supply dam? At what stage is a project considered an "existing project?" If it has been approved but not built, is it an existing project?

Al Wright, with the Pacific Northwest Utilities Conference Committee, recommended "some kind of a 'grandfathering' process to make sure that certain projects that have gone through a substantial process and have yet to be licensed ... have adequate provisions of going to completion ... There are some of our membership that have invested considerable amounts of money and have obtained a considerable amount of consensus with the fish and wildlife agencies on adequate mitigation. That level of effort and commitment of resources should have some protection."

Bill Finnegan at Puget Sound Power and Light cautioned, "The Council should clarify the language used so that it is not subject to reinterpretation in the future. The exclusion should apply to hydro projects that add additional generation or capacity or undertake other modification, as well as all existing dams or structures whether or not they currently have generation facilities. This clarification is essential to avoid future attempts to limit the exemption."

On the other hand, Jane Foraker-Thompson, with the Idaho Conservation League, said, "We would like to point out that adding turbines to existing non-power dams or to existing hydropower facilities can result in further severe impact to migratory fish, as well as to the entire watershed and ecosystem. And we would like the Council to include the prohibition of additions of new electric generators to existing dams in the protected areas ..."

The Council finally decided that the protected areas policy should not apply to existing dams, the relicensing of existing dams, modifications to existing dams, or the addition of hydropower generation facilities to dams that do not currently have hydropower facilities. As to projects not yet built but in the

The protected reaches include spawning and rearing areas and migratory routes for fish, plus habitat for important or endangered wildlife.

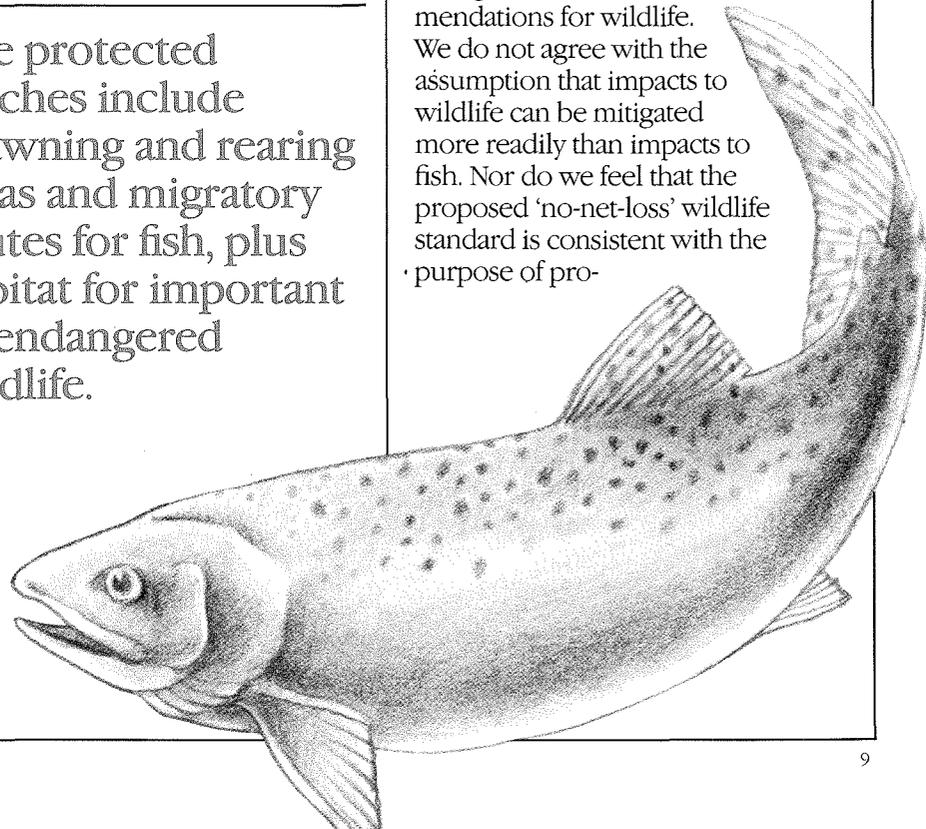
Federal Energy Regulatory Commission's licensing process, the Council recognized that "in many cases the applicant has made substantial investments and has completed, or nearly completed, agreements with all interested parties, including state fish and wildlife agencies. The Council recognizes that the Commission may be obligated to complete its processes on these applications, but expects where possible that the protected areas designations will be taken into account to the fullest extent practicable"

The Council also adopted a process for reviewing hydropower projects that could provide exceptional benefits for fish or wildlife. (For example, a project that created upstream water storage could improve flows for an entire stream.) Through this process, these exceptional projects could be built in protected areas.

How the proposal would deal with wildlife was also an area of concern. The Council had proposed that, in areas where wildlife or hatchery-reared resident fish are present, no hydropower development should occur that would result in a net loss of such fish and wildlife.

Many people felt, as did the Montana Department of Fish, Wildlife and Parks' Jim Flynn, that, "We do not agree with the Council's recommendations for wildlife.

We do not agree with the assumption that impacts to wildlife can be mitigated more readily than impacts to fish. Nor do we feel that the proposed 'no-net-loss' wildlife standard is consistent with the purpose of pro-



tected areas. A no-net-loss standard would not provide clear signals to potential developers or to the Federal Energy Regulatory Commission on the importance of wildlife resources. It leaves the door open to disputes arising from different interpretations of impacts."

The Council agreed that hydropower development also poses substantial risks for wildlife and that dams should not be built on important wildlife habitat. Consequently, the Council abandoned the no-net-loss standard.

In addition, the category of hatchery-reared (e.g., non-wild) resident fish areas was eliminated because the record indicated that these areas contained wild species and were already covered by the protected area designation.

Beyond policy calls, there were technical details in the proposal that needed to be worked through. Several commentors pointed out errors in the lists of streams proposed for protection, and Council staff corrected the lists. But the process for adding or deleting reaches from the list after the proposal was adopted concerned other speakers. The Council had included in the proposal an expedited amendment process for removing areas from the list if they were erroneously included. Many commentors agreed with Larry Murante from Seattle who asked that the Council "use the same expedited review process for additions as well as deletions."

In the final decision, the Council agreed and adopted a process to treat additions and deletions in the same way. Proposed changes will be referred to the appropriate state fish and wildlife agency for review and comment. They will then be considered by the Council on a regular amendment schedule. If a proposal requires faster action, the Council may initiate a special amendment process.

The effects of protected areas designations

The protected areas designation formally amends the Council's Columbia River Basin Fish and Wildlife Program and Northwest Conservation and Electric Power Plan, and it is through these vehicles that its influence will be felt.

While the Council does not license hydroelectric development, the Northwest Power Act requires the Federal Energy Regulatory Commission, which licenses non-federal hydroelectric projects, to take the Council's fish and wildlife program (now including the protected areas designations) into account "to the fullest extent practicable" in its decisions on licensing projects within the Columbia River Basin.

"Boldly make history. It is late, but perhaps not too late; if we act now."

Don Clarke, speaking for the commission, testified that the proposal "will provide significant assistance to the commission in carrying out its comprehensive planning obligations under the current law ... the protected area proposal could significantly affect the commission's licensing decisions." In addition, the Northwest Power Act obligates the Bonneville Power Administration to act in "a manner consistent" with the Council's fish and wildlife measures.

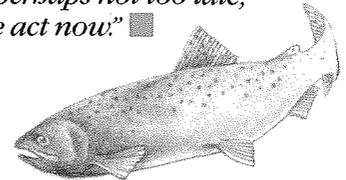
Outside the basin, the protected area's influence will be felt through the Council's power plan. The Federal Energy Regulatory Commission considers the Council's power plan in decisions for projects throughout the Northwest. The designations will also guide Bonneville's resource acquisitions throughout the region. As part of the decision, the Council

called for Bonneville to refrain from acquiring hydropower from proposed or new projects in protected areas. The Council found Bonneville's policy of relying on protected areas inside the basin to limit access to its intertie is consistent with the Council's fish and wildlife program and its power plan. (The intertie is the transmission system over which power is moved to California.) The Council also recommended that Bonneville deny access to projects in protected areas located outside the Columbia Basin.

During the public comment period, the Council heard much eloquent testimony about the proposal. One of the most articulate was Brian Goller, an Idaho citizen.

"The Northwest Power Planning Council's protected areas proposal is a first step in developing, as a society, a land ethic. The congressional directive to the Council to protect, mitigate and enhance fish and wildlife has historic implications, in terms of developing that ethic. This is a recognition of the land community, and it gives status to wildlife as constituents of that community. It is an important step in living up to our obligations to the natural environment.

I urge the Council to be broad and inclusive; resist those who advocate narrow interpretations. The Columbia River system is very much an interconnected system. Boldly make history. It is late, but perhaps not too late; if we act now." ■



Sharon Nelson

Washington Utilities and Transportation Commission chief discusses power planning priorities.

Sharon Nelson sits at the helm of the region's largest public utility commission, the Washington Utilities and Transportation Commission or UTC. That she has made her mark is evidenced by the fact that she has recently been elected president of the western region as well as a vice president of the National Association of Regulatory Utility Commissioners.

Washington's electricity and gas companies, telephone companies and the transportation industry all fall under her commission's purview. The commission is charged by the state legislature with the regulation of privately owned utilities to ensure that they provide adequate service at fair and reasonable rates to the public.

The Washington UTC has pioneered "least-cost" planning¹ for the electrical utility industry in the Northwest. The commission now requires such plans from the electrical utilities it regulates: Puget Sound Power and Light, Washington Water Power and Pacific Power and Light, as well as the natural gas utilities. Public Utility commissions in Oregon and Idaho are also looking at the possibility of adopt-

ing least-cost planning requirements for the investor-owned utilities they regulate. Nelson's route to a top utility position started with law school. She later worked for Senator Warren Magnuson on the U.S. Senate Committee on Commerce and was assigned to the consumer and communications subcommittees in the



mid-1970s. "That's where I found out about the changes that were going on in regulation of the communications industry," she says.

Next, she worked as a consumer advocate for Consumers Union, spending a good deal of her time lobbying Congress. From there, she returned to the Northwest to practice law in a private firm, but found she missed the public policy work. So, when a job opened up with the Washington state legislature, she jumped in. The work was with a joint select committee rewriting the utility code for telecommunications.

She was soon recognized as an expert in telecommunications, and her work came to the attention of Governor Booth Gardner. He appointed her to the state commission where she has been since 1985, serving as chairman during that time.

Nelson holds a bachelor's degree from Carleton College in Minnesota, a master's in teaching from the University of Chicago and a law degree from the University of Washington. She lives in Seattle with her husband and cat.

Q. Washington is the first state in the Northwest to require a least-cost plan from its investor-owned utilities. What do you see as the value of least-cost planning? What will it give you that you didn't have before?

Well, it opens up the process. It gives us some sense that, if a lot of good minds are looking at options available to the utilities, then we can avoid some of the very costly mistakes we've made in the not too distant past. In opening up the process, we're hoping

"Least-cost" power planning — planning to provide electrical services at the lowest total cost.

that many points of view can be represented, and public comment on the plans can help the utility refine its planning processes. I think a second, perhaps not intended consequence, but something that's very beneficial for us, is that we're seeing increasing understanding between our staff and the companies' staff. Of course, the ultimate and intended benefit is to have generating and conserving resources brought on line that truly are economically efficient and to avoid unnecessary increases in consumer rates.

Q. How is it going? Where are you in the process?

Puget [Sound Power and Light] submitted its first plan last year, and we're just beginning a similar planning effort with [Washington] Water Power. Pacific Power and Light is a little further behind.

Q. I understand that you asked Puget to expand its plan. Is that correct?

Puget made a presentation, and we sent the company a letter that generally supported the initial effort between Puget and the commission staff. We noted there were several good comments filed by the Northwest Power Planning Council and others that we thought Puget should take into account in its next plan. The companies are required to submit these plans every two years. We're really trying to make it a cooperative effort and not be excessively regulatory. We're not saying, "thou shall do," but we're suggesting what would work. Corey Knutsen, director of strategic planning, and other members of Puget's staff have responded in kind. I think they are all generally agreed that the suggestions we made in our letter are the way to go. The development of Puget's first plan was a learning exercise for both Puget and the commission.

Q. The investor-owned utilities (IOUs) generally say they are not going to buy power from the Bonneville Power Administration. Puget is already deficit in terms of producing its own power, and other utilities may need new

resources in the very near future. Yet if these utilities don't plan to turn to Bonneville for resources, where are they going to go?

You are correct that Puget is deficit. It recently concluded a long-term purchase from Water Power. But resource decisions must be made. For Water Power, the sale to Puget has put that utility close to load/resource balance, and if the recent growth in Water Power's loads continue, Water Power will need some new resources soon. Pacific Power's recent load growth has also been at quite robust rates.

Now let's talk about resources. These utilities are looking at their options, and I would be surprised if the lists are much different than those developed for the region by the Council. In the short run, given the regional surplus, there is power available on the spot market at favorable rates. Puget, for example, buys on the spot market daily.

These favorable short-term arrangements will begin to dry up, or at least become increasingly expensive, as the regional surplus diminishes. Thus, now is the time to be looking for least-cost long-term resources. Puget's first least-cost plan talked in general terms about these options. I expect that Puget's next plan will be much more specific. For example, both Puget and Water Power are working on interconnections with Canada, something the Council has been exploring also.

Puget, being deficit, is running its retrofit conservation program at levels close to the recommendations from the regional plan. Water Power scaled back its retrofit conservation effort when it was surplus. Now, in the wake of the Puget sale, I would expect Water Power to once again be gearing up its retrofit conservation program — we will see what its least-cost plan says early in 1989.

Commissioner Dick Casad of the WUTC is also very interested in advancing the "conservation transfer" idea first proposed in the Council's plan. If it can be made to work, this seems like a very good way to demonstrate that conservation is a saleable commodity.

In terms of conservation in the new construction market—the Council's model conservation standards—it will be important that the investor-owned utilities support the standards. This support has to include utility programs and, ultimately, an MCS-based building code for this state.

Q. Does it seem to you that dismissal of Bonneville as a resource provider is at odds with a least-cost plan?

The utilities have not dismissed the Bonneville option. I am aware that key top-level staffers from Puget meet monthly with key top-level staffers from Bonneville. We all know that the IOUs and Bonneville have had, and continue to have, their differences. But I sense that they are trying to develop a new working relationship and this may well lead to future electric transactions.

What Bonneville has to prove is that its power can be priced competitively with other long-term options available to the IOUs. Bonneville can do this by clearly demonstrating that it intends to implement the wise energy policies in the Council's plan, and by figuring out how to make the 7(f) [new resources] rate pool more predictable. If Bonneville can't do these two things, then buying from Bonneville poses considerable risks to an investor-owned utility—risks that have to be figured into any least-cost cal-

culatation undertaken by these utilities. Again, I sense that progress is being made on this.

Q. Do you have some thoughts on what the proper role or relationship between Bonneville and the IOUs should be?

The relationship should be a business relationship. Both sides should be operating according to least-cost planning principles, which means that, from time to time, the investor-owned utilities need to bargain with each other as businesses must do.

Yet, as the Council has demonstrated so well, there are many mutual benefits to be gained from thinking on a regional basis. We have to recognize that our Northwest economy is tied quite closely together. Beggar-thy-neighbor policies come back to haunt you. For example. We need



to think regionally and make the conservation transfer idea work—that is how we can keep the total cost of electricity down to this interdependent Northwest economy in which we all participate.

Q. What kinds of structural changes do you see occurring in the utility industry and particularly because of the FERC rulemakings?² Do you agree that this is leading toward utility deregulation?

Well, deregulation notions are in the atmosphere right now. Regulators are constantly admonished to emulate the market forces wherever possible. However, in our region, the need is to *not* have cutthroat competition. The need is for cooperation, for planning that is embodied in the concepts underlying the Northwest Power Act.

I have always thought it was somewhat odd because you have this gloss, at least among the pri-

²"FERC rulemakings" refers to three recent proposals put out by the Federal Energy Regulatory Commission to amend its rules. The most controversial of these three proposals would authorize a bidding system for the acquisition of new power by regulated utilities. Under this system, the utility would set criteria for electrical capacity which it forecasts as needed. Interested parties would then be allowed to submit bids for meeting this need. A contract would go to the lowest qualified bidder.

What Bonneville has to prove is that its power can be priced competitively with other long-term options available to utilities.

vate utilities, about all these sort of centrifugal market forces breaking up their systems and requiring different responses to different customers. Then there's the centripetal force of the Act and also the reality of a hydro-based system.

So, we are faced with a dilemma right now. With the FERC acting in the way it is acting, there are all kinds of reasons for concern about future industry structure and relationships. At this point, FERC seems to be in such disarray that it is difficult to believe they are going to get anything adopted in the time remaining for the current administration.

It is an election year, and FERC seems driven to do something, yet there is no sense of consensus on national policy. In Washington [state], at least, we have been

enjoying a hiatus in the tremendously difficult kind of regulatory questions we were facing a couple of years ago. We have used this lull when we don't have to worry about major rate cases to concentrate on least-cost planning. Of course, we recently dealt with the merger.³ We keep hearing persistent rumors that Water Power or Puget could also be targets for some kind of acquisition strategy by somebody else.

Q. There are those who believe that in the near future the IOUs are all going to merge and there is going to be one huge private utility in the Northwest.

I keep hearing these rumors, and I especially hear them from the Idaho commissioners who think that Water Power, Idaho Power Company and Montana Power could all merge.

Shearson Lehman recently issued a study on merger benefits. Some members of our staff thought the study was very poorly done, and the sources were not well identified. Most of these mergers never seem to come to pass, although in California, Southern California Edison recently announced an intent to acquire another California utility. Perhaps we're just beginning to see the wave. At this point, it remains all speculation.

In terms of our statutes, our lawyers tell us that there is regulatory authority in Washington that is available to the transfer of any assets for the acquisition of these companies. So we feel sure we will not be caught by surprise. If there were something going on; we'd be hearing about it.

Q. Has the UTC commented on the FERC rulemakings? If so, what is the thrust of your comments?

³"Merger" is a reference to the proposed merger of Pacific Power and Light and Utah Power and Light Company. The proposal requires the approval of the public utility commissions in the seven states served by the company. All of the state commissions have approved the merger. However, the Federal Energy Regulatory Commission must grant final permission. An administrative law judge at the Commission has ruled against the merger, which now goes before the full Commission.



We have. In general we've said we thought the bidding rule was probably O.K., but that FERC shouldn't make anything mandatory, shouldn't preempt state action. The states have been experimenting in this area and should be essentially left alone to run their experiments. We think bidding has some real merit.

Q. Didn't the UTC investigate bidding as a utility strategy for this state?

We are in the middle of a proceeding. We have collected comments, and most of them are favorable. I have a matrix of the comments by the various parties that has been put together by our staff, and it looks as if we'll probably go forward and issue a Notice of Proposed Rulemaking in this area.

Essentially, our direction would be that we'd have bidding, linked to a least-cost plan in terms of the maximum avoided cost that would be paid in a bid, as well as the quantity of new resources solicited in a bid. How to regulate the so-called "non-price" characteristics still needs to be worked out.

Q. Would your bidding procedure treat conservation as a resource?

We haven't made a decision on that, but I certainly think that it would. That is, of course, one of the main points of least-cost planning, and therefore, it should be integral to the regulatory offshoot of competitive bidding.

Q. There appears to be some concern that regulatory incentives for conservation are really on the disincentive side because once rates are set, utilities won't want to sell conservation if it competes with their ability to get a good rate of return. Doesn't Washington allow a 2-percent rate of return for conservation? Doesn't this expire in 1990?

We think of the Council as being an intellectual leader, maybe a consultant, of sorts, to us.

We have a law that tells the commission that for a conservation investment by the utilities, we must allow a 2-percent kicker on the return on equity for that investment. The legislature passed it with the explicit intent to make conservation attractive to the utilities.

Q. Has it been successful in encouraging investment in conservation?

There is debate internally on how successful it's been. Some of our staff think it has been a pretty good statute and has primed the pump. Some other people think it has not been all that useful in getting the utilities to really take conservation seriously. But I think our Northwest utilities are far ahead of the rest of the nation. I don't know whether this is a result of the good work done by your folks, or just sort of a "gestalt" and the region has come to favor conservation.

Personally, I think the 2-percent law has been very good; it helped get an infant industry off the ground. I don't know whether it is needed in the '90s or not, given the subsequent development of the resource. To use a real hackneyed phrase, we're trying to make the playing field level so that whatever is most efficient from the customer's point of view is where the utility begins to make its investment. I don't know if we'll continue to support that law when it comes up for review in the legislature. It is a decision we haven't yet made.

Q. Is Washington considering any other regulatory changes to pursue conservation or promote conservation?

We are looking at a few things, some of which I am enthusiastic about, others I am not so sure. You mentioned in your previous question the possible regulatory incentive for utilities to stimulate short-term sales once rates get set in a rate case. Ralph Cavanagh [Natural Resources Defense Council] has suggested a rate mechanism as a way to alter this incentive. I am sure we will be looking at that proposal at least at the staff level.

I am also interested in using one of the main regulatory tools that a commission has — quick regulatory response — to further least-cost planning goals.

For example, suppose a utility spends money on a conservation program — say to support the MCS-based Super Good Cents program. It cannot recover those costs until the next time that it is in for a general rate case. A few years ago, when utilities were in almost every year, this created no particular regulatory barrier to conservation; they could spend the money today and get it back next year. Now, however, I don't expect that we will be seeing the IOUs filing general rate cases all that often. So, if a utility spends money on a long-lived investment such as conservation, it erodes its short-term financial position until it can incorporate the investment in its rates. This problem is compounded if the utility isn't allowed to accrue some kind of a carrying cost on the conservation capital investments. It seems to me that some kind of recovery mechanism is needed as an incentive for resources that are clearly cost-effective and consistent with good least-cost planning principles. I hope that we'll be looking at this soon.

Q. What are your views on the roles of the region's utility commissions as regulators of the IOUs and the Council's role as a planner for Bonneville loads? We are somewhat sister agencies in that we're both appointed by the governors. Are we working closely enough? Has there been productive interaction, and should there be more?

We think of the Council as being an intellectual leader, maybe a consultant, of sorts, to us. Your [computer] modeling and planning efforts are certainly the model for our least-cost planning efforts here. Our staff meets with Council staff and finds that very useful. We try to keep in touch with our own state [Council] members on an informal basis.

I think the communication is really quite good. Of course we could always communicate better, but the relationship seems to be quite cordial and productive at this point.

Q. Are there specific components for your least-cost plans? Do you have guidelines or criteria for them?

Our rule is very general; it is just one page. Other states have gone the opposite direction, promulgating hundred-page rules. Our rule says that there will be a range of demand forecasts; an evaluation of the costs of generating and conserving resources; a consistent cost-effectiveness method to evaluate those resources; and short-term and long-term least-cost plans. It also requires significant public involvement. All of the detail beyond these general requirements are left to staff and the company to develop.

If a lot of good minds are looking at options available to the utilities, we can avoid some costly mistakes.

Q. Then there is quite a lot of latitude?

There has been quite a lot of flexibility, and that's by design, because we don't want to constitute ourselves as micro-managers of the utility. I have been adamant that I don't want to get into the position where we have changed the relationship between the commission and utility management. Management is still supposed to take the risks, assess the cost/risk benefit and make the decisions. As a regulator, I want to make sure they're making the right decisions, but I don't want to be telling them what to do.

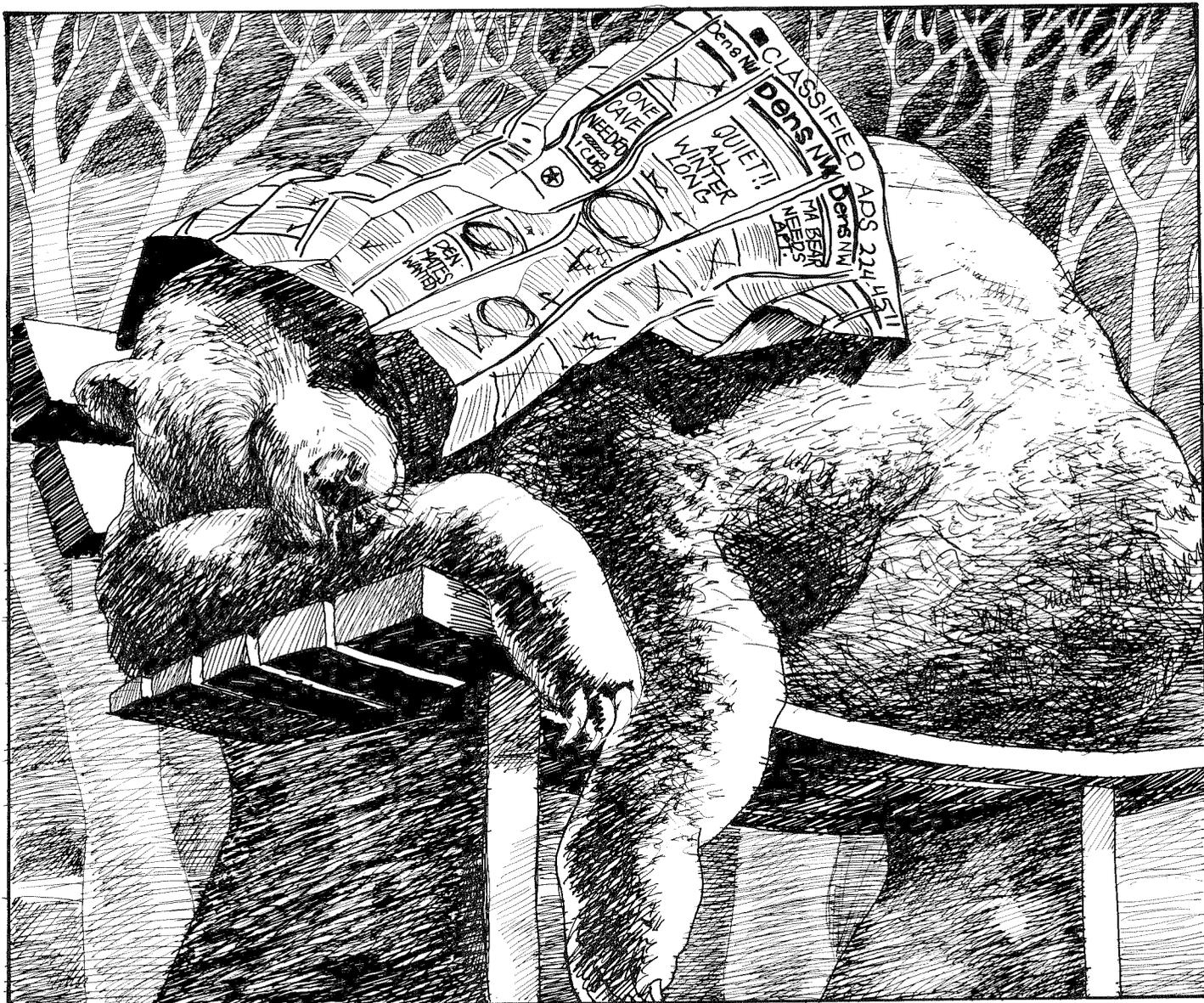
Some of the other states, such as Wisconsin, for example, have gone in the other direction. I haven't wanted to change the regulatory compact such that the commission gets involved at the beginning and essentially works as a second layer of management, okaying these decisions. But, we do have the right to review the prudence of decisions, and I didn't want to change that. We're hoping that, because the process is flexible, because we haven't "straitjacketed" the utilities, along with the fact that we're reviewing the plans every two years, it will keep us close enough together so we won't have the huge investments in plants that then become unnecessary 10 years later. We want the plans' emphasis to be on small, diversified sources of power. That's the direction we all seem to be going.

Q. On a more global level, have you seen or do you see any major new trends in the utility industry?

I really do think that the forces of competition are making themselves apparent everywhere and the demands of the large industrial users, both on the gas and the electric side, are going to be something that we have to deal with in the short term. The broader issues of competition and deregulation will likely be with us in the long term. This particular FERC has introduced the issues rather clumsily. But, they are not going to go away. The cross fuels, the gas versus electric, generate a lot of competition. Now we're getting gas-on-gas competition. There really is substantial competition in the energy area. That is really changing the way we think about how we need to regulate.

It's a pretty exciting time to be in regulation, because you feel that there are sea changes coming, and yet how our institutions and our laws will respond remains to be seen. You feel you have a chance to try to sort out some of these problems and influence public policy outcomes. But we're just at the beginning of the process.

Plight of the Homeless



by Beth Heinrich

It doesn't take a professional biologist to figure out that what needs dry land to survive, does not fare well under 80 feet of water. So when water pools up behind dams, the host of animals that once made their homes in the green river bottoms and adjacent uplands are flooded out.

Shrinking
wildlife habitat:
the region's next
environmental
challenge

?

It is easy to assume that these animals simply moved on up the hill or across the desert. But the land can sustain just so many animals. That maximum number is referred to as a habitat's carrying capacity. If too many bears or beavers try to live in the same area, one of many side effects is the possibility they may literally eat themselves out

of house and home. Much like tenants that get kicked out of buildings with no vacant apartments, wildlife pushed out of one area because of inundation usually have nowhere else to go. Eventually those wildlife populations die off, and their values to society are lost.

Along those same lines, a particular mammal or bird relies on specific vegetation to supply it with the essentials to live — food, water, cover and habitat to bear and raise its young. This makes up its ecosystem. The yellow warbler, bald eagle, or muskrat, which are associated with willow thickets and cottonwoods along river banks, can't survive in the dry sagebrush lands that now make up many reservoir shorelines. But, fluctuating water levels or steep terrain also make it difficult for that waterside or riparian community to establish itself along the new shoreline. The original wildlife ecosystem is lost forever, and biologists must resort to improving other lands to enhance other wildlife populations to make up for the losses.

This reclaiming of habitat to replace flooded ecosystems is a major focus of proposals to mitigate wildlife losses at Grand Coulee Dam in Washington, eight dams in the Willamette Basin in Oregon, and the Palisades, Anderson Ranch and Black Canyon dams in Idaho. The Northwest Power Planning Council is reviewing these proposals as it explores the policy implications of adding substantial new expenditures to the Columbia River Basin Fish and Wildlife Program. Only two other wildlife mitigation plans, those for Hungry Horse and Libby dams in Montana, have come before the Council and been adopted into the program. With the new proposals, and at least eight more to come, the Council is seeking answers to some major questions.

Who's Hit the Hardest?

Thousands of acres of wildlife habitat in the Columbia River Basin, now inundated by vast reservoirs, have been lost forever. Usually the first to go is the lush streamside greenery, or riparian areas, that is home to countless birds and mammals. These rich riparian areas are probably the most productive of all wildlife habitat, providing an unsurpassed supply of food, protection, denning and nesting sites. Also lost are the cottonwoods and other trees that often line the river banks, supplying perches and nesting sites for bald eagles and other birds. Because of steep terrain or fluctuating water levels in many of the reservoirs, these riparian areas can't be re-established along the new shorelines.

Just up from the streambanks are sagebrush and grasslands, as well as pines and firs, that are often inundated. These areas provide critical winter feed for big-game herds such as deer and elk. During the harsh winter months, the deep mountain high snows force the herds to these lower elevations where they can more easily paw through the snow for food. Without accessible and abundant food, many big-game animals perish during the winter. These lower elevations also provide important upland-game habitat. Some of the game birds, such as grouse and quail, do not migrate south for the winter, and thus rely on this habitat to supply the essentials year round.

When devising wildlife proposals for particular hydropower projects, wildlife managers use old aerial photographs, private snapshots, conversations with old-timers, past game records and anything else they can find, to mentally reconstruct the site before the dam was built. By comparing that with what the site looks like today, managers can make an estimate of how much habitat was lost and how many animals it might have supported. It would be impossible to propose a mitigation or enhancement project for every species that was affected. So instead, managers choose key species, or "target" species, to plan mitigation projects for, knowing that a number of other wildlife species that share the habitat will also reap the benefits.

Here is a sampling of wildlife species frequently affected by hydropower development.

Uplands

Big game	Nongame	Upland game
deer	sparrows	ruffed grouse
elk	meadowlarks	sage grouse
mountain sheep	ground squirrels	blue grouse
bear	pocket gophers	sharp-tailed grouse
moose	mice	California quail
		jackrabbits
		cottontail rabbits

Riparian Areas

Aquatic furbearers	Predators	Waterfowl	Nongame birds
beavers	black and	geese	bald eagles
muskrats	grizzly bears	ducks	hawks
river otters	bobcats	swans	owls
mink	foxes		blackbirds
	coyotes		herons
			kingfishers
			warblers
			swallows
			sandpipers
			woodpeckers

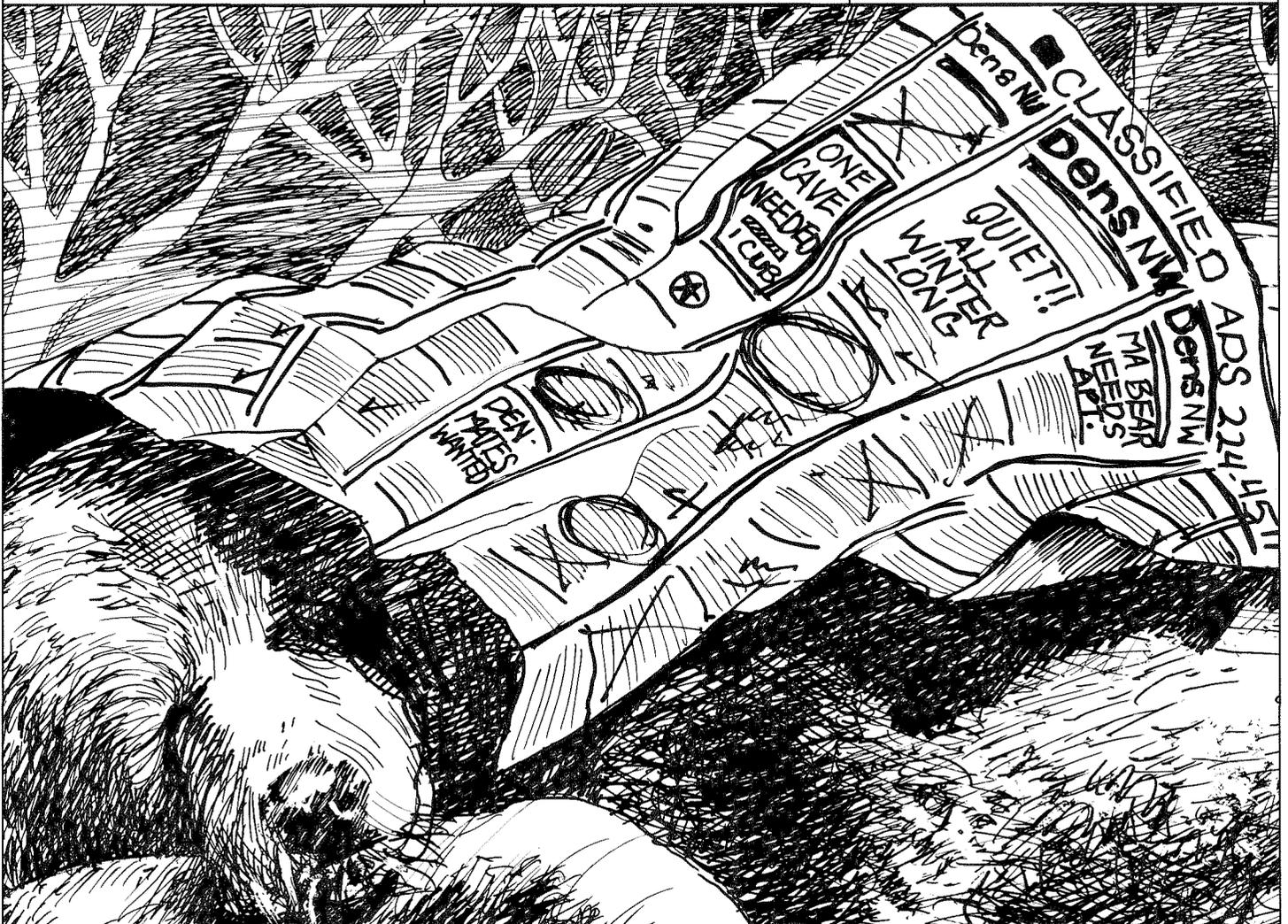
Divvying up the damage

No one can deny that hydropower facilities have taken their toll on many wildlife species. But one of the questions the Council must face is just how much of the damage is directly related to the production of hydroelectricity. Under the Northwest Power Act, the source of the Council's authority, only hydropower-related damages are to be addressed by the fish and wildlife program. But Palisades and Grand Coulee dams, for example, are just two of several multipurpose dams in the federal system. They not only generate electricity, they also provide water for irrigation and storage for flood control.

Some utility representatives have argued that the costs of wildlife mitigation should be shared among the project purposes, arguing that hydropower does not receive 100 percent of the benefits, and thus shouldn't have to bear 100 percent of the costs.

But many wildlife professionals think differently. They propose that all of the damages to wildlife are attributed to hydropower and that ratepayers should pay the entire mitigation cost. They also contend that most of the federal hydro projects received authorization from Congress largely because power production could provide sufficient revenues to repay the federal treasury's investment. Without hydropower, they maintain, these projects would not have been financially feasible.

One way or another, the dams made it from the desks of Congress to the Columbia River drainage, and someone, somewhere, is going to have to determine how much wildlife mitigation the hydroelectric system is responsible for. Back in 1986, when the Council wrestled with this issue over the wildlife mitigation plans for Montana's Hungry Horse and Libby dams, it chose what is known as the "congressional repayment schedule." In other words, the Council determined that ratepayers should be held accountable for approximately 77 percent of the mitigation costs, the percent of project costs returnable to the federal government from power revenues. The congressional repayment schedule is only one of several



ways to allocate mitigation costs, however, and the Council made it clear it intended to set no precedent back in 1986.

Pulling on the purse strings

Another question arises over the costs of wildlife reparations and the limits, if any, on those expenditures. According to the Bonneville Power Administration's wildlife program manager, Jim Meyer, Bonneville's planned expenditures for wildlife will reach \$5 million in Fiscal Year 1990. However, the proposals before the Council could add up to \$10 million per year if funded over the next 10 years, and there are at least eight additional mitigation proposals still to come.

How will the region afford these new projects? Some of the options include slower-paced wildlife funding, an increased Bonneville budget or reallocation of existing fish and wildlife funds. Also on the table is the idea of placing a cap on wildlife mitigation expenditures, either on a hydropower project-by-project basis or for the entire wildlife mitigation program.

The budget question also brings up one of scheduling. If funds are indeed the limiting factor, should pending wildlife mitigation projects throughout the basin be prioritized and spaced out over a number of years? Should the proposals now before the Council be put on hold until managers complete the remaining mitigation plans in the Columbia Basin, giving the region a better idea of what's to come in the way of wildlife proposals?

Adding acre for acre

One of the reasons the Council and utilities are faced with higher wildlife mitigation costs than they expected, is the intent of the plans' developers — wildlife agencies and Indian tribes — to acquire new land to replace habitat now sitting at the bottom of reservoirs, rather than rely on more piecemeal approaches.

All of the mitigation proposals before the Council are based on this habitat approach. Wildlife losses are described in terms of quantity and quality of habitat inundated. Those lost acres are then replaced with new lands, though it is not easy to duplicate the original habitat that indigenous wildlife need to survive. Nonetheless, the issue of enhancing adjacent public land, securing conservation easements, or outright purchasing of new land raises the question whether the Council's wildlife program goal is to replace lost habitat, acre for acre. If the Council decides that it is, a second question must be answered; once land is purchased, who will maintain ownership and who will pay its annual upkeep?

Backseat backlash

Probably the most pressing question facing the Council is not one of how best to quantify wildlife losses, enhance elk habitat, or even determine who pays for what. A more pressing question may be how important is the wildlife program in relation to rebuilding the salmon and steelhead runs or other priorities in the program?

The wildlife agencies and tribes are quick to point out that the Northwest Power Act clearly states that wildlife populations, as well as fish, are to be protected, mitigated and

enhanced to the extent affected by hydroelectricity in the Columbia River Basin. Some also rush to reason that wildlife have taken a backseat to salmon and steelhead in the fish and wildlife program, a precarious position neither appreciated nor warranted, they insist.

Determining the relative importance of wildlife in the grand scheme of things also brings up whether it might not be appropriate to set basinwide mitigation goals and objectives for wildlife, similar to setting a basinside goal to double the salmon and steelhead run.

Whatever approach the Council takes, it is time to reevaluate the role of wildlife mitigation and the part it plays in the fish and wildlife program. The review begins this fall, with an issue paper that combines the current proposals and spells out the key policy questions to be resolved. The Council will hear comment on the paper before moving on to specific wildlife projects. ■

Four Steps to Future Wildlife

The Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program contains a section devoted strictly to addressing the damages done to wildlife populations by hydroelectric development in the basin. By far the most harm inflicted on the animals is the direct result of inundating acres upon acres of wildlife habitat. To effectively and systematically alleviate those losses, the Council has established a four-step process that state and federal wildlife managers, Indian tribes and project operators are to complete for each hydroelectric project in the Columbia Basin. The Bonneville Power Administration is funding the wildlife planning process. The first three steps of the process for all of the federal hydroelectric projects are nearing completion.

4

Program Amendments.

The fourth and final step calls for the Council to amend the mitigation plans into its fish and wildlife program. Before doing so, the plans are put through a rigorous public review process, which may result in some revisions. Once the Council amends a mitigation plan into the fish and wildlife program, then Bonneville or the appropriate project operator can begin funding the implementation of that plan.

3

Wildlife Mitigation Plans.

Step 3 is the wildlife professionals' chance to devise a plan for each hydropower facility to address the wildlife losses identified in the loss statements. Once the managers have completed the mitigation plans, they forward them to the Council for review and amendment into the Council's Columbia River Basin Fish and Wildlife Program. The mitigation proposals for Grand Coulee Dam, the Willamette Basin facilities, Palisades, Anderson Ranch and Black Canyon dams have reached this stage in the planning process. Bonneville expects that the wildlife mitigation plans for all of the federal projects will be completed in 1990.

2

Wildlife Loss Statements.

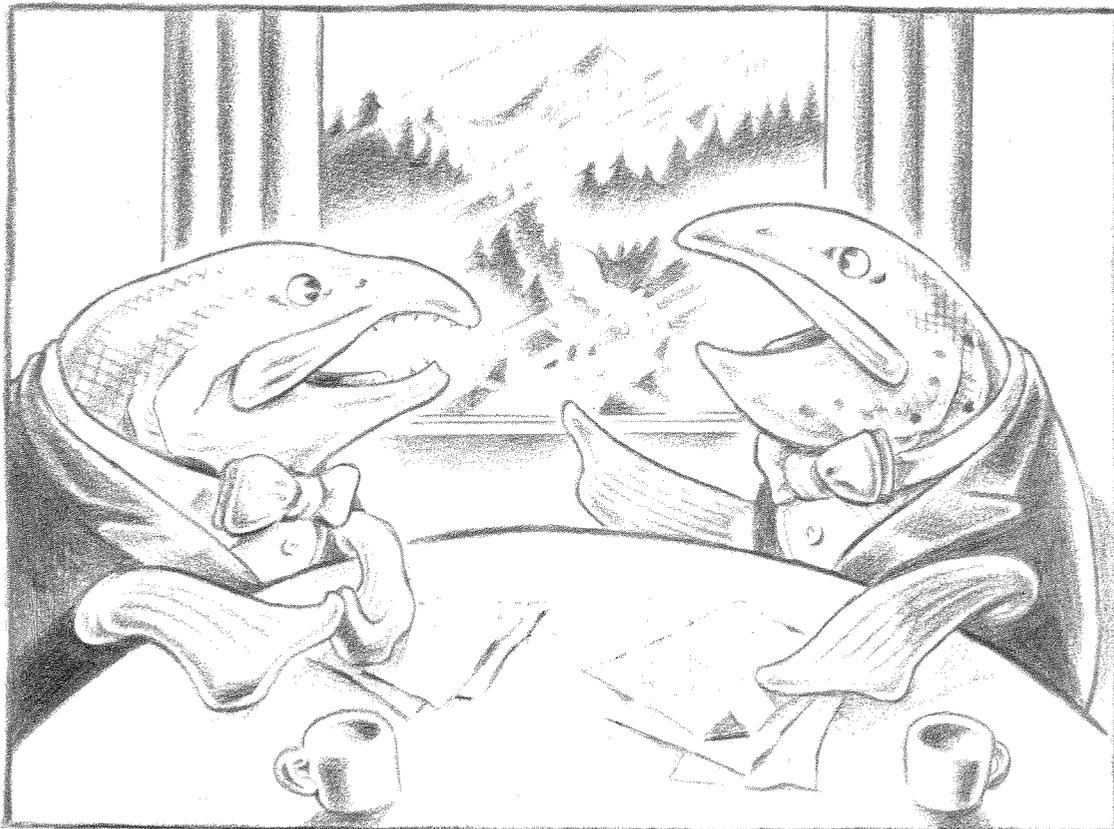
Step 2 calls for wildlife loss statements that quantify the amount of wildlife habitat or the number of animals that were lost due to the hydropower projects. Wildlife managers are instructed to take into account any benefits to wildlife that may have resulted from the projects, such as resting habitat for waterfowl that a new reservoir may have produced. The net loss statements for all of the federal projects are scheduled to be completed in Fiscal Year 1989.

1

Mitigation Status Reports.

The first step in the process entails a thorough review and analysis of past, present and proposed wildlife mitigation programs at each of the hydroelectric facilities in the basin. The status reports, now complete for the federal projects, documented the need to pursue more wildlife planning at the facilities.

STRAIGHT TALK AT THE



ROUND TABLE

Frank appraisals of five years' focus on fish.

It was intended as a two-day retreat into the foothills of Oregon's Mount Hood for frank appraisals of the first five years of the Columbia River Basin Fish and Wildlife Program. Northwest Power Planning Council Member Bob Saxvik of Idaho, chairman of the Council's fish and wildlife committee, opened the event with a challenge: "The Congress and the people of this region expect nothing less than that we protect and rebuild salmon and steelhead populations almost lost in this basin because of the construction and operation of our undeniably valuable hydroelectric system."

Saxvik called out an abbreviated list of major fish and wildlife program accomplishments and shared the Council's appreciation for the efforts of "fisheries agencies, the tribes, the Bonneville Power Administration, the U.S. Army Corps of Engineers, the Bureau of Reclamation, the Federal Energy Regulatory Commission, the land and water managers, public and private utilities, independent fishing groups and the individual citizens of the Northwest."

"You have backed up your opinions with actions," he added.

At the round table were the leaders of each of those entities, brought to the same table for the first time.

They came prepared to tackle the three questions around which the two-day session was organized:

1. In what areas has the salmon and steelhead program been successful and beneficial?
2. Where has the program fallen short?
3. How shall we take on the remaining challenges?

Day one, June 29, was billed as the time for speakers at the table to offer their views on the program. Each listed his or her favorite accomplishments, identified common ground and reflected on the needs of the future.

Policy-makers were joined the

second day by invited national experts representing specific fields of fisheries knowledge. They made presentations on the future of natural salmon and steelhead production, the economic benefits of increasing salmon and steelhead in the Northwest, and ways the region can negotiate new agreements to move the program forward.

Particular themes emerged early and were echoed throughout the two-day dialogue:

1. Cooperative ways need to be found to continue the successes of the first five years.
2. Safe passage must be provided for juvenile salmon and steelhead passing Columbia and Snake river dams.
3. Research on salmon and steelhead must be coordinated and information systems shared.
4. Fish production should balance hatchery breeding with protection for wild fish.
5. The management of salmon and steelhead harvests should be continually improved.
6. Water supply and water conservation should both be addressed.
7. Estimates of program benefits should be refined to include recreational, commercial, tribal and economic development values of salmon and steelhead.

Revisiting an old debate

The exchange on issues was far more candid than "canned," heating up quickly over old disputes. First to speak was Tim Wapato, executive director of the Columbia River Inter-Tribal Fish Commission and chairman of both the Columbia Basin Fish and Wildlife Authority (the umbrella group of state and federal fish and wildlife agencies and Indian tribes in the basin) and the Pacific Salmon Commission, which oversees implementation of the United States/Canada Pacific Salmon Treaty.

We continue to have a problem that has plagued this system since the first dams ... and that's safe passage [around dams] for downstream [juvenile salmon and steelhead] migrants ... Despite repeated attempts by many parties to convince the Corps of Engineers to spill minimal amounts in order to attain the 90-percent [smolt] survival standard within the program, the Corps continues to operate according to its own rules ...

If all agencies, particularly those who control the levers on the dams, are not involved and bound by items and specific proposals within the program, then we need to take whatever steps are necessary to see that that occurs.

General Mark Sisinyak of the Corps' North Pacific Division delivered the Corps' response.

Our current plan is to mitigate juvenile fish passage mortality caused by Corps' projects to the extent "incrementally justified." We feel that only by analyzing each element of an overall plan having to do with the fisheries ... on an incremental basis, by comparing costs and benefits, can we assure that the measures represent a wise federal investment ... The spill for fish is not, in our view, adequately justified.

There was more verbal skirmishing, which featured the General's description of three ways the Corps' fish and wildlife efforts could be funded: through traditional appropriations to the Corps; through re-

"I know of no other set of complex societal or resource problems that are being handled as well as you are handling the salmon and steelhead issues."

gional interests such as Bonneville; and through specific direction of Congress. That part of the discussion led Washington Council Member R. Ted Bottiger to ask a pointed question.

All of the expertise available to me tells me that [spills for fish are] essential, so obviously, your experts and my experts disagree. If I pay for it myself, can I just tell you what to do?

And the General fired a simple answer.

If you have some money, and you want some federal design and construction done, I'm confident the Corps of Engineers can do that.

Break for inspiration

Despite the early debate, Charles Wilkinson, University of Colorado law professor and author of numerous books on natural resource law, delivered a luncheon address that provided both focus and inspiration for the rest of the colloquy.

What we're dealing with is a part of the world where natural resources affect society uniquely, where there is a tie between landscape and animals and rivers and mountains and plains and forests and weather and people, that is deeper and more direct than in any reasonably well-populated area in the world. So all of us who are going to do our jobs right can't just think in terms of resources ... We have to think in terms of the whole society; of jobs, family, religions, avocations, beauty, art, all of the things that make up community, all of the things that combine to make up the human spirit.

... I know of no other set of complex societal or resource problems in this region that are being handled nearly as well as you are handling the salmon and steelhead issues here ...

You have, over the last decade, moved toward an ethic of place by respecting the other side of the equation, the fish and the many people who depend on them ... you have done this better than any other single place in the country. I hope you find ways to con-

tinue to inculcate in the consciousness of the people of this region how wondrous are these animals and their habitat, about how they are a central thread that binds together the Pacific Northwest, about how they cannot be replaced.

... You are trustees, in the most basic sense, not just for natural resources, but also for the whole society in the Pacific Northwest ... You have fulfilled that trusteeship role ... in an absolutely inspiring and historic way ... and all of us who love the Pacific Northwest and its unique, magnificent qualities, wish you well as you set your sights even higher in the decades to come.

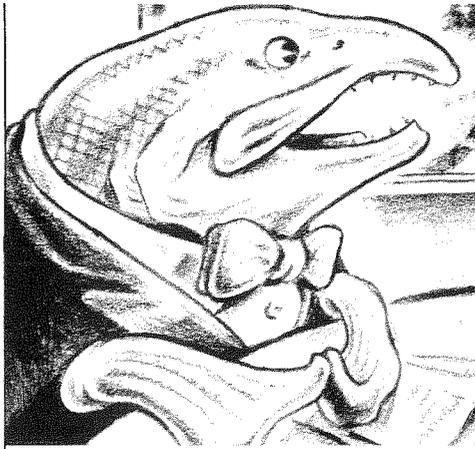
Cuts from the conversation

Even a summary of all the issues discussed at the round table, if it included quotes from the participants, would take up more than an entire issue of this publication. The transcript is two-volumes long, each book totaling more than 200 pages. Consequently, what follows is more of a sampling than a summary. The selected comments are drawn largely from the first day, when policy leaders presented their reviews of the first five years' salmon and steelhead recovery effort. A more complete summary will be released for public review this fall.

■ General Mark J. Sisinyak, North Pacific Division, U.S. Army Corps of Engineers:

To put the Corps' effort in perspective ... we have, through 1987, invested over \$400 million ... in fish facilities. This represents some 13 percent of the federal dollars spent on Corps projects. Of the amount I just talked about, \$90 million has been spent on juvenile fish protection.

... [on] the question, "Do you think the program is working?" My answer is yes, it is working. The Corps of Engineers ... has implemented most of the measures that the Council has put together



with all of your help. And we will continue to comply with the provisions of the Power Act and respond to the Council's fish and wildlife program ...

We will implement those measures we are authorized to implement and which meet the requirements of our lawyers' regulations and policies applicable to the Corps. Obviously, the Corps is obligated to comply with the Power Act. I submit to you, there are several other laws that the Corps of Engineers must continue to adhere to also.

■ Ed Sienkiewicz, Jr., senior assistant administrator, Bonneville Power Administration:

I hope you will bear with me when I say "we," I mean all of us. I don't mean the Bonneville Power Administration ... We are just one of the players.

... there have been successes in terms of improving habitat that will be beneficial to the perpetuation of wild stocks ...

... We have completed one hatchery at Cabinet Gorge. We broke ground just a week or more ago at Colville. We are working rapidly for the hatcheries of the Yakima and Umatilla ...

... We have been successful in ... dealing with fish disease and in understanding the influence of predators on survival of those fish.

... By way of perspective, in 1980, Bonneville's direct expenditures for fish and wildlife were \$1.9 million. By 1988, it was nearly 20 times that amount and projected to go up even more.

■ Al Wright, executive director, Pacific Northwest Utilities Conference Committee:

I think the Council's articulation of its goal of doubling the [salmon and steelhead] run size has put some material quantification on what it is we're trying to do, and I think that has been productive. I hope it also has dispelled a lot of the divisive arguments that went on early in the program formation about ... the hydro-power obligation, about cumulative debts and obligations to totally restore the fish run to ... pre-white man involvement in the Columbia River.

■ Joseph Blum, director, Washington Department of Fisheries:

The progress we have made in the last five years is that we can have the forum today and have this kind of exchange. That's not been possible in the past. It has happened because there is a spirit in the Northwest that is willing to arrive at consensus on very difficult issues.

I will give us a challenge of leveling the table, of building that consensus and getting on to where we are not dealing with micro-management, but we are dealing in the management of the big issues that we are capable of handling.

■ Ken Pedde, deputy regional director, Bureau of Reclamation:

In 1951, the Bureau of Reclamation began studying ways to improve the water supply in the Yakima Basin. An integral part of that study ... was fish ladders and screens. At that time we weren't able to get the necessary support, the necessary consensus, to go forward with the project.

The Council's focus of attention on the need for passage facilities has helped us accomplish something we have been looking at for a long time ... in that area, the Council's work has been extremely successful.

■ Rolland Schmitt, Northwest regional director, National Marine Fisheries Service:

If I was to offer a grade for all of us for the first five years of progress, I would say that it would be a "C" grade or an average grade ... and frankly, only because of the last two years of effort.

Looking back now, it is my opinion that what we did to ourselves was to develop such a high degree of caution that we made it very difficult to get the program off the ground and running ... I would like to see more results and less studies.

■ Paul Vetterick, associate state director, Bureau of Land Management:

Our major role in wildlife and fisheries activity is that of a habitat manager, and ... with the Columbia Basin there is about 5,000 miles of cold water fish habitat under Bureau of Land Management administration.

We heard earlier about federal expenditures. Our experience ... for anadromous fisheries in western Oregon easily shows a cost-to-benefit ratio of 1-to-3. For every dollar we spend, we can very, very safely assure at least \$2.50 or \$3 return on fisheries stock ... some projects go as high as 1-to-7 [cost-to-benefit ratio].

■ Elmer Schuster, Yakima Indian Nation Tribal Council:

... communication has improved ... I hope the period of litigation is over. If we forget what litigation was like ... ask some of the old players that were a part of that litigation process and I think they could remind us of how awful it was.

I have heard the term "consensus" today. Through consensus ... the efforts of the Power Council and the utilities, all the players involved, the states, the tribes, through our efforts, Yakima is going to be the model.

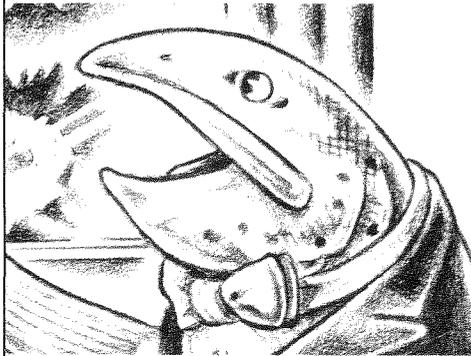
■ Jerry Pavletich, regional director, Trout Unlimited:

Here in the Northwest, we have reminders everywhere — "Salmon Creeks" without salmon; places called "Fish Trap," and no one can recall why they were given that name; "Redfish Lake," and children ask where are the fish that turn red.

In our view, public awareness is one area where we believe the Council has been tremendously successful. Salmon and steelhead are in the news a great deal ... because of the efforts of the Council.

■ Bill Bakke, executive director, Oregon Trout:

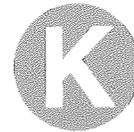
It's a question of how we restore and sustain fish populations in a fragmented political environment, with short-term goals and expectations and very poor ecological data ... the Council ... opened the door for the public to have some role to play in the decision process ... this was not really possible before because it was such a broad-based problem.



Two final challenges

Bill Wilkerson, former director of the Washington Department of Fisheries and current director of that state's Department of Revenue, urged round-table participants to:

Put people in charge of change who have common sense. But also put people in charge who are the "change agents" — the people who can deliver change. Five years from now, if you ... deliver people with common sense to the role of leadership and people who are ... willing to take the heat for it, you will see more change on the Columbia River.



ai Lee, former Washington member of the Northwest Power Planning Council and University of Washington professor, provided the gathered leaders a view of the Columbia Basin from outside the United States. Lee had just returned from delivering a paper on the Columbia River Basin Fish and Wildlife Program at the International Institute for Applied Systems Analysis conference in Laxenburg, Austria. He explained that the fish and wildlife program is an example of a concept called "sustainable development."

This is the hope that it will be possible to carry out economic development in such a way that we can husband our natural resources and environmental quality on a global basis throughout the world and particularly for the poor countries of the tropical part of the globe.

I came back from Europe having talked with people from the Nile, people from the Danube, people from the other great river basins of the world, and I came back convinced that there is only one place in the world where sustainable development has a fighting chance today, because the problem with sustainable development is that it raises a host of very difficult, in some places cruel, trade-offs. Trade-offs very much like the ones we're trying to deal with here in power and fish but where the stakes are agriculture, human survival, and whether poor nations will have a chance to have a 21st and 22nd century.

The Columbia River Basin is a leader in the world ... This is the only place where we are tackling seriously ... the challenge of sustainable development.

We have a world class opportunity here, an opportunity to teach the world some important things about what mere human beings can do with natural forces. But we will have that opportunity only if all of you who are left here don't blow it. ■

SHORTS

Legislation aimed at slowing global warming by encouraging conservation and renewable resources has been introduced before the U.S. Senate by a bi-partisan group led by Colorado Senator Tim Wirth. The "National Energy Policy Act of 1988" calls for reducing carbon dioxide emissions in the United States by 20 percent by the year 2000. Energy conservation in buildings and the use of alternative transportation fuels are both called for in the proposed legislation. The chair of the Senate energy committee, J. Bennett Johnston, is a co-sponsor of the bill. Montana senators Max Baucus and John Melcher and Washington's Dan Evans were among the western supporters of the bill. (Source: *Western Energy Update*, 6500 Stapleton Plaza, 3333 Quebec Street, Denver, Colorado 80207.)

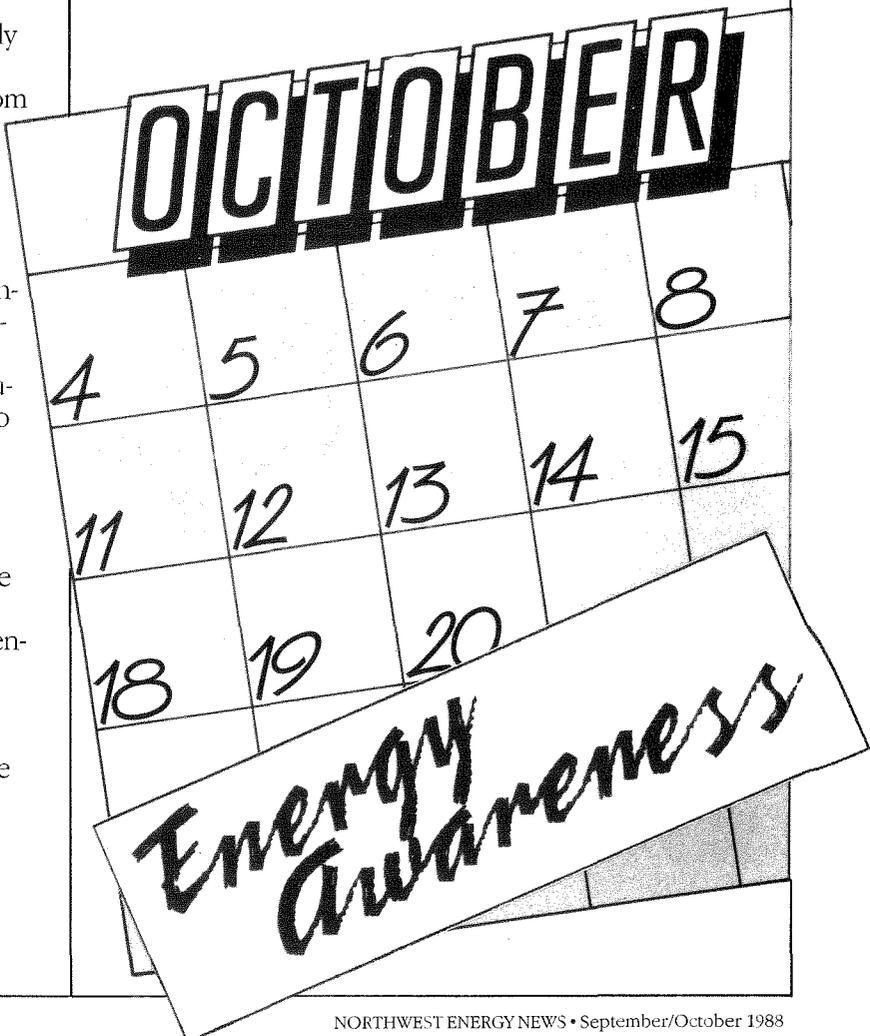
Alaskan salmon harvests accounted for more than 15 percent of the dollar value of the entire fish and shellfish catch in the United States last year — \$473 million — with most of the labor and capital coming from Washington and Oregon. That catch is expected to jump 42 percent in 1988 — from 95-million to 135-million salmon. Furthermore, the total annual worldwide production of "farmed salmon" equals only about 10 percent of Alaska's annual harvest. (Source: *Marple's Business Newsletter*, 911 Western Avenue, Room 509, Seattle, Washington 98104, 206-622-0155.)

A global energy war is coming this fall: watch for it. Segments of the "war" will likely be broadcast nationally. The events' planners, the American Energy Assurance Council, a coalition of business, government, consumer, environmental and academic officials, are hoping it will focus public attention back on conservation and a national energy policy. The "war" itself will simulate the nation's and the world's condition 30 days into a crisis caused by oil embargoes and other energy shortages. (Source: *Rocky Mountain News*, Denver, Colorado.)

October is National Energy Awareness Month and the theme for 1988 is "Energy Makes America Work." The U.S. Department of Energy, other state and federal agencies and numerous non-governmental organizations are participating in educational events designed to increase American awareness of the role of energy in the U.S. economy and its importance to health, welfare and national security. (Source: *Energygram*, Oregon State University, Extension Service, Corvallis, Oregon 97331.)

Tomorrow's clothes will respond to changing weather if they are made of a U.S. Department of Agriculture patented fabric called "polytherm." Clothing made of this fiber will "sense" temperature changes and release stored heat or feel cool depending on the climate. The new textile uses a polymer to bond a substance similar to antifreeze (polyethylene glycol) to wool, cotton or fabric blends. It may appear in clothing, footwear, insulated draperies and even building insulation. (Source: *Energygram*, Oregon State University, Extension Service, Corvallis, Oregon 97331.)

Electricity consumers in Kuwait use roughly 12 times the energy Americans use, most of it for air conditioning. And in Italy, ratepayers contract for the power they need. If they go over the contracted amount, the power is cut off. In Russia, utility bills are blank forms to be filled in by the consumer who reads the meter, then pays in person and in cash at the appropriate agency. (Source: *The Centinal*, The Columbia Group, 2121 First Avenue, Suite 103, Seattle, Washington 98121.)



CALENDAR

September 27-29 — "Northwest Energy Connections '88" at the Sea Tac Red Lion in Seattle, Washington. Sponsored by Puget Power in cooperation with Seattle City Light, Snohomish County Public Utility District, Tacoma City Light and the Bonneville Power Administration. For more information: TLA Marketing Services, 10020A Main Street, MS443, Bellevue, Washington 98004, 206-455-9917.

October 1 — "Sustainable Energy: From Possibility to Reality," a regional energy conference at the Greenwood Inn in Beaverton, Oregon. Sponsored by the Solar Energy Association of Oregon. For more information: Solar Energy Association of Oregon, 2637 S.W. Water Avenue, Portland, Oregon 97201, 503-224-7867.

October 12-13 — Northwest Power Planning Council meeting in Missoula, Montana.

November 8-9 — "Energy EXPO '88," a trade show and conference for gas and electric energy conservation for commercial and industrial uses, in Milwaukee, Wisconsin. Sponsored by ANCO of Wisconsin. For more information: Kevin S. Anderson, Energy EXPO '88, ANCO, Public Service Building, 231 W. Michigan, Room 226, Milwaukee, Wisconsin 53201, 414-221-4801.

November 9-10 — Northwest Power Planning Council meeting at the Sheraton in Spokane, Washington.

November 18-19 — "Celebrate America's Rivers," a national conference in honor of the 20th anniversary of the national Wild and Scenic Rivers System, in Alexandria, Virginia. For more information: Suzanne Wilkins, Kevin Coyle or Ken Olson, American Rivers, 202-547-6900.

November 18-19 — "The Public Trust and the Waters of the American West: Yesterday, Today and Tomorrow," a continuing education conference at Lewis and Clark College in Portland, Oregon. For more information: Laurie Maize, Northwestern School of Law of Lewis and Clark College, 10015 S.W. Terwilliger Boulevard, Portland, Oregon 97219, 503-244-1161, extension 629.

November 29-December 3 — "Housing for the 90s" at the Sheraton Tacoma Hotel, Tacoma, Washington. Sponsored by the Energy Business Association. For more information: Patricia Anderson, Energy Business Association, 420 Maritime Building, 911 Western Avenue, Seattle, Washington 98104, 206-622-7171.

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

Compiled by Ruth L. Curtis

NORTHWEST POWER PLANNING COUNCIL MEMBERS

Idaho

Northwest Power Planning Council
Statehouse Mail
450 West State
Boise, Idaho 83720
Telephone: 208-334-2956
Council Members:
James Goller
Robert Saxvik

Montana

Northwest Power Planning Council
Capitol Station
Helena, Montana 59620
Telephone: 406-444-3952
Council Members:
Morris Brusett, chairman
George Turman

Oregon

Northwest Power Planning Council
1400 S.W. Fifth Avenue
Portland, Oregon 97201
Telephone: 503-229-5171
Council Member:
Ted E. Hallock
Northwest Power Planning Council
4090 Pigeon Hollow Road South
Salem, Oregon 97302
Telephone: 503-564-8926
Council Member:
Norma Paulus

Washington

Northwest Power Planning Council
Washington State Energy Office
809 Legion Way, S.E.
Olympia, Washington 98504
Telephone: 206-586-8067
Council Member:
R. Ted Bottjoger
Northwest Power Planning Council
Anderson Hall #34-36
North Ninth and Elm Streets
PO. Box B
Cheney, Washington 99004
Telephone: 509-359-7352
Council Member:
Tom Trulove, vice chairman

NORTHWEST ENERGY NEWS

Central Office

Northwest Power Planning Council
851 S.W. Sixth, Suite 1100
Portland, Oregon 97204
Telephone: 503-222-5161
Toll Free: 1-800-222-5555
(1-800-452-2524 in Oregon)
Executive Director: Edward Sheets
Information Director: Dulcy Mahar

is published by monthly by the Northwest Power Planning Council, 851 S.W. Sixth, Suite 1100, Portland, Oregon, 97204. Reprinting is encouraged. Please credit Northwest Energy News.

The Northwest Power Planning Council is required to develop a program to restore the Columbia fisheries and a regional electric energy plan, to be carried out by the Bonneville Power Administration, emphasizing cost-effective conservation and renewable resources.

Executive Editor: Carlotta Collette
Art Director: Stephen Sasser
Special Departments Editor:
Ruth Curtis
Production: Marty Todd

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
- (88-22) Amendment Regarding Protected Areas and Response to Comments Received
- (88-10) Issue paper on Grand Coulee, Willamette Basin, Palisades, Black Canyon and Anderson Ranch Wildlife Mitigation Plans
- 1986 Northwest Power Plan
- (88-21) Draft 1988 Update of the 1986 Northwest Power Plan
- 1988 Annual Report to Congress

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 and a more detailed publications list)

Name _____

Organization _____

Street _____

City/State/Zip _____

(Or call Judy Allender at the Council's central office, 503-222-5161, toll free 1-800-222-3355 in Idaho, Montana and Washington, or 1-800-452-2324 in Oregon.)

Northwest Power Planning Council
851 S.W. Sixth, Suite 1100
Portland, Oregon 97204

BULK RATE
U.S. POSTAGE
PAID
PERMIT NO. 1709
PORTLAND, OR