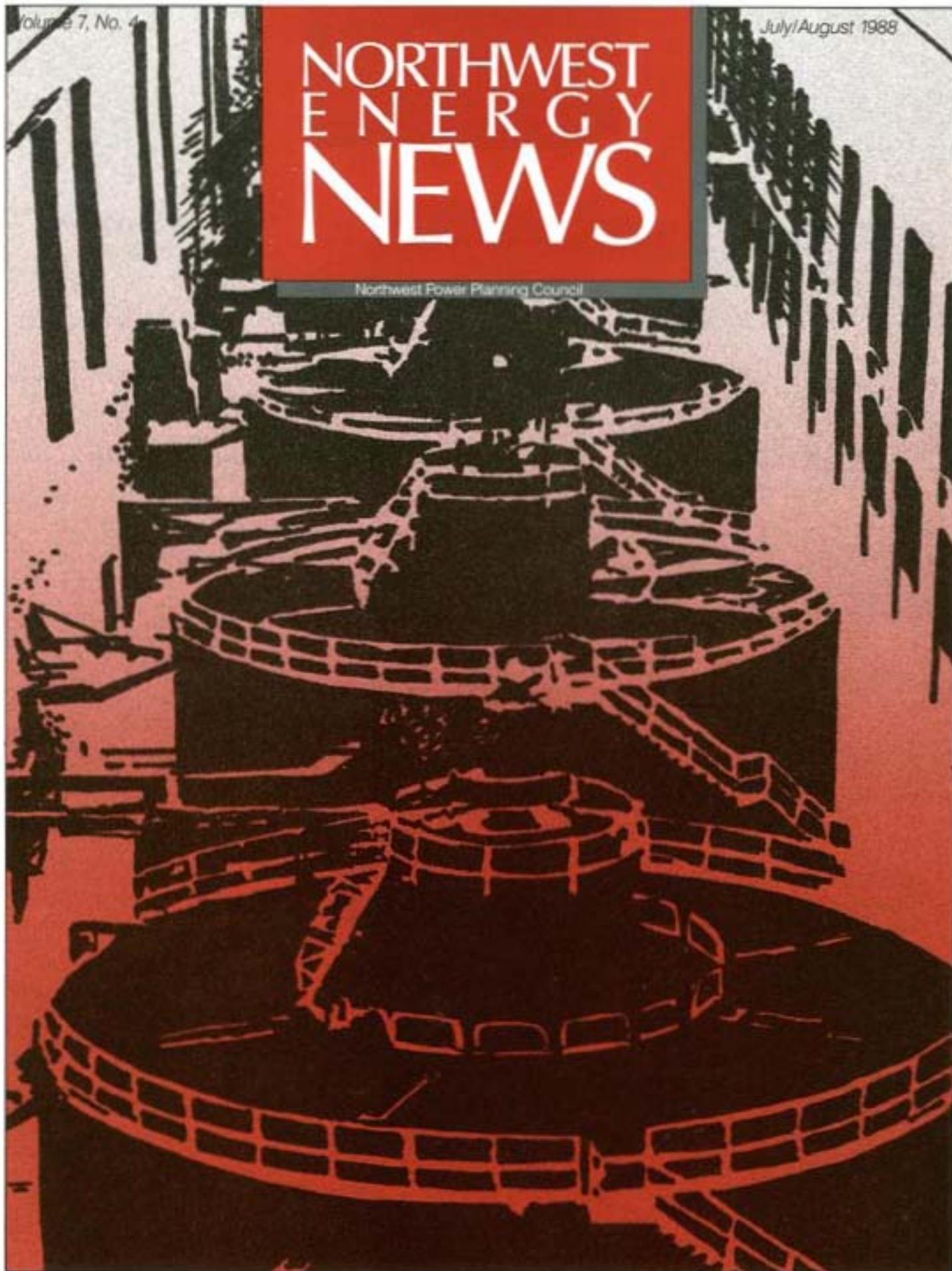


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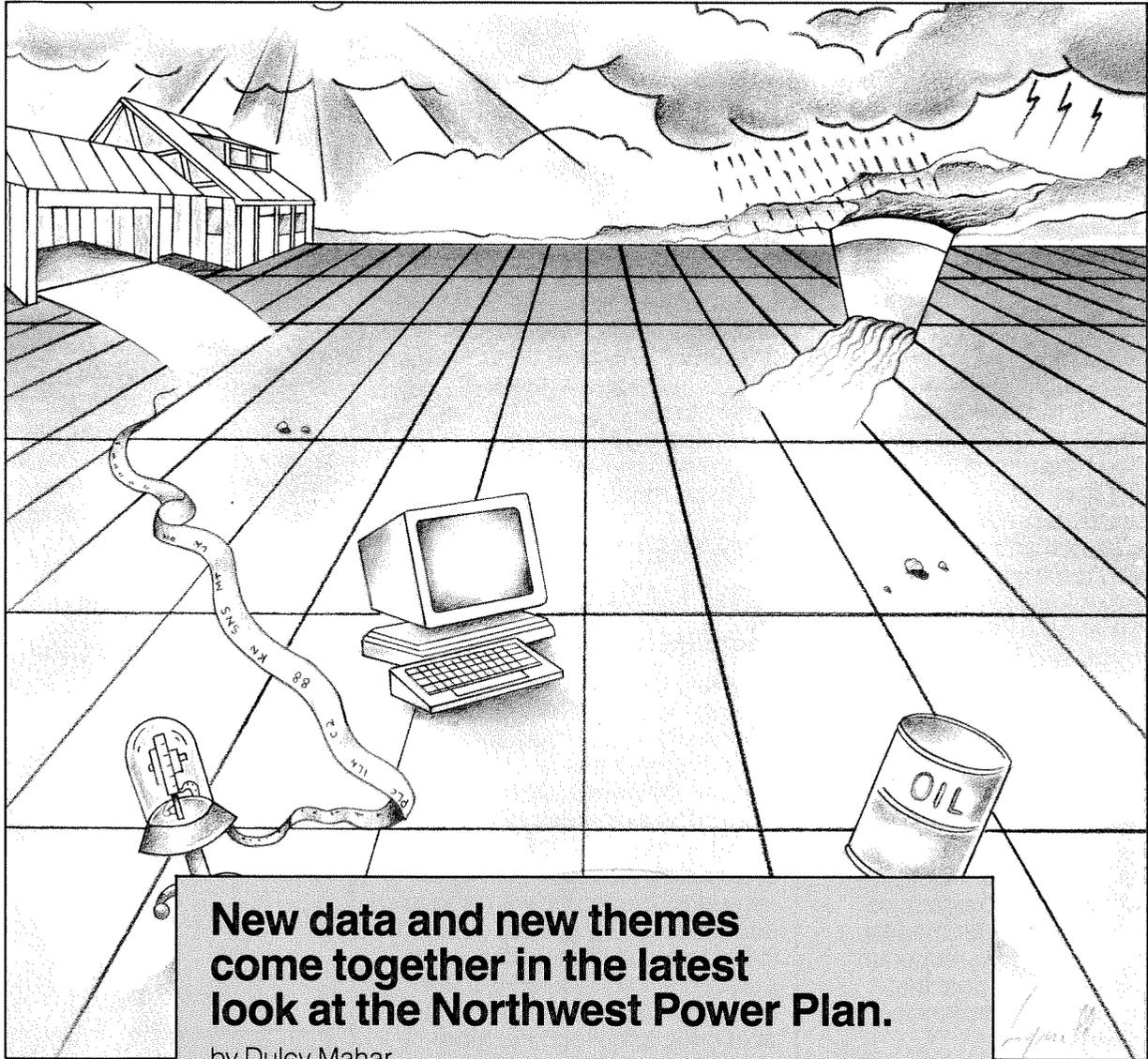
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Editor's Notes

It has been a busy summer at the Council, and there appears to be no letup in sight. In June, Oregon Governor Neil Goldschmidt announced his choice of former State Senator Ted E. Hallock to replace Robert Duncan on the Council. Duncan announced his resignation in March. As we went to press, Hallock's appointment still required approval by the Oregon legislature.

The Council is currently updating the technical basis for the Northwest Power Plan; considering amending both the power plan and the Columbia River Basin Fish and Wildlife Program to incorporate areas designated as protected from future hydropower development because they are critical to fish and wildlife; and coordinating planning in 31 subbasins of the Columbia Basin to determine their potential contributions to the goal of doubling salmon and steelhead runs in the basin. These activities and more will be covered in the Council's Eighth Annual Report, to be sent to our Energy News mailing list in October. Drafts of the report are available for comment through August 1, 1988.

Surveying the Range of Uncertainty



New data and new themes come together in the latest look at the Northwest Power Plan.

by Dulcy Mahar

Change in the Northwest's electricity picture cannot always be measured in years; sometimes it's a matter of months or even weeks. A myriad of influences come into play. For example, technologies grow; studies are completed, and more data becomes available; price fluctuations affect the competitive ranking of various energy resources; economic growth exerts new demand on electricity; and resource availabilities shift subtly and, sometimes, not so subtly.

For these reasons, the Northwest Power Planning Council is updating the technical data, facts and assumptions that underlie its 1986 Northwest Power Plan. While the technical update is not an overall

review of the plan, it will guide the Council in determining if individual amendments or an overall review are needed.

In particular, this re-examination of the numbers should provide a

better basis for considering possible changes to the Action Plan, according to Jim Litchfield, the Council's director of power planning. The Action Plan is that section of the power plan which spells

out specific steps to be taken in the near term to achieve the overall goals of the 20-year power plan.

Preliminary Forecasts of Future Energy Use

The updating process began in March, when the Council released preliminary assumptions about the Northwest's economy and fuel prices, both of which could affect how much electricity the region will need over the next 20 years. This information then became part of a preliminary forecast of electricity demand for the planning period. The forecast was something of an historic event in the region, because it was the first time the Council and the Bonneville Power Administration had issued a joint forecast, timed to coincide with both Bonneville's budget cycle and the Council's technical update.

While both agencies reserve the right to make independent determinations on the final forecasts, the Council and Bonneville are conducting the public review process jointly. This decision was made partly as a natural outgrowth of the fact that the two agencies already share computer modeling and data, and partly in response to earlier public comment that it was difficult and redundant to track two processes.

Based on public comment made on the preliminary forecast, a joint-revised draft forecast was issued for further comment in June. The revised paper noted that the region's 1986 sales of firm power (electricity guaranteed and contracted for) had been 15,300 average megawatts.

Because of the uncertainty over what will happen over the next 20 years (and the economic repercussions of a wrong guess), the Council instituted a practice of framing the forecast in terms of a range of possibilities encompassing low to high regional growth.

In the low forecast, electricity use was estimated to grow to only 15,800 average megawatts by the year 2010; while growth in the high forecast was predicted at 28,600 average megawatts. The difference between the two extremes, 12,800 average megawatts, indicates the degree of uncertainty inherent in the region's power system.

Regional growth in electrical use is most likely to fall between the medium-high and medium-low forecasts, a spread of 4,300 average megawatts. This compares to the 1986 plan where there were 10,980 average megawatts between the high and low forecasts and 2,737 average megawatts between the medium-high and medium-low forecasts.

Conservation and Generating Resources

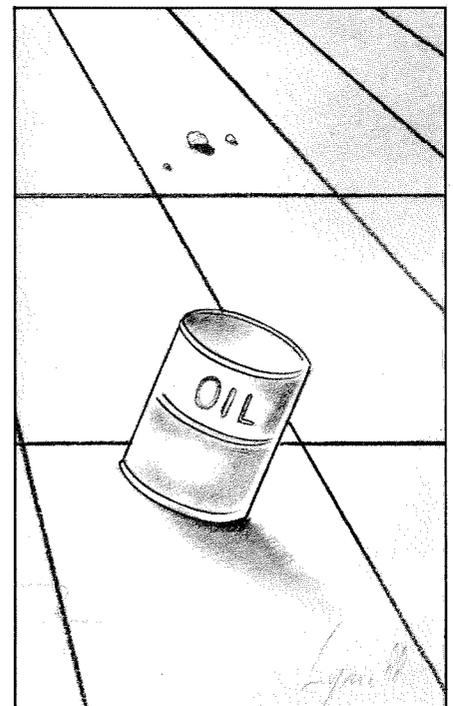
Where the electrical load growth forecast functions as a map of the Northwest's electrical future, the Council's resource portfolio is the means of transportation to that future. The resource portfolio contains the most cost-effective mix of available electrical energy resources the region will need to acquire to fulfill the need outlined in the forecast. Resources in the portfolio are scheduled with the most economical and readily available ones acquired first. More efficient use of existing energy is considered most cost-effective of all resources. Thus, conservation is the Council's first-choice resource.

In June, the Council also released for public comment issue papers containing analyses of the region's conservation and generating resources. Proposed changes in the resource portfolio were scheduled for release in July, with hearings set for August on the power plan update process. The Council anticipates adopting final revisions in September.

Changes occurring since the 1986 Power Plan was adopted that may affect the selection and scheduling of resources include:

Conservation resources:

- substantial new data on the amount of conservation available in the commercial sector;
- new information on residential weatherization costs and the amount of weatherization that has already occurred;
- impacts of new nationwide appliance efficiency standards; and
- new state building codes.



Generating resources:

- completion of studies on increasing the efficiency of the electrical power transmission and distribution system and on the potential energy savings from improved regulation of the distribution system voltage;
- current negotiations between the United States and Canada to improve coordination of the Columbia River system;
- substantially improved information from the Council's protected areas studies about the potential for new hydropower development in the region;
- declines in fossil fuel prices such as oil and gas;
- improved estimates of cogeneration;
- improved technologies, including combustion turbines and coal gasification; and
- possible strategies for extending the useful life of the generating plant adjacent to the Hanford N-reactor.

Other Potential Changes

Some non-substantive restructuring of the plan's narrative is also expected. Such changes are intended to dispel reported misconceptions, according to Jim Litchfield. "Probably the key misconception we've heard is that the plan is for the whole region, not for any particular entity, and therefore it doesn't really apply to anyone in particular," Litchfield said.

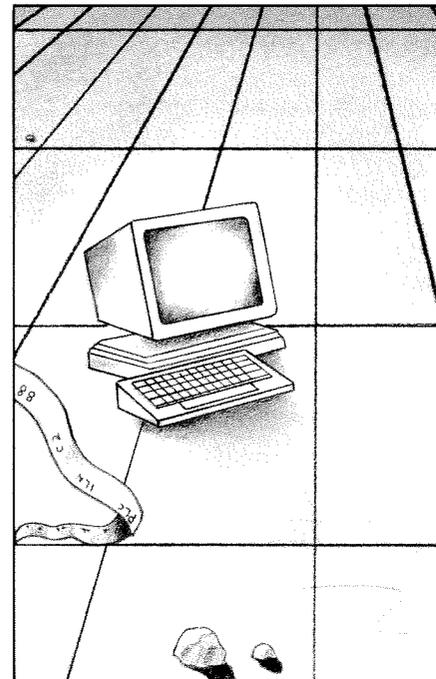
"This isn't correct. The Northwest Power Act requires the Council to develop a plan to meet the Bonneville Administrator's obligations as well as a least-cost plan for the region. Some regionwide mandates are clearly in the Act — such as ensuring that model conservation standards achieve all regionally cost-effective electrical energy savings — and this has led to misunderstanding," Litchfield explained.

The 1986 plan begins with an aggregate view of the region and its utilities, and works toward individual components, such as Bonneville's needs in the resource portfolio and responsibilities in the Action Plan. Litchfield suggests the new version may well reverse that direction, beginning with an examination of the components and working toward a regional outlook.

He expects the revision to provide additional analysis and focus on Bonneville's possible as well as known loads. He points out that each of Bonneville's customer groups represents some uncertainty. Even those utilities that have no generating resources of their own and rely entirely on Bonneville require widely varying amounts of electricity to meet their loads. Public utilities that generate some of their own power also experience load swings and, in addition, have been discussing reducing their reliance on Bonneville — a prospect that compounds Bonneville's uncertainty.

The direct service industries, primarily aluminum companies that buy power directly from Bonneville, have always been unpredictable, with load swings depending on both world aluminum prices and the price of electricity. Even the investor-owned utilities, which do not currently place firm loads on Bonneville, are a question mark because they can place loads given seven years' notice.

"Every customer group represents a piece of uncertainty, and we have to look at how best to manage that uncertainty at the lowest possible cost," Litchfield said.



Another change reflected in the technical update will be the estimates of how much conservation remains to be developed in the region. The Council treats conservation as a resource — equivalent to a generating resource — as required by the Act. Consequently, the Council subjects conservation to the same analysis for cost-effectiveness as for all other resources.

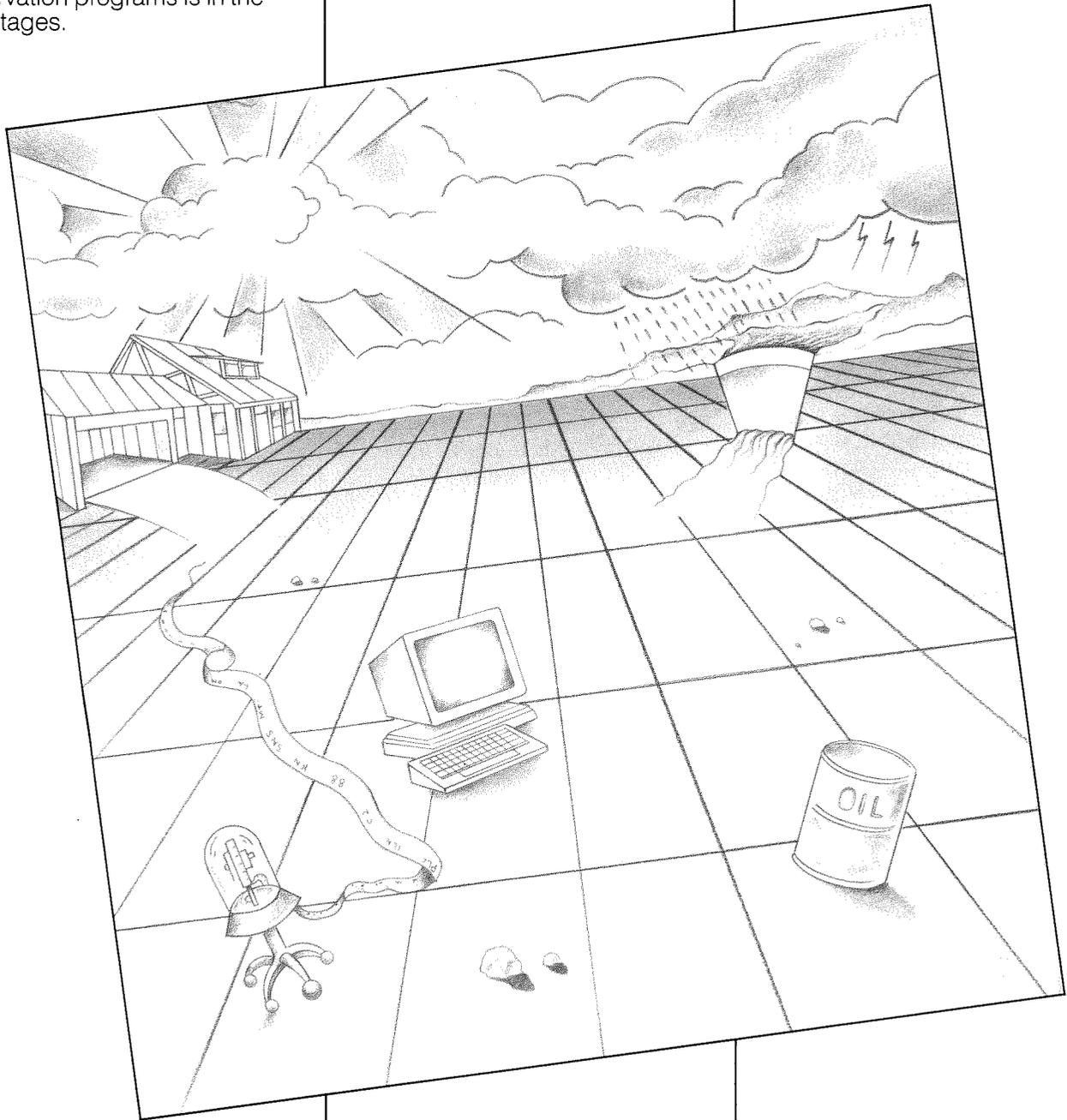
"We treat future conservation as a supply-side resource much like any generating resource, to keep it on the same playing field in front of decision-makers," Litchfield explained. "However, once conservation has been acquired, it manifests itself as a load reduction in the forecast." For example, because of the new national appliance efficiency standards, an assumption was made at the time the new draft forecast was developed that there would be less energy needed for appliances in the future.

If someone looks at the figures in the resource portfolio and sees that the Council is identifying less available conservation, it could be misinterpreted to mean that the Council is placing less emphasis on conservation. But what people will really be seeing is a reduction in the amount of conservation available over the 20-year planning period, because some of it has been or will be "acquired" through recently adopted energy codes and standards. Litchfield believes the region can expect to see a continuing decrease in available conservation, except in some sectors where development of conservation programs is in the early stages.

Five advisory committees — Economic Forecasting, Demand Forecasting, Generating Resources, Conservation Supply Curves and State Agencies — have been working with Council staff to prepare the technical update. Committee members include technical experts in these specific areas, as well as members of the general public representing a wide variety of viewpoints and interests.

This update should provide the Council with the data to fine tune its Northwest Power Plan and, if the new information suggests such a direction, to move into subsequent revisions of the Action Plan. ■

Copies of all issue papers related to the power plan update are available to the public and listed on the back of this publication.



Bill Bakke

Oregon Trout's outspoken executive director reflects on the interests of anglers.

Bill Bakke has been fishing since he was 4 years old, and it was about that time that he learned a great lesson in life. He and his Doberman pinscher had just harvested the entire population of the neighbor's goldfish pond. "I learned very early that if you take all the fish, they cement over your pond. It's a lesson I've kept with me."

Bakke is executive director of Oregon Trout, a group formed by anglers in 1983 to influence fish management policy in the Northwest. While Oregon Trout has a "shoestring" annual budget—\$100,000—and a relatively small membership—1,200, it is representative of the growing constituency of sport fishers in the Columbia River Basin that is showing increased political muscle and savvy. The group was formed by people from other organizations who wanted a vehicle that could take on the "political world," according to Bakke.

"We try to be professional in our approach," he says, "and we are definitely advocates of fish and fish habitat, rather than being involved in allocating the resource among the various users."

Bakke, a Portland native, can't remember a time when he wasn't an advocate. He has been professionally involved in fishery policy issues for 20 years and has worked for both the Columbia River Inter-Tribal Fish Commission and the Columbia River Fisheries Council. He has also served as conservation editor for Salmon Trout Steelheader magazine.

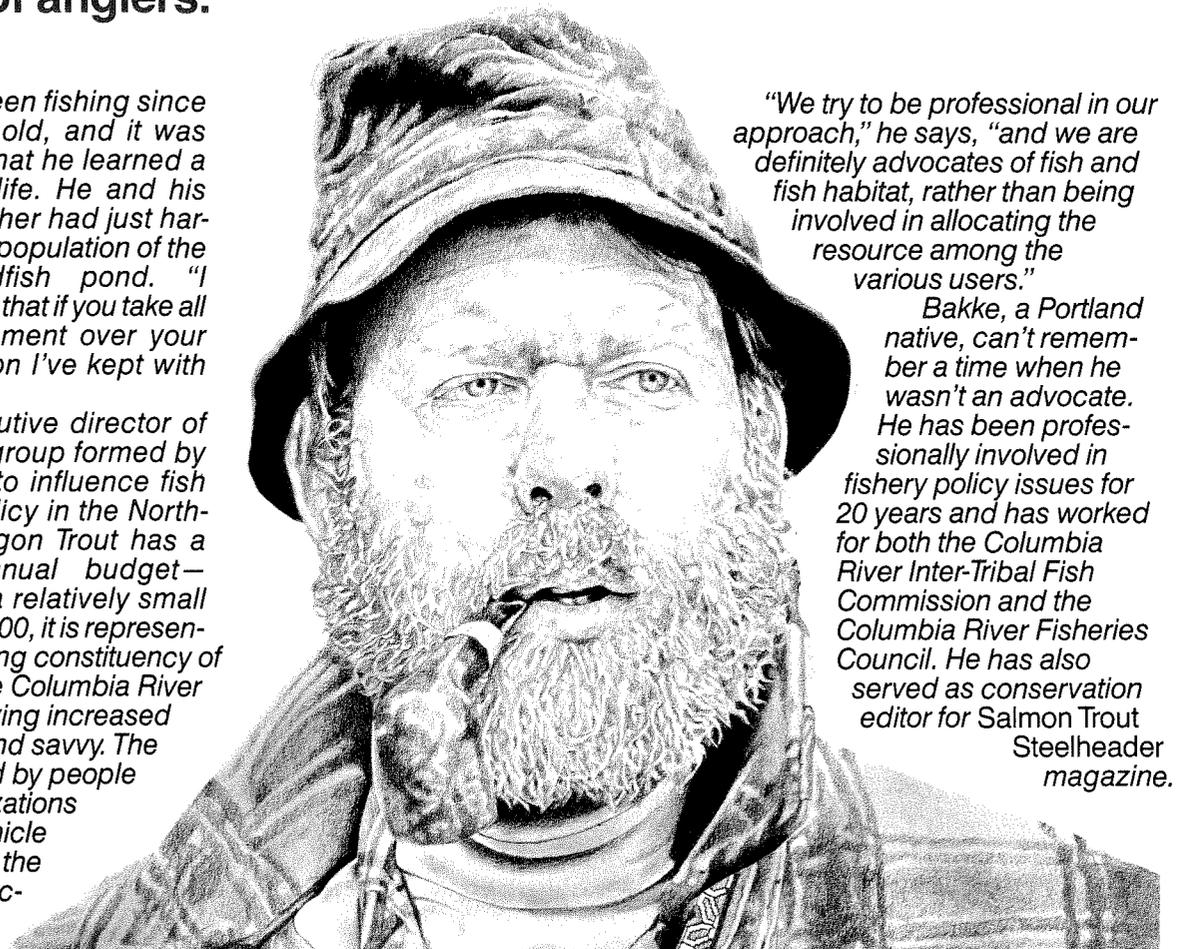


Illustration by Lynn Carson

"I guess when I first started out, I was primarily a fisherman," he says. "And there's kind of an evolution you go through. You start noticing oceans and rivers and fish, and you begin to ask why about different things." For Bakke, that led to reading scientific journals. "They taught me a lot about the resource. I became more acquainted with fish and how they adapt to their environment." He remembers a time when "you'd catch a fish and take it to the local store to get it weighed and have your picture taken. The person at the hardware store could tell you where the fish came from. The fish from each river looked different. We've lost a lot of those distinctions now with the expansion of the hatchery program."

As for fishing secrets, Bakke is enigmatic: "The thing I've always tried to do is let the river tell me what its secrets are, and I am open to what the river wants to say. It has a lot to say, but you have to be prepared to listen."

Q. Let's start with the big picture. What progress, if any, have you seen under the Council's Columbia River Basin Fish and Wildlife Program or as a result of the Northwest Power Act?

The progress I see has been primarily the funding that has been available for habitat improvement. I see very definite improvements in fish habitat to make it more complex and thereby more productive to both adults and juvenile fish. I think that is a good investment. I also believe that the fishery agencies and tribes have gained some control over the spring flows [on the mainstem of the Columbia] to help the outmigration of juvenile salmon. This has been a definite improvement over what we were faced with before.

Another important thing happening in the basin because of the Council is that you're getting all the various parties together and trying to resolve problems. This is really important because it is allowing public interest groups on the outside to be involved in those discussions. They now have some status, some input and some recognition for their positions within the decision-making process. That was largely inaccess-

sible to us before, because there is such fractured management in the Columbia River Basin among the various state resource agencies and the power interests. It was so fractured that it was very hard to participate, and you could only do it through the state.

The Council has brought all that together, and it has encouraged us all to try to resolve common problems. That has probably been the largest benefit of the Council in terms of trying to improve the management of the Columbia River system for fish and wildlife. There are basically two approaches: on-the-ground improvements and the cultural improvements that the Council has caused by bringing the parties together.

Q. What do you see as the big issues ahead of us?

I see as the major problem the fact that the goal for salmon and steelhead restoration in the basin is primarily a numerical goal [doubling Columbia Basin runs] without a clearly stated biological objective. I'm concerned that the restoration of the fish resources will not take place. What we'll get is additional production for more harvest, rather than protecting and maintaining a long-term persistence of the natural resource.

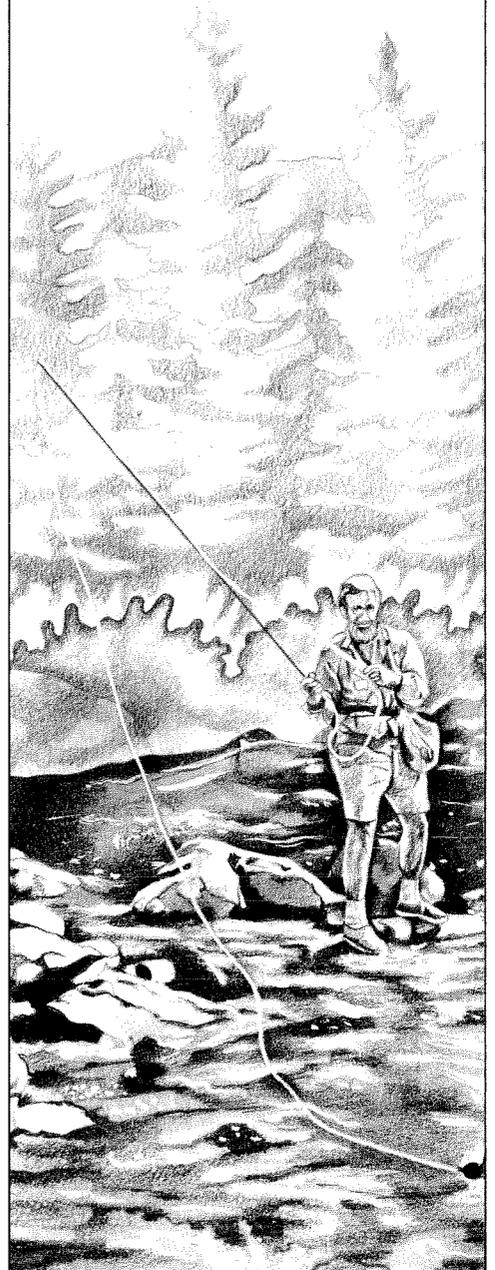
Q. How would you characterize a biological goal?

A biological goal would be not sacrificing any more of the genetic resources in the basin. That would include the hatchery as well as natural fish populations. We have already recognized that we've lost some of those stocks and are continuing to lose more. The Snake River coho was designated as extinct last year, and it looks like the Salmon River sockeye will be the next to go extinct. There has been indication that we've lost the native spring chinook in Hood River.

We don't know the extent of the loss because we have very poor inventory information, and this region has consistently failed to make the investments needed to understand how the natural system operates. Instead, we have invested in hatcheries. With this

approach, we are passing on to future generations a bill to be paid rather than a self-sustaining, renewable resource.

Without including chinook and chum salmon, I've calculated, based on scientific records, that we've lost 101 stocks, and they are at the extremes of the basin. They are upper Columbia River stocks in Canada, and they are Snake River stocks. Within the basin, we're losing the diversity of stocks that are adapted to extreme environments. A large chunk of the genetic resource has been eliminated through the development of the basin. So a biological goal would be to make sure we don't lose any more



resources, because the extinction record for the Columbia River basin is large. We have a small part left to work with, and we shouldn't be losing any more of it.

Q. I realize there is not a simple answer, but what would you see as an appropriate balance of hatchery and wild fish?

There is no balance. I don't think a balance is achievable. Everybody speaks about balance being achievable, for instance talking about a better balance between natural and wild production. Fishery management is taking on more and more of an agricultural approach to fisheries, where you

are essentially farming fish for commodity production. Maintenance of wild stocks under that kind of a program can't be done. The reason it can't be done is that we are managing fish populations for short-term goals rather than long-term productivity. The question for the Council and cooperating agencies is how do you obtain long-term goals in a short-term world?

Q. Why is genetic diversity important to the basin?

There is a production advantage in our fish genetic resources. Fish are adapted to the environments they are reproducing and rearing in, and those fish have a

productive edge over hatchery fish. That production advantage isn't fully recognized by the public or the agencies. In the Columbia Basin, I only know of two studies that give us a handle on how productive natural fish are within the ecosystem. That's a very limited amount of scientific attention, and we have consistently avoided funding that kind of research.

The Kalama River Study showed that a highly domesticated stock of hatchery steelhead placed into the natural environment were very unproductive in terms of producing the next adult generation, and that wild fish were 8.5 times more successful at producing the next adult generation



than were hatchery fish in the natural environment. So there is an advantage that natural stocks have in the environment, and we shouldn't squander that capacity. However, we are doing just that.

Right now I don't think we're poised in such a way that we take advantage of that natural productivity. We're saying, in a sense, that we can replace it with hatchery fish, and that hatchery fish and natural fish are equal. Scientific information is showing us that that isn't true, but we're not paying attention to it.

Q. Would you advocate stopping all hatchery production?

No. The way hatcheries are operated is the problem. Right now there is no gene conservation program within the hatchery system. There are a few instances where we are beginning to see hatcheries operated as part of the ecosystem, but they are exceptions.

The hatcheries are put there as large pumps to push more fish into the system and overcome some of the bottlenecks. If you paid more attention to having the hatcheries operate within an ecosystem and to having a gene conservation program within the hatchery system, then you would have a better program.

There are some hatcheries that are operating wisely within their ecosystems, like the Warm Springs Hatchery. Warm Springs has been widely recognized for the way it was set up. They are working with a wild spring chinook population, and they are supplementing it with hatchery fish. They are doing it in such a way that they are maintaining the wild stock, and it was the objective from the start to maintain the wild run. They had a biological objective; they didn't want to decrease the ability of wild fish to survive within the river. The hatchery program is attempting to maintain the life history characteristics of the wild run.

It is just amazing how very well thought out and well executed this hatchery program is, but it didn't have the blessing of the funding agency.

I'm concerned that the restoration of the fish resources will not take place. What we'll get is additional production for more harvest, rather than protecting and maintaining a long-term persistence of the natural resource.

Q. Could you explain the difference between the terms "wild" and "natural" fish?

This is an interesting distinction. Let me give you a little background on it. Oregon's coho plan started out with "wild" coho, and now it has been redefined as the Oregon coastal "natural." I am working on the chinook plan on the coast for Oregon, and there has been a large debate among the technical staff between whether the term should be "wild" or "natural." And then you see the terms come up in the Council's program where "wild" was redefined as "wild and natural."

What's happened is that, through redefinition, the agencies are trying to minimize or remove the emphasis on conservation. Wild production, as I see it, is really the primary constraint upon harvest management. In order to get production of wild fish in streams, you have to have a spawning escapement [fish allowed to return upriver to spawn rather than be caught]. What we're doing instead is putting hatchery fish into the natural environment for rearing, rather than trying to get a spawning escapement of wild fish that are native to that system.

By redefining wild out of the equation, we're ending up with less constraint on harvest management, less of a conservation burden for the states and tribes. And ultimately, the agencies will be able to argue effectively that wild fish do not exist due to their supplementation programs. They will then be able to escape their responsibilities under the Endangered Species Act.

Q. So fish that are born in a hatchery but are out-planted to streams are called "natural" fish?

That's right, and they have been selected for survival in the hatchery rather than in the natural environment. Without a hatchery program that is concerned with gene conservation, what you're doing is putting maladapted fish into the natural environment. They will come back and breed with wild fish, and eventually it is going to eliminate the wild population.

I remember Jack Donaldson [executive secretary of the Columbia Basin Fish and Wildlife Authority] saying there are probably no pure wild fish in the basin. That's immaterial. The point is that you want to maintain throughout the basin fish that are genetically adapted to various natural environments.

Instead, we just put hatchery fish in those environments and expect them to produce adults for harvest. If the river is short on spawners, the agencies will just put more hatchery fish into that environment. Consequently, overfishing and interbreeding will destroy the wild runs.

If we can increase the runs by 2.5 million, then we have reached a goal, but have we reached a goal that is going to be lasting? The goal is numerical, but if it has no biological foundation; it may not last very long. We are already having trouble with the hatcheries in terms of genetic changes in the fish, lower survival and disease problems.

Q. What ways would you change the Council's direction if you could change the program?

We have asked the Council to adopt a gene conservation program and hire a geneticist to help direct subbasin planning [to determine fish production levels and methods in individual tributaries] and to help develop the hatcheries that the Council has approved. We have asked that they essentially have a genetic emphasis as one of the goals of the Council's program. The more diversified that program is, I think, the better it is going to be. A numerical goal is fine, but we also need genetic goals. We want there to be a goal of maintaining the existing breeding units within the basin. If we have a diversified goal like that, we're going to be closer to hitting the target in terms of long-term persistence of the resource.

Q. In the 1987 program amendments, the Council set a priority on preserving gene pools. You don't think that emphasis is strong enough?

No, it is not strong enough. Nobody understands it. In fisheries, our understanding of genetics is about 100 years behind agricultural genetics. We've invested very little money in understanding genetics and understanding how natural systems work and how those fish live within those natural systems. We know a lot more about how to raise fish in hatcheries than we know about how fish rear and raise themselves in natural environments.

Right now the agencies and tribes don't have any control over the habitat that produces the fish, therefore, the option is to build hatcheries.

This started back in 1878 when the supply of fish was going down because of overharvesting. The cannery built a hatchery in the Clackamas River, and the state took it over. The conventional wisdom of the time was, if they could release more fish, they would be able to harvest more fish. That was the beginning of the hatchery system, and the mentality hasn't

really changed. The application of the technology is essentially an industrial approach to the production of fish. We can overcome the constraints, the lack of authority over habitat, and still have our fish, even though our habitat is going to hell.

We have now gone full circle. We began by releasing fry into streams, but found there could be better survival if we released them at a larger size. We have now returned to fry released and out-planting smolts without having learned much about how natural systems work.

I think the Council is making some important headway with its genetic/technical work group. They are trying to take what we know about genetics and make it applicable to fisheries management. I think that is going a lot further than we have ever gone before.

Q. In addition to genetic conservation, how would you change the hatchery system?

The hatcheries should be based more upon smaller breeding units, smaller hatcheries doing a minimum amount of genetic selection, rather than these huge hatcheries like Lyons Ferry and what we're looking at in the Yakima Basin and in northeastern Oregon.

But we're not going in the direction of smaller hatcheries. We're going toward bigger is better,

We know a lot more about how to raise fish in hatcheries than we know about how fish raise themselves in natural environments.

toward cost-efficiency, rather than managing the hatchery within the ecosystem. For instance, the genetic goal would be to have as large an effective population size as possible to prevent genetic drift and prevent inbreeding. But the major goal of the hatchery system is to use as few adults as possible in the egg-taking operation. These goals are diametrically opposed.

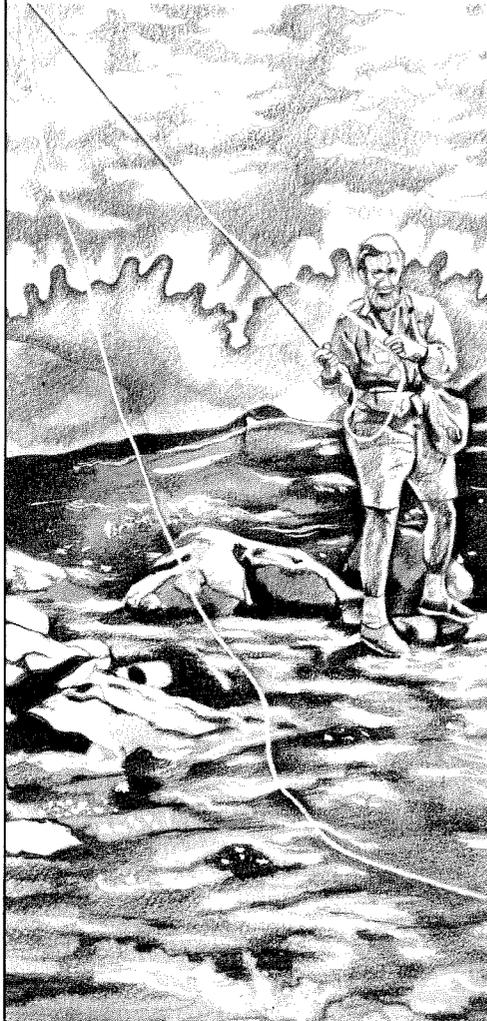
Q. How important are the commercial and sport fishing industries to the Northwest? I don't mean just in terms of dollars, but in other values as well.

The sport fishing industry, Indian fishery, lower river gillnet fishery and the troll fishery are cultural institutions. They are extremely important to our sense of well being. They are extremely important to why people live in the Northwest.



The management of the fisheries should complement that cultural diversity, whether gillnetters or sport fishermen or the others. The Northwest would be poorer without its fisheries. But we must learn that good fisheries are a by-product of good fish management.

The Northwest fishery is also unique, when you look at it on a worldwide basis, in terms of public access to fish. But we also have to recognize that the salmon resource now in the Northwest is a very restricted ecological resource. I would hope the lifestyles that have developed around the fishery could be maintained, because they are essentially unique to this coast. We've lost a lot of those lifestyles on the East Coast where we once had a similar fishery. But because we live with these fisheries, I guess we don't recognize their uniqueness, even though, to those involved in those fisheries, they are irreplaceable ways of living that must be and are fiercely embraced.



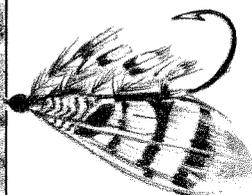
Q. What are sport fishing groups doing to be involved in public policy?

More and more they are getting involved. Oregon Trout was formed to be involved in public policy and essentially to be an advocate for fish and fish habitat. We recognize that there is a close link between habitat protection and fish production, and that public policy decisions and the funding of those policies are probably the primary arenas in which the sport fishing community can be effective in terms of providing long-term improvements in the fishery resource. In the long term, I think you can make greater gains by being involved in legislative, budgetary and policy decision matters than in the more appealing rock-rolling projects.

Q. Sport fishing groups appear to be becoming much more active now. All of a sudden it seems as if we're getting more calls from anglers' groups to send speakers. I've seen a lot more public comment from them and a lot more involvement.

You're right, it is changing. But one of the reasons it's changing is because the Council has caused people to come together. The sport fishing community is finding out that if it is going to be able to protect its interests, it is going to have to be involved. Now that the agencies and tribes are pulling together to work their differences out, the sport fishing community is finding itself having to do the same thing. It can no longer reside within its own turf. We're having to come out and embrace the larger political world. That's really healthy.

Q. A major issue for the Council right now is the fish bypass screens at the U.S. Army Corps of Engineers' dams on the Columbia and Snake Rivers. Congress allocated funds for 1988 to install systems at each dam so



young salmon and steelhead heading downstream are spared having to pass through the turbines. The Corps has stalled on that work. Is this an issue for your organization?

That issue is a high priority because the mainstem is the funnel through which all the fish go, hatchery and wild. We have no hope whatsoever of restoring runs into the upper basin and specifically naturally produced runs, as long as that funnel is not operating effectively to protect those fish in their downstream migration. So it is vital. It angers me tremendously that the Corps chooses not to spend the money that has been appropriated for bypass facilities. We have been working through the American Fisheries Society, in Washington, D.C., to try to correct this problem.

Q. What about recent developments in reducing feuds between sport and tribal fisheries?

I think it is really positive. As long as fishermen are fighting one another they are not dealing with the big problems that the resource is faced with. I wish the conflicts would go away, but they don't.

While the sport fishermen are fighting the tribes or lower river gillnetters, they are not focused on the Forest Service and habitat damage. They are not focused on the BLM [Bureau of Land Management] or BPA [Bonneville Power Administration], and they are not focused on the Corps. In terms of limiting fish production — killing fish — those are the big harvesters in the basin, not other competing users.

Just recently the sport fishermen were fighting the lower Columbia River gillnetters, in both Washington and Oregon, and it will come up again in this next legislature. The sport fishermen and gillnetters should be working together to get more fish into the river. To the extent that sport fishermen and other groups begin to pull together and work to solve problems of fish production and protection, we're going to be a long way ahead, and the Council's program and state agency programs are going to be stronger.

Q. Is there a role for volunteerism in working on fisheries improvement?

There is a strong and growing role. Oregon Trout and its members are involved in doing stream restoration projects. Such projects increase the awareness of people about how the resource functions, how streams function, what it means to have good habitat, what bad habitat looks like, and how to visualize a healthy stream. That is extremely important.

But in terms of the public volunteering and helping to restore streams that have been damaged by over 100 years of habitat destruction, there is no chance it [restoration solely by volunteers] is going to happen. We've got to get bigger dollars, and we've got to get the agencies that are involved in habitat management to begin not only to protect, but to restore. That is why Oregon Trout is busy working in Washington D.C., on the Forest Service budget, to get more fish biologists and to get more money into the fish program in this area. Through that institutional effort, we are going to increase the protection and improvement of fish habitat on a grand scale, and we're also going to funnel volunteerism through these projects, because they need the manpower to help achieve their objectives.

Q. What directions do we need to head in as a region?

We need to pull the fish and wildlife agencies and tribes together even better than what we have done in terms of cooperative work and restoring the runs. We also need to include the land management and water management agencies in that effort.

So far, we've done a poor job at that. I see the Council as being the primary facilitator for that kind of reorganization of political entities in the basin. It has to go further than just the fish agencies and the power interests. Somehow, we have to get the Corps to play ball and get them to begin doing the job of fish protection at the dams.

Q. What is your prognosis? Are you optimistic that we're going to restore the runs, even given a numerical goal, do we have any chance of getting there?

It is one of those bittersweet things, doing some great things, failing to do others. I am very optimistic about the Council's program, because I've seen it do so much in such a short time. But I am also not optimistic, because I see it getting derailed; because the Council is essentially being led by the fishery agencies and tribes. The Council is relying on the expertise of the agencies and tribes to solve the problems.

If the Council had a geneticist who understood policy and management, rather than just an academic geneticist, we would be a lot further ahead toward laying out a program of research, for instance. That would give us a handle on how to restore the runs with sensitivity to the biological facets of the basin and give us a better chance to reach a sustainable numerical goal.

Q. How do you feel about the Council's proposal to protect critical fish and wildlife habitat from future hydro-electric development?

The protected areas proposal is great. I hope it goes forward as it has been proposed. It has given notice that rivers are no longer just up for grabs. For me, in the public interest arena, it relieves me of a lot of difficulty, because it is very hard to fight case by case the hydro projects that come up.

If we can increase the runs by 2.5 million, then we have reached a goal, but have we reached a goal that is going to be lasting?

We've been, for instance, in the Salt Caves Dam struggle for over four years. It is very difficult, and financially, it is a huge drain.

We can't protect the Council's investment and the investment of the people of the state of Oregon unless we give our rivers distinction and plan hydro development. The protected areas program is extremely vital to the region in order to give us the assurance that we're going to be able to maintain our investments in our rivers and their fish runs.

The problem with the protected areas program, and the problem I see with the Council in general, is that it is not addressing resident fish [non-ocean-migrating fish] to the extent that it should. There is a bias on the Council that anadromous fish are the primary concern. They are no more primary than resident fish. However, it isn't surprising to me that resident fish and wildlife are weak elements in the Council's program, because within the agencies they are weak programs, too. But this will change. ■

A Marriage of Past and Future

New technologies carefully applied make historic structures more efficient than the best buildings being built today.

by Ruth L. Curtis

Designing a new commercial building that is more energy-efficient than almost any existing building is a challenge. Taking an old building with its walls of single-paned windows and archaic heating and cooling systems and turning it into a progressive, energy-saving structure can be a major feat.

That feat was recently accomplished with two historic Portland, Oregon, landmarks — Montgomery Park and the Director Building. These two are now more technologically advanced than most contemporary buildings. Montgomery Park, formerly a catalog distribution center for the Montgomery Ward Company, has been transformed into a world trade center with retail and office space,

exhibition halls and restaurants. The Director Building, once a furniture store, is now an office building with retail space on the ground floor. These venerable buildings were winners in the Northwest's Energy Edge competition and are now harbingers of the future of building design.

Energy Edge was a competition to see just how energy-efficient commercial buildings could be. Architects, engineers and developers



The Director Building in downtown Portland, Oregon, nestles among newer structures.

Photographs by Ruth L. Curtis

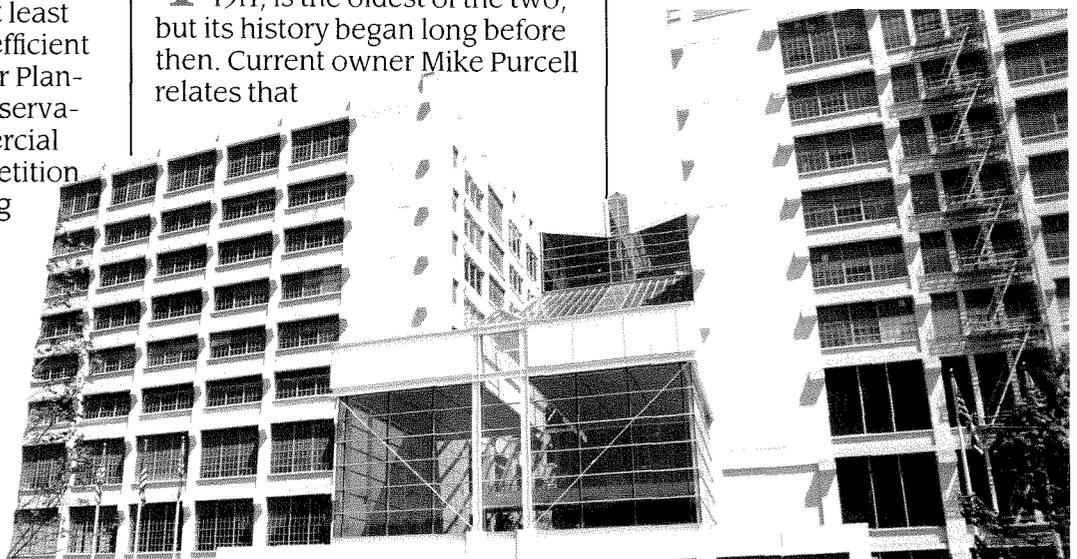
were challenged to design highly energy-efficient commercial buildings, and financial assistance from the Bonneville Power Administration paid them to carry out their designs. In addition to providing design assistance, Energy Edge was a research program to gather information on the energy use and actual design and construction costs of state-of-the-art energy-efficient buildings. These buildings are projected to be at least 30 percent more energy-efficient than the Northwest Power Planning Council's model conservation standards for commercial buildings. Now, the competition has ended, but monitoring will continue. The expertise gained will be used to design other conservation programs when the Northwest needs to acquire more energy.

The designers of 29 buildings throughout the Northwest won the competition,

earning Bonneville's assistance in implementing the energy-efficiency measures in their buildings. Except for Montgomery Park and the Director Building, all of these were new buildings. But these two are old enough and unique enough to have been placed on the National Register of Historic Places.

The Director Building, built in 1911, is the oldest of the two, but its history began long before then. Current owner Mike Purcell relates that

"the site started out as a lumberyard and then, in 1891, a fellow by the name of John Cordray erected a tent on the site and created a 'Musee.'" The Musee featured a clock that played music, gave the time of day in a dozen time zones, and had figures of angels and apostles that appeared when the clock chimed. If the audience became bored with the clock, Cordray also provided vaudeville



the competition, Montgomery Park's new entrance, a nine-story glass and steel atrium, meets the National Register standard that it be distinguishable from the existing structure.

acts, live monkeys and other curiosities.

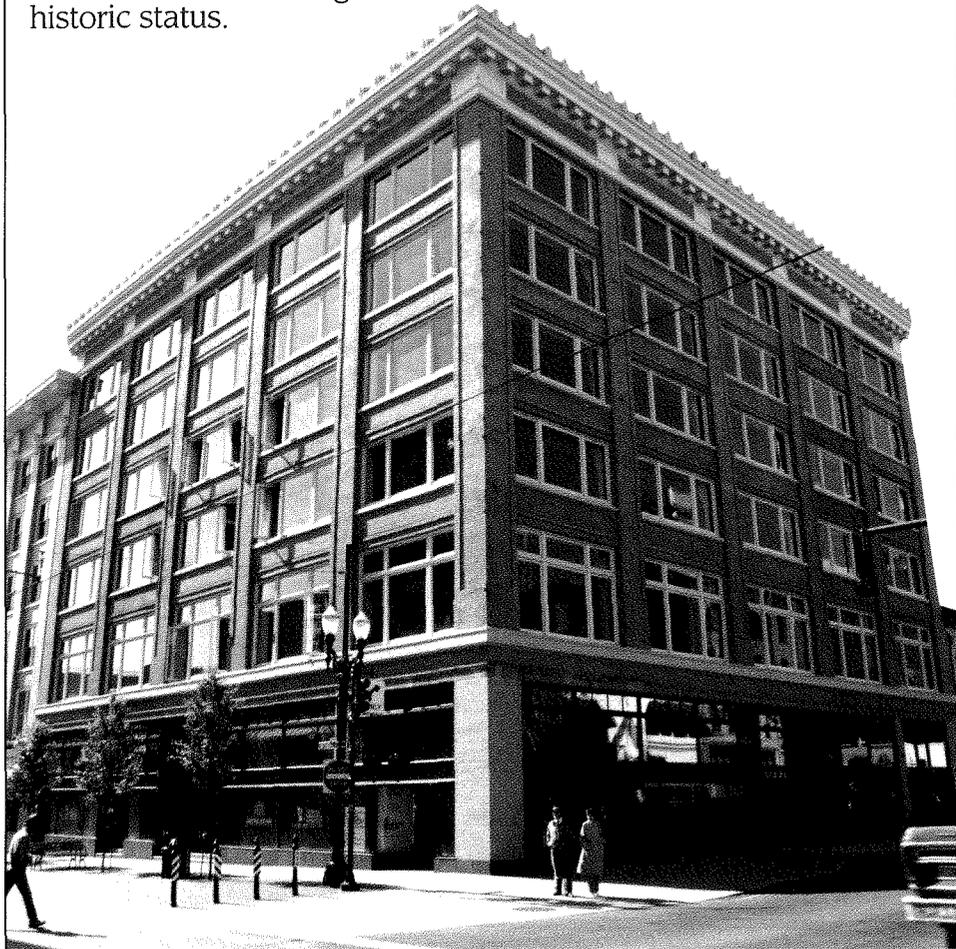
In time, Cordray built a permanent structure that included a successful theater and a saloon. In 1910, the building was declared unsafe and demolished. In its place, a new six-story brick building was built to house the Ira F. Powers Furniture Company. In the late 1950s, Director's Furniture Store moved into the building where it remained until 1985, when the company relocated to the suburbs.

Purcell and his partner, Ken Bakke, bought the building in 1985. They put together plans, began the design work, found some financing and started renovation at the beginning of 1987. Along the way, Purcell heard about the Energy Edge competition. Mike Purcell liked the competitive aspects of the program — "Utilities should do similar programs. It is part of the risk-taking intrigue and excitement of property development that entices a lot of people. They like to take chances and win," he says.

After making the first cut in the competition, Purcell began a series of meetings with Portland Energy Conservation, Inc., which was operating the program in the Portland area. "There were some 500 hours of time that went into these meetings," he relates. "We examined at least 30 different strategies. Some were totally unrealistic. Some products were being misrepresented. But if there was any thought that it could save energy, we investigated it. We pared the list down to about a dozen strategies and submitted it to the competition." The result was that the building made the final cut.

In a way, compared to the new buildings being considered, the historic building was at a disadvantage in the competition, because it first had to be brought up to current energy-efficient practice (where a new building would start), before it could go 30 percent beyond that level.

A penthouse addition on the Director Building is invisible from the street because of the building's historic status.



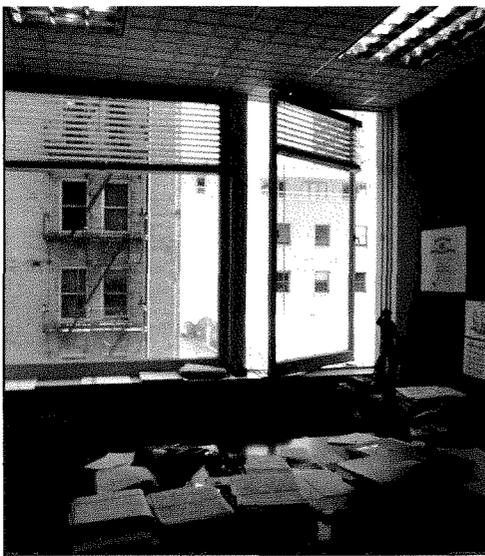
One of the first measures the owners took to improve the energy efficiency of the building was one that every homeowner knows — they added insulation and weatherstripping. This decreased the air that was escaping or entering through the skin of the building — the building envelope — and allowed the new heating and cooling system to be more effective.

That heating and cooling system is one of many features in the building that are on the leading edge of technology. It is a high-efficiency water-loop heat pump system that moves excess heat from the interior spaces to provide heat at the perimeter. Purcell relates that "we got creative, did a search throughout the whole country and brought in this 30-ton air-to-water heat pump. It's the first one in town."

The pump is leased, and the energy savings from the building more than cover the lease payments.

In addition to the Energy Edge requirements, the owners had to deal with the standards for National Register buildings. These limit what can be done to a building and still have it qualify for tax credits for a certified historic rehabilitation.

The shell of the building, the facade, must maintain its original character, and any additions must be distinguishable, so there is no confusion about what is original. This meant that the two-story penthouse added to the building was set back from the edge so it is not visible from the street. It was also built of dissimilar materials. The result is a modern addition on an old building.



National Register standards also state that if any materials on the facade are replaced, like materials must be used. In the Director Building this caused difficulties with the windows. "We have these huge windows that pivot open. But these darn windows – the sashes weren't such that we could double glaze them. We had to live with them being single-paned windows, but we did weatherstrip them."

The national standards had no impact on upgrading the internal systems of the building. The original builders would never have conceived of a lighting system as extraordinary as the one that was installed in the renovation. In the perimeter areas, daylighting controls turn off the lights when there is sufficient sunlight coming in the windows. Occupancy sensors turn off the lights in rooms that are unoccupied.

And the lights themselves are energy-efficient. Standard fluorescent lamps were replaced with slimmer, more efficient fluorescent lamps. In the corridors and restrooms, compact fluorescent lamps with wattages reduced from 75 to 13 provide adequate light with no sense of dimness. In fact, the lighting in the building's lobby – energy-efficient fluorescent and low-voltage spotlights – recently won an award from the local chapter of the Illuminating Engineering Society.

Pivoting windows in the Director Building proved impossible to convert to double panes without violating Historic Register rules.

The result of all this work is that the furniture store has been turned into a very comfortable, first-class office building. The mahogany and granite in the lobby are very businesslike, but touches of whimsy tucked throughout the building – murals in the parking garage painted by local students, ceramic sculptures of familiar Portland faces in the lobby – show that there is more to this building than

is first apparent. It has an intriguing history, and yet has met the future with its energy-conserving design.

If the Director Building is comfortable, Montgomery Park is sophisticated and futuristic – a science fiction movie could easily use the building as a set. A nine-story atrium of glass and steel serves as foyer to the huge building two city blocks square. The



Montgomery Park's futuristic interior could be used as the set of a science fiction movie.

size of the building is overwhelming. H. Naito Properties of Portland owns the building, and Bob Naito, the company's vice president, says that it is that very size that attracted the firm to the building. "We decided that because of the volumes of space on the lower floors it would make a hell of a trade show facility. It was bigger than any facility in town, and you could convert that kind of building for less money than anything you could build from scratch."

The building was built in 1920 as a mail-order catalog distribution center for Montgomery Ward. At nine stories and 782,900 square feet, it is the largest historical structure in Portland. "The great story," Naito recalls about the building, "was that the packers who filled the rush orders would roller skate around the building, because it was so huge, and they had to go fast."

The catalog operation was closed in 1982, and Naito properties bought the building in 1984. They hired a local company, Heritage Investment Corporation to get the building listed in the National Register and ensure that renovation work would not endanger the building's tax-credit status. As with the Director Building, the new addition — in this case the atrium — was made of dissimilar materials so that it stands out from the rest of the building. The original building

was shaped like a gigantic horseshoe, and the atrium filled in the open end.

Unlike the Director Building, Montgomery Park did not go through the competition to become an Energy Edge building. Instead, the Energy Edge folks approached Naito Properties asking to use the building as a "guinea pig." They wanted to use it to try out all of the regulations and procedures, before the competition actually began.

Naito reports that the process was interesting, "because we suddenly found out we should be buying things that we normally won't pay for. But even without the free money from Energy Edge, these things pay for themselves."

The lighting system has particularly impressed Naito. "In the past, you put the lights in, and the lights would throw off heat, so you had to buy more air-conditioning capacity. Now here's a light fixture that produces zero heat and gives off 93 watts of light for every 90 going in. It's like somebody's perpetual motion machine. It defies belief."

One energy-efficient feature of the building was actually installed when the building was first built — the 30,000 tons of concrete that make up the structure of the building. Montgomery Park is basically a huge concrete cube with windows. The concrete has become part of the

building's heating and cooling system: it acts as a huge thermal storage system, storing the building's heat in winter and coolness in summer to temper the need for heating and cooling systems.

The heating and cooling system also has more contemporary features, including a variable-air-volume heat pump system in the exhibit halls. In a traditional building, there would be a fan constantly going full speed and the temperature of the output air would be varied. Montgomery Park's system simultaneously varies the temperature of the output air and the amount of air flow. The compressor can be shut off with the air still circulating, and when it is not needed, the circulation can also be shut off. This variability saves electricity by ensuring that only the heating and ventilation actually needed is used.

"Then," as Naito says, "we hooked this whole thing up to a computer." The computer has an energy management system that allows the building operations manager to independently control the heating, cooling and lighting systems for 200 zones in the building. If the sun is warming one side of the building more than another, the computer compensates. Naito says that with most buildings, "the number-one tenant complaint is climate control. But at Montgomery Park, if something goes wrong, the com-



The Department of Interior's National Register standards did have an impact on how Montgomery Park was renovated. Its windows — all 40,000 of them — were replaced one by one with more efficient windows, and each one was hand glazed into its original sash.

puter will pick it up immediately, and the problem will be repaired — often before the tenant is aware of it."

Naito is now using the computer to work out energy-management strategies, "We're trying to figure out when to turn things on and off. How short can you cut the start-up time and still get the building to the correct temperature when the occupants arrive in the morning? With this equipment you can see everything." The system has worked so well that it has been installed in another Naito building.

Through computer modeling, it has been estimated that Montgomery Park's energy saving features will save 3,248,000 kilowatt-hours or \$186,500 each year for its owners — that is 32 percent beyond the estimated annual energy savings of the Council's model conservation standards. The smaller Director Building is projected to save 368,852 kilowatt-hours or \$18,433 per year — 36 percent beyond the model conservation standards.

Monitoring to see if these savings are actually achieved is the next phase of the Energy Edge program. For three years, these old buildings will be monitored to see if they perform as well as the computer models showed they would.

These landmarks have already had an impact on other buildings in the area. Naito Properties has used Montgomery Park's lighting and energy-management technologies in developing other buildings, without the incentives from Bonneville. The buildings have also proven that it is not only new contemporary buildings that can be made super energy-efficient. With creativity, older buildings can more than hold their own. ■

Securing the Last Reach

The Corps of Engineers continues to study the much-opposed dredging of the last open stretch of the Columbia.

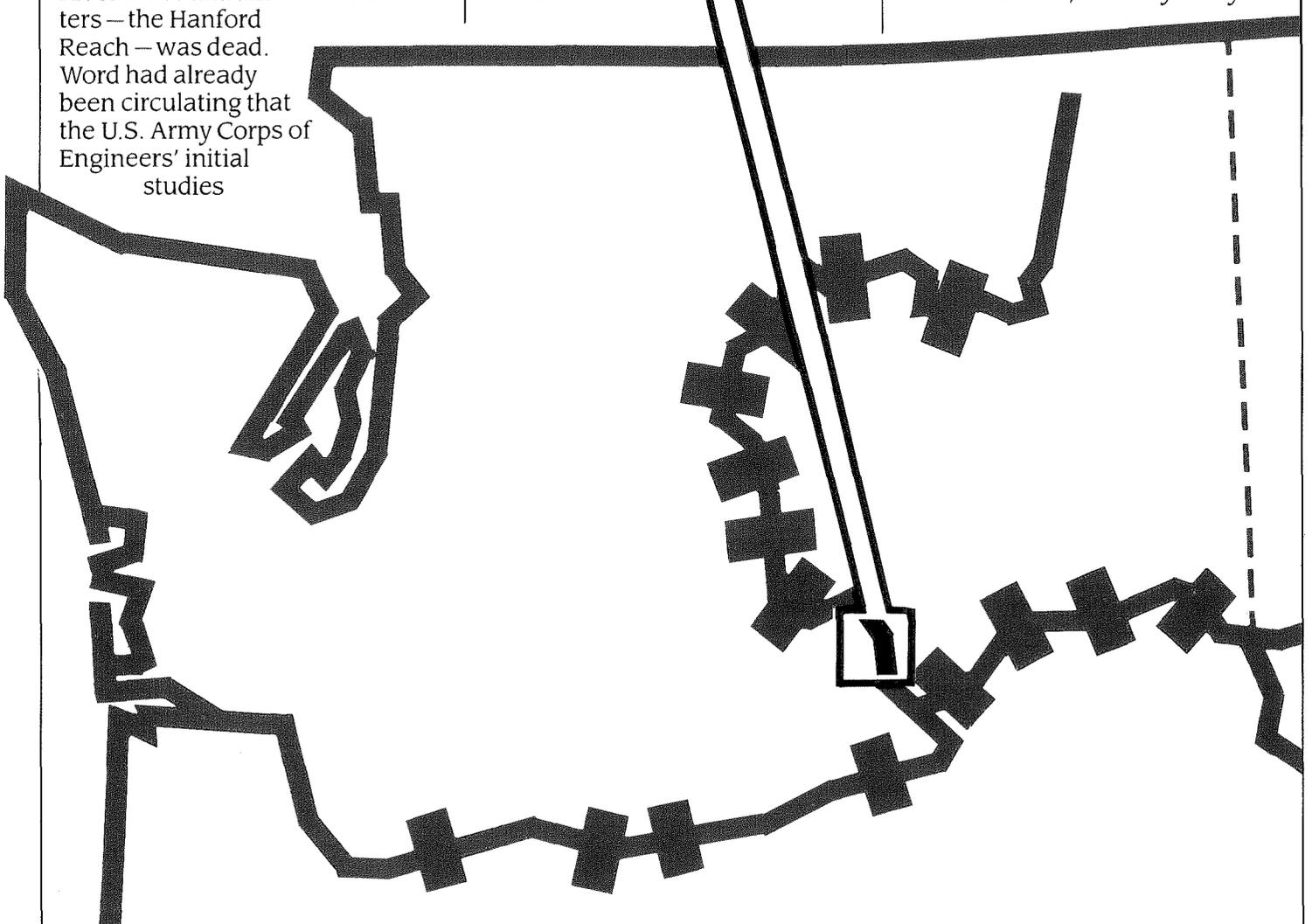
by Carlotta Collette

Nearly everyone thought the plan to carve a navigation channel through the Columbia River's last untrammelled waters — the Hanford Reach — was dead. Word had already been circulating that the U.S. Army Corps of Engineers' initial studies

indicated the mics of the dollar-for-dollar investments

faulty econo-
scheme. No
returns on
could be

squeezed out of the project's anticipated profits to upriver counties. Furthermore, virtually every



Map by Stephen Sasser

The Hanford Reach is the only remaining salmon and steelhead spawning habitat on the mainstem of the Columbia ... the Corps' dredging proposal could destroy 47 percent of that spawning area.

environmental group in the Northwest, Columbia Basin Indian tribes, fishing organizations, archaeologists, fish and wildlife agencies, legislators and others, including members of the Northwest Power Planning Council, were all squarely aligned against the idea because of the harm it could inflict on fish, wildlife and other resources.

So, it was with some shock that the Council at its May meeting in Richland, Washington, heard Corps' representative Noel Gilbrough quietly explain that the scheme to dredge the Hanford Reach is still in the works.

The Hanford Reach is that piece of the Columbia running from Priest Rapids Dam, at about river mile 400, to the top of the pool behind McNary Dam, near Richland, Washington. It is bordered on land by the U.S. Department of Energy's Hanford Nuclear Reservation.

The reach was spared development by the Corps of Engineers as recently as 1979, when the proposed Ben Franklin Dam was scrapped. That dam would have buried the Hanford Reach behind a reservoir and navigation lock that would have accomplished what the Corps is now proposing.

This time the engineers want to dredge portions of the reach, creating a deep enough channel to eventually move some of the world's largest barges between the lower Columbia and Wenatchee, Washington. Project supporters believe the navigation plan would open that city and surrounding Chelan County to broader markets for the area's lumber, aluminum and agricultural products.

The dredging scheme, part of the Corps' long-term Mid-Columbia Navigation Proposal, would include a series of lifts or cranes on gantries, instead of navigation locks, to help the huge barges up the elevation changes along the reach. The Corps estimates the expense of such a system to be between \$100 million and \$200 million. But that figure does not reflect the ecological impacts of relocating nearly a million cubic yards of river bottom in a delicately balanced environment.

It is easy to imagine the Columbia River before development. Old photographs depict its rough current and breathtaking canyons. There were river reaches where the walls on either side came close together and the water was squeezed down

through a tight chute. There were stretches where the land slid back from the river, flattened out and baked dry. Around the big corner in the river, above where the Snake came pouring in from its long fall through Idaho, there was a smooth run of the Columbia that had broad, shallow beaches, tall white bluffs and low gravel bars scattered with rocks the size of a big fist.

Most of the steep-walled canyons are just deep pools now, backed up and spread out behind thick concrete walls. Water no longer falls off cliffs submerged beneath the surface of reservoirs. In the river's whole 650-mile run through the United States, only one slender measure remains intact, the roughly 50-mile long reach known as Hanford.

Home to more than half of the fall chinook salmon returning up the Columbia to spawn, most notably the wild run of prized fish called "upriver brights," the reach figures heavily in the U.S. and Canada Pacific Salmon Treaty governing ocean harvests and increased production of salmon and steelhead. The reach is also an important piece of the Council's Columbia River Basin Fish and Wildlife Pro-

Project supporters believe the navigation plan would open Chelan County to broader markets for the area's lumber, aluminum and agricultural products

gram effort to double salmon and steelhead runs in the Northwest. It is, in fact, the only remaining salmon and steelhead spawning habitat on the mainstem of the Columbia.

Tony Eldred, eastern mitigation coordinator for the Washington Department of Wildlife, estimates that the Corps' dredging proposal could destroy about 47 percent of the salmon and steelhead spawning areas along the reach. The department considers this a conservative estimate, difficult to measure clearly because it is difficult to imagine what the Corps will do with the million cubic yards of rocks scraped from the river bottom.

One million cubic yards of gravel would look like 200, 3-foot-thick football fields laid end to end. It is hard, reasons Eldred, to conceive of any portion of the reach where such a mass of stone could be deposited without tremendous environmental consequence.

If they use the rocks to build new spawning habitat in the area of the reach, they will need to build nearly three dozen new environments to replace the one they disrupt. That assumption is based on the unlikely premise that the Corps' new spawning environments outperform every

other such experiment ever attempted in the Columbia.

A similar project, just upriver from the reach — the China Bar spawning channel built by the Grant County Public Utility — has been only marginally successful in attracting about 40 chinook spawners to build their nests (called redds) each year. On the Vernita Bar, adjacent to the Corps' proposed navigation channel, the unimproved natural spawning gravel hosts up to 100,000 spawners annually.

Besides the recuperating run of fall chinook, the reach provides a comparatively safe environment for 13 species of animals and nine species of plants classed by federal and state authorities as "endangered," "threatened," or "of concern." "The character of the Hanford Reach," argues Eldred, "governs what is present; change its character and you change what is here, whether rock or mud, plant, fish, wildlife or man."

For security reasons, access to the reach has been restricted since 1943, when the towns of White Bluffs and Hanford were abandoned to make room for the nation's first plutonium production plant. By restricting access, the department coincidentally

deterred vandalism at archaeological sites and areas of cultural and spiritual importance to Indians along the reach. The Yakima and Wanapum Indians, whose ceded lands include the reach, and other Columbia Basin tribes, are on record as strictly opposed to any plans to disrupt these last sacred holdings.

The uniqueness of the Hanford Reach led, as early as 1972, to its being identified by the U.S. departments of the Interior and Agriculture as one of 47 rivers nationwide to be studied under the nation's Wild and Scenic Rivers Act. In 1982, the reach was placed on the nationwide rivers inventory list prepared by the Department of the Interior.

Now, Washington senators Dan Evans and Brock Adams and Congressman Sid Morrison have introduced legislation to follow up on the Interior Department's interest in the reach. The legislators are asking that the reach be studied for inclusion in the Wild and Scenic Rivers System, and that a moratorium on all development await the findings of that study and subsequent legislative action. As passed out of the Senate and discussed in the House, the bill would halt the Corps' plans for at

The reach provides a comparatively safe environment for 13 species of animals and nine species of plants classed as "endangered," "threatened," or "of concern."

least eight years — three years to complete the study and another five to complete actions in response to the study.

So, with all this resistance, who stands to benefit if the Corps proceeds? Certainly the Port of Chelan County, at Wenatchee, Washington, is interested in the barge channel. It would cost the county next to nothing (the work would be taxpayer funded) to gain access via barge transportation to the shipping center at Portland, Oregon, and on to the world's markets. The Corps' innovative lift system for moving the barges, seen otherwise only in Europe, could also become a tourist attraction.

Washington State Senator George Sellers, who works for the Port of Chelan, has been promoting the navigation project. Sellers explained to the Council that Chelan County "wants to be a good neighbor to the reach." He argued that the

Fist-sized gravel on the Vernita Bar annually hosts more than 100,000 spawning salmon and steelhead.

project can be compatible with the environment and the fishery in that area, even possibly enhancing the fishery.

"We know that the days of doing public projects just because they're there are gone, and they probably should be," he said. "So we do have to prove the economics of the project, and that will be done in the next few months. The economic studies are not that favorable," he added. "We have to be honest about that."

"We are looking at the economics of it," echoed Noel Gilbrough, the Corps' study manager on the reach, "and they don't look that good. We see some opportunities possibly to increase the benefits, but there

would have to be significant increases in the benefits as we see them now. But we are not killing the project yet."

Keeping the reach-carving plan alive will gain the Corps few friends on the Council. Washington Council Member Tom Trulove is outspoken in his opinion of the proposal. "Why the Corps would even propose such a thing in the face of such obvious opposition, is a mystery," he asks. "To attempt such an enormous upheaval in our last pristine piece of the river, borders on the irresponsible."

While the Corps reworks its numbers, the reach's defenders converge on Congress, pushing for the legislation that will at least stall the Corps mid-stream. ■



Photograph by Carlotta Collette

Puget's Big Plus

Washington's largest investor-owned utility is turning to conservation to help meet its new power needs.

by Carlotta Collette

The service district of Puget Sound Power and Light Company wraps around the city of Seattle, but does not include it. Eight counties in western Washington and part of Kittitas County in central Washington are served by the investor-owned utility, which is the largest in the

state of Washington. More than 1.5 million people

buy their electricity from Puget Power, fully a third of the state's citizens.

And while most of the Northwest is experiencing a surplus of electricity, Puget's rapidly growing customer base (arguably the fastest growing in a generally slow-growing region) and limited generating resources have already forced the utility to purchase two-thirds of its needed power from other

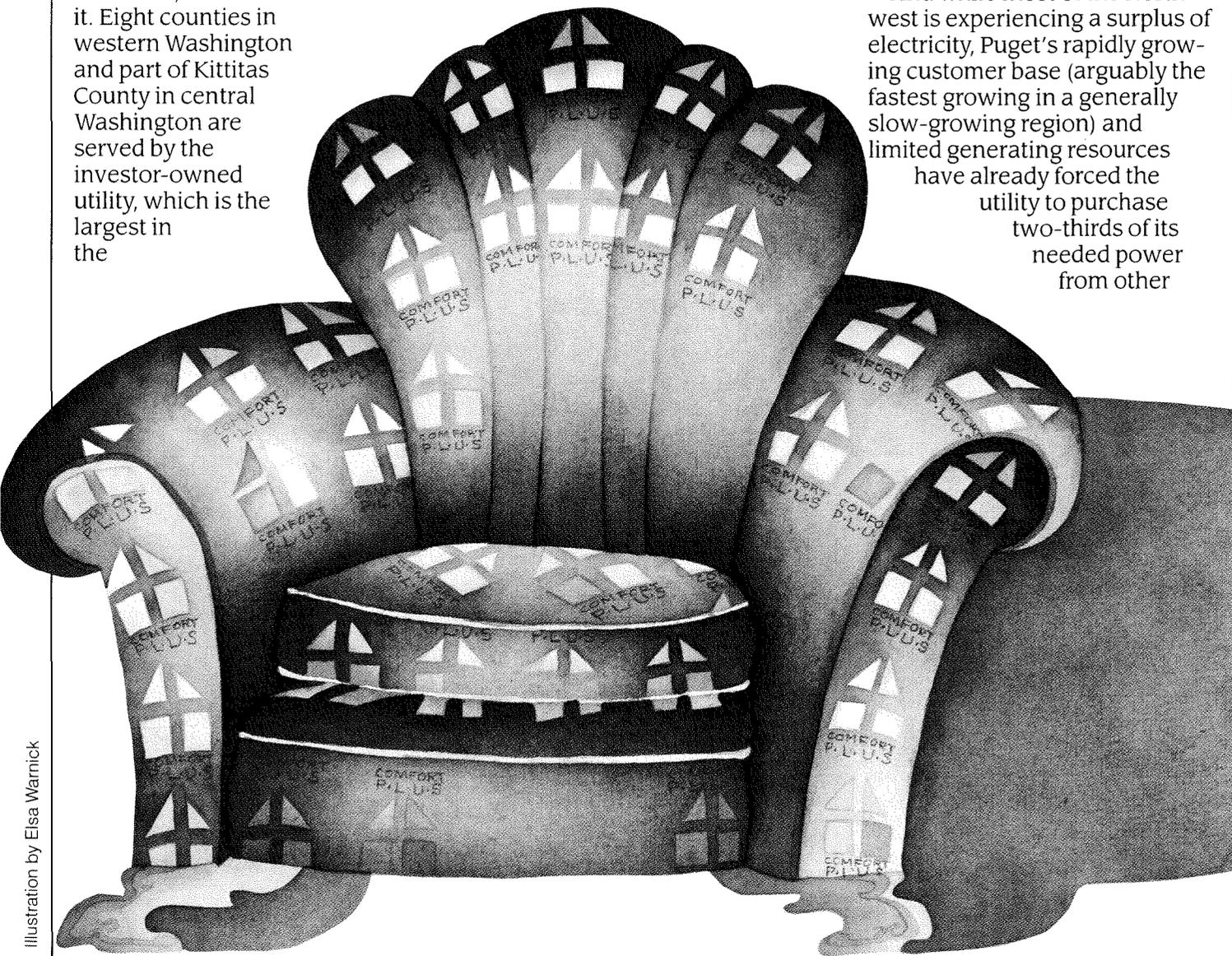


Illustration by Elsa Warnick

utilities. Given the Northwest's cheap power rates, Puget is not considering its deficit to be a plight — right now. "We're buyers in a buyers' market," says David Hoff, the company's director of market planning and forecasting.

But, as new buildings go up, utilities like Puget, which lack the independence enjoyed by utilities that generate all their own power, will be trying to meet the growth in their future electrical needs by making very efficient use of what they have.

Enter the impetus for "Comfort Plus," Puget Power's program to achieve the energy savings of the Northwest Power Planning Council's model conservation standards. The Council designed the standards to cut energy use in new electrically heated homes by as much as 60 percent. Working with the Bonneville Power Administration, the Council recommended programs to help utilities garner those savings in as many new homes in their service districts as possible.

Bonneville's program, called Super Good Cents, markets this more "centsable" approach to managing utility and regional electrical load growth. The Council figures that if enough new homes and commercial buildings are made to be as efficient as is cost-effective, the Northwest can stave off the need to develop new generating resources that cost more than twice as much as conserved energy.

That reasoning was not lost on Puget Power. But rather than borrow Bonneville's Super Good Cents program, Puget met with builders and others in the housing industry and developed an alternative program to achieve the savings of the model standards in ways tailored to that community.

A by-product of these meetings was Puget's development with a local window manufacturer of efficient windows that incorporate controllable vents. These vents improve indoor air quality

Puget wants these homes to be quieter, cleaner, brighter, more comfortable, and with lower energy costs than anything else on the market.

in houses without the necessity of cutting additional vents in the structure's walls.

The Puget program is designed to be in effect until Washington's state building codes match the energy savings of the Council's standards. Currently the state is closer than any other Northwest state, but Puget's program is a challenge to move the codes all the way to super efficiency.

Bonneville encourages super efficient new construction by providing marketing and technical assistance to participating utilities and building professionals and by offering financial payments for each electrically heated housing unit that meets the model conservation standards. Puget matches Bonneville's payments to a total of \$1,000 for each home or \$1,000 for the first unit of a multifamily building and \$250 for each additional unit.

Puget estimates that its expenditures for the Comfort Plus program, roughly \$2.5 million in 1988 (half of which is reimbursed by Bonneville) for 2,800 housing units, will be more than offset by the benefits of the program.

Puget provides partial incentives to builders who only go part of the way to the model standards. "Some of our builders had problems with Bonneville's 'all-or-nothing' approach," explains Hoff. So Puget, concerned that not enough builders would participate in too rigid a program, offered them the opportunity to take less than the whole package. "But almost all the buildings

so far have gone the whole distance to the model standards," he adds, and the utility is seeing more super efficient electrically heated homes built than it anticipated.

Movement toward efficiency on Puget's part is critical to regionwide acceptance of more efficient building codes — the Council's ultimate conservation goal — because more than a third of the region's new construction over the last four years occurred in the Puget Power service area. Conservation in Puget's service area translates into considerable energy savings, more predictable future electrical requirements, and tempered seasonal fluctuations in electrical use for Puget and the region as a whole.

But, clearly, the big winner in Puget's program is the new homebuyer living in a Comfort Plus home. Puget wants these homes to be "quieter, cleaner, brighter, more comfortable, and with lower energy costs than anything else on the market," according to its marketing material. Puget's homes will use about half the electricity that electrically heated homes built to current state codes require. And the utility expects few complaints from Comfort Plus home owners because their bills will be lower, and all of the home's energy components are covered by a Comfort Plus warranty.

In 1987, Puget completed the first step in its ongoing Demand and Resource Evaluation (DARE) project. The project relies on a public review and comment process to help the utility expand its view of which resources could be counted on to meet future power needs at the least possible cost. In response to the report and the comment it received, Puget has kicked off what it considers to be "one of the most aggressive energy efficiency and weatherization programs in the country." Comfort Plus is the headliner in that list of programs. ■

SHORTS

The town of Cathlamet, Washington, was honored for its leadership in achieving energy efficiency by the Northwest Power Planning Council and the Bonneville Power Administration. Cathlamet has been a pioneer in promoting the Council's model conservation standards for new electrically heated housing. The city adopted the standards into its building codes in 1986.

Portland General Electric is offering a money-back guarantee to owners of the utility's "Good Cents" homes, if they cost more to heat than is advertised. The Oregon utility, confident that its super energy-efficient homes will require only \$270 a year to heat (for homes that are less than 1,500 square feet—larger homes have higher heating bills), promises to pay the excess fuel bills back to the homeowner. The homes are designed to meet the Council's model conservation standards for efficiency, and they have been demonstrated to cost from 30 to 50 percent less to heat than homes built to Oregon's current building codes. The pay-back program only applies to homes heated with heat pumps or zonal electric heating systems. (For more information, contact: Michael Tevlin, Portland General Electric Company, 121 S.W. Salmon Street, Portland, Oregon 97204, 503-220-4534.)

Spring chinook returned this year to the Umatilla River Basin in northeastern Oregon for the first time in 60 years, say representatives of the Columbia River Inter-Tribal Fish Commission. The chinook are the first adult returns from young chinook released into headwater tributaries of the river two years ago by the Umatilla Tribe and the Oregon Department of Fish and Wildlife. The tribe has been trying to recover these runs as part of the Columbia River Basin Fish and Wildlife Program.

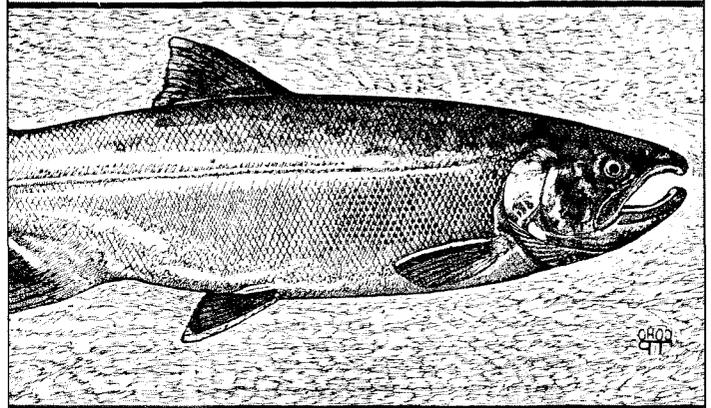
U.S. energy consumers could save more than \$15 billion over the next 25 years using new energy-efficient fluorescent light fixtures called for in a bill passed by the Senate this spring. The bill would require new fluorescent light ballasts—the part of the unit that ignites the bulb—to meet strict energy-efficient standards comparable to those adopted in California, New York, Connecticut, Florida and Massachusetts. A major advantage of the legislation would be manufacturers only having to produce one standard of fixture nationwide. (For more information, contact: Jim Spellman, Colorado Senator Tim Wirth's office, U.S. Senate, Washington, D.C. 20510, 202-224-5852.)

Action on Protected Areas Designations

In April, the Northwest Power Planning Council released for public comment a proposal that would protect roughly 43,000 miles of Northwest streams from future hydroelectric development. The streams contain critical habitat for salmon and steelhead, resident (non-seagoing) fish and other wildlife, and new hydropower projects could cause irreparable harm to this habitat.

The Council published a list of these stream reaches and a draft of the proposal in October 1987. More than 400 individuals and groups commented on this early draft. These comments have been considered in developing the proposal that was released in April.

The Council held public hearings on the proposal in each of the four Northwest states (Idaho, Montana, Oregon and Washington) in May and June. Additional public comment in writing was taken through July 8, 1988. The Council is expected to take final action on the proposal, which would result in amendments to both the Columbia River Basin Fish and Wildlife Program and the Northwest Power Plan, at its August Council meeting in Kalispell, Montana.



CALENDAR

August 10-11 — Northwest Power Planning Council meeting at Cavanaugh's Motor Inn in Kalispell, Montana.

September 26-29 — "Northwest Energy Connections '88," at the Sea Tac Red Lion in Seattle, Washington. Sponsored by Puget Power, in cooperation with the Bonneville Power Administration. For more information: TLA Marketing Services, 10020A Main Street, MS443, Bellevue, Washington 98004, 206-455-9917.

September 14-15 — Northwest Power Planning Council meeting at the Owyhee Plaza Hotel in Boise, Idaho.

October 1 — "Sustainable Energy: From Possibility to Reality," at the Greenwood Inn in Beaverton, Oregon. Sponsored by the Solar Energy Association of Oregon. For 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.

October 24-27 — Fisheries Bio-engineering Symposium at the Columbia River Red Lion in Portland, Oregon. Sponsored by the American Fisheries Society. Co-sponsored by the Northwest Power Planning Council. For more information: Victor Kaczynski, CH₂M Hill, 503-224-9190.

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. 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 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 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

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NORTHWEST ENERGY NEWS

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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.

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COUNCIL PUBLICATIONS ORDER FORM

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

Publications

- 1987 Columbia River Basin Fish and Wildlife Program
- 1986 Northwest Power Plan
- (88-9) Proposed Amendment Regarding Protected Areas
- (88-18) Analysis of the Corps of Engineers Study of Mainstem Bypass Facilities
- (88-19) Supplementation Research Proposed Five-Year Work Plan
Papers Regarding the Technical Update to the 1986 Power Plan
 - (88-2) Plans for a Technical Update to the 1986 Power Plan
 - (88-13) Conservation Resources for the 1988 Power Plan Update
 - (88-14) Cost and Availability of New Generating Resources
 - (88-15) Revised Draft: Economic, Demographic and Fuel Price Assumptions
 - (88-16) Revised Draft Forecast: Demand for Electricity in the Pacific Northwest
 - (88-17) The Role for Conservation in Least-Cost Planning
- Western Electricity Study briefing papers:
 - (87-3) Western System Overview
 - (87-4) Electricity Use in the Western U.S. and Canada
 - (87-7) Existing Generating Resources (draft)
 - (87-13) Future Resources (draft)
 - (87-14) Interregional Transactions
 - (88-3) Load/Resource Balances (draft)

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)

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(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.)

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