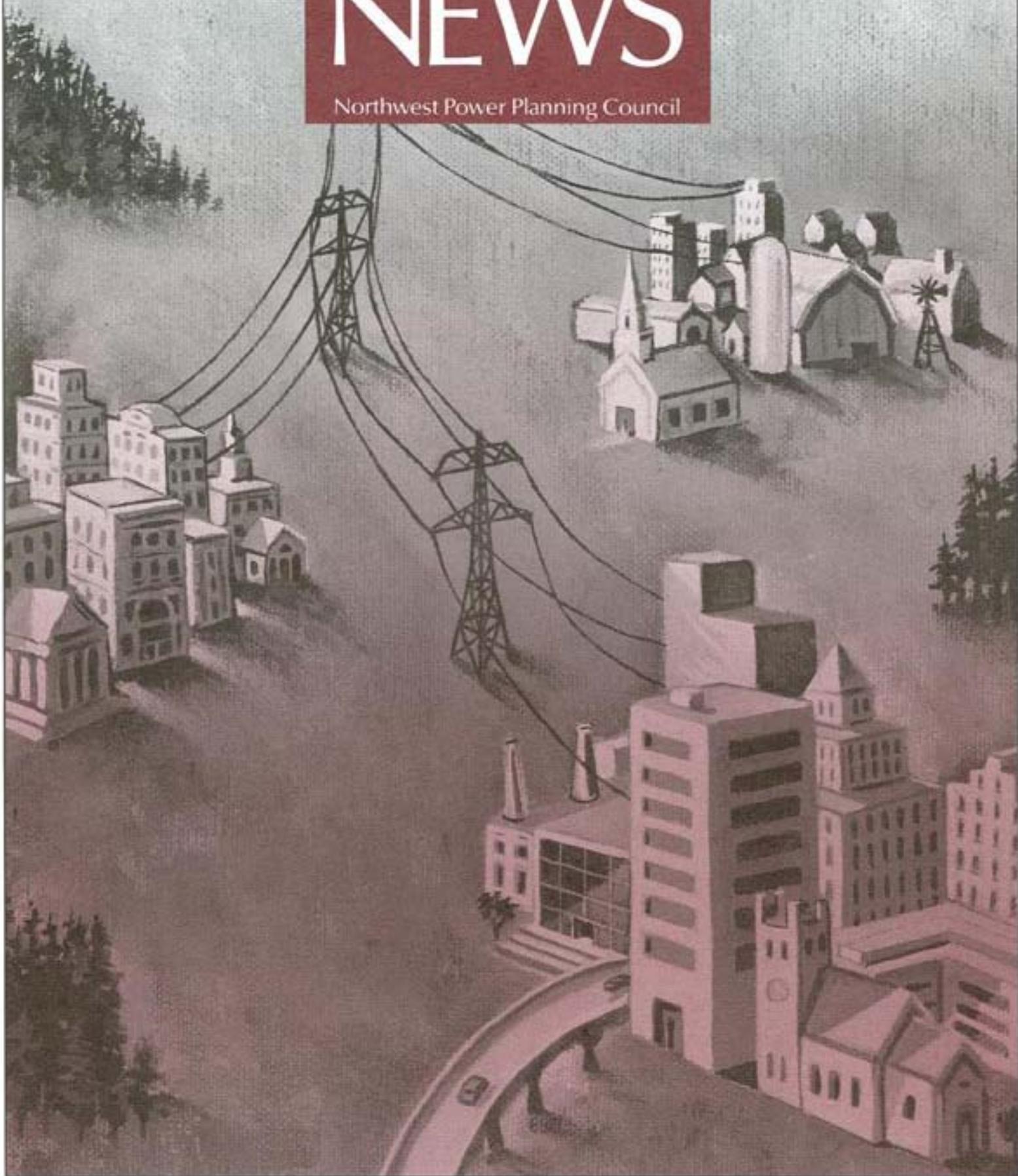


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# NORTHWEST ENERGY NEWS

Northwest Power Planning Council



## EDITOR'S NOTES

*Before the elections in November, "Water Strategist" newsletter out of Claremont, California, asked the two leading presidential candidates to submit for publication their positions on western water policy. What follows are excerpts of the comments by President-elect Bill Clinton. We will return to our regular "Notes From the Chair" in our next issue. The Council's new chairman, Stan Grace, is the subject of this issue's interview, which begins on page 12.*

For both economic and environmental reasons, the Columbia River salmon runs and the river itself must be protected and restored. Environmentally, preserving the salmon runs is about more than simply saving fish. It is also about restoring overall environmental health to the Columbia River. Salmon runs are depleted because the entire river system has been stretched to the breaking point.

Economically, failing to protect these salmon runs today will destroy forever the valuable commercial and recreational fishing industries that depend on the river. As with many issues, we can pay a little now, or a lot later.

Investing in the river's future requires that all activity impacting the river be re-evaluated to ensure the river's long-term economic and environmental viability. Increasing our energy conservation efforts is one aspect of the solution. In addition, agriculture must also make more efficient use of water from the river, and barge traffic must also move more efficiently.

—Arkansas Governor Bill Clinton

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*This issue's cover illustration is by  
Stephen Hayes.*

# Hatfield and Governors Send Strong Signal on Salmon

**Act now on recovery program, or risk losing regional control.**

**U.S.** Senator Mark Hatfield of Oregon said the Pacific Northwest can be proud of the work it has begun in an effort to rebuild Columbia River Basin salmon runs. But this is no time to rest on laurels, he added.

Hatfield spoke at a December field hearing of the Energy and Water Development Subcommittee of the U.S. Senate Appropriations Committee. He convened the Portland hearing to give government agencies and Indian tribes an opportunity to comment on implementation of the Northwest Power Planning Council's Strategy for Salmon, a comprehensive salmon rebuilding program approved by the Council last September after about a year and a half of work. The program includes actions designed to improve salmon survival at every stage of the salmon life cycle.

by John Harrison

**"Those who believe the federal courts will preserve our regional heritage are taking a gamble of monstrous proportions."**

**--Senator Mark O. Hatfield**

Also speaking at the hearing were governors of Oregon, Idaho and Montana, as well as representatives of the governor of Washington, the Power Planning Council, federal land, water and power agencies, and five Indian tribes. It was the third hearing Hatfield has convened since 1990 to focus public attention on the salmon problem and the region's response.

The senator described a number of the region's recent accomplishments. He noted that as a result of the Council's program, water flows for salmon migration have been increased in

both the Snake and Columbia rivers, reservoirs have been lowered to speed fish travel time, harvests of Columbia River salmon in the ocean and in the river have been cut, some 400,000 salmon-eating squawfish have been caught in the river, and



Idaho Senator Larry Craig and Oregon Senator Mark Hatfield face a packed house, including the governors of Montana, Idaho and Oregon, and a representative of Washington's governor.

# The Council's salmon strategy is "not just a smorgasbord of options for government agencies."

--Governor Barbara Roberts, Oregon

barge transportation of juvenile salmon to carry them past the big dams has been improved.

**"R**esults of the Council's program are real, and I believe they will lead to salmon recovery," Hatfield said, but he also noted that there are areas where the region has "fallen short."

Oregon Governor Barbara Roberts said the Council's salmon strategy is "not just a smorgasbord of options for [government] agencies, but a comprehensive plan," adding: "We cannot indulge in selective implementation."

Roberts said Oregon is working to see that screens are installed on water diversions in streams to protect salmon and that river harvest of salmon is reduced — even below levels recommended by the Council. Actions to protect and

rebuild salmon runs are being funded even though the state has a very tight budget, she added.

Idaho Governor Cecil Andrus, who advocates drawing down the reservoirs behind federal dams on the lower Snake River to speed juvenile fish on their way to the ocean, said he preferred a regional solution to the salmon problem. But he did not rule out legal action.

He said he sensed that some federal agencies were reluctant to implement some parts of the Council's salmon plan, and he admonished Hatfield to "keep the big stick in your hand" to be sure the work gets done.

Andrus said the region — and the salmon — can't tolerate further delays.

"I would say to you that the biological clock for the fish is ticking much faster than the federal bureaucracy's clock ticks. So we need to move with deliberate speed," Andrus said.

Montana Governor Stan Stephens said his administration is committed to helping with salmon recovery, even though Montana doesn't have any salmon. Montana contributes about 20 percent of the water in the Columbia system, but salmon never have been able to reach the state.

He said he was concerned that one endangered species could be pitted against another if his state has to give up water to help salmon downstream while fish in Montana suffer. Petitions have been filed to protect bull trout and white sturgeon under the Endangered Species Act, Stephens noted.

**S**almon rebuilding efforts must protect the region's economy as well as its fish, he said. "The salmon recovery plan must have the minimum economic cost. The objective is to protect our fish and wildlife resources, but it's also to ensure a supply of cost-effective electric

energy to the region. A carefully balanced plan is under development, and it must be implemented by all parties. I agree with others who have spoken here that it is time for renewed cooperation between all state agencies, tribes and others in implementing the Council's fish and wildlife



Oregon Governor Barbara Roberts

program," Stephens added.

Curt Smitch, director of the Washington Department of Wildlife, represented Governor Booth Gardner. Smitch also said it is critical that the Council's plan be put into action.

"The most important part of this plan is that the region agreed on it," Smitch said. He said Gardner was "distressed at those who seek to use the courts to challenge one part of this plan over another.

**"T**he region is better off when we work together," Smitch said. "We have done much better in our planning to recover Snake River salmon than on our efforts to recover the northern spotted owl. The history of these two problems clearly shows that the region is substantially better off by coming together and trying to find solutions rather than the finger-pointing and blame that has both characterized and stalemated spotted owl efforts to date."

He said the Council should monitor progress on salmon rebuilding actions, and report to the governors and Congress if work isn't getting done.

Ted Bottiger, vice chairman of the Power Planning Council, concurred with others who said it is critical that actions in the salmon program are carried out quickly. Hatfield agreed, and warned that failure to move



Idaho Governor Cecil Andrus

quickly could end with the river being run by the judiciary. He said the Council's program, developed in cooperation with state and federal agencies, Indian tribes, regional utilities and other interested citizens, should be given a chance to work so that salmon recovery isn't directed by a federal judge.

Hatfield noted that six lawsuits already have been filed in federal court. Drawing on a business analogy, the senator likened the

**"The biological clock for the fish is ticking much faster than the federal bureaucracy's clock ticks."**

**--Governor Cecil Andrus,  
Idaho**

lawsuits to hostile attempts at corporate take-overs.

"In this case, the corporate entity is the regional salmon recovery planning process," he said. "It represents the best possible effort to devise a fair,

equitable plan to recover the species. Few in the corporation are always pleased with the way it operates, but the general consensus is that it represents the most profitable, risk-averse chance for long-term success."

**H**atfield said court battles over salmon likely would lead only to gridlock. "The corporate good that is the Pacific Northwest, which includes all the elements that we believe are important to our way of life, will be compromised and sacrificed for single-interest purposes," he said. "The lawsuits will provide the grist for bitterness and acrimony that will likely survive long after the judge's orders are signed. The region's resources and residents may suffer the consequences for years to come, maybe forever."

The senator said he remains "a firm believer in the regional process," and added: "Those who believe the federal courts will preserve our regional heritage are taking a gamble of monstrous proportions. I pray the odds are against them."

Hatfield also heard from representatives of federal agencies, including the U.S. Army Corps of

# "It is time for renewed cooperation in implementing the Council's fish and wildlife program."

--Governor Stan Stephens,  
Montana



Wilferd Yallup, tribal chairman, Yakima Indian Nation

Engineers, Bonneville Power Administration and Bureau of Reclamation, who said they are committed to implementing the Council's program.

The Bureau of Land Management, U.S. Forest Service and Soil Conservation Service reported on their efforts in response to the Council's salmon recovery program. They indicated there were areas where they may need additional federal appropriations to carry out the work.

Leaders of the Nez Perce, Warm Springs, Umatilla, Yakima and Shoshone-Bannock Indian tribes also testified at the hearing. They said the tribes are taking actions to protect salmon runs, but that not enough is being done around the Columbia Basin to improve salmon spawning and rearing habitat.

"We haven't seen the real problem addressed," said Samuel Penney, chairman of the Nez Perce tribal executive committee.

Elwood Patawa agreed with Penney. Patawa is chairman of the Umatilla tribe's board of trustees. "The Forest Service is supposed to protect salmon habitat, but it isn't being funded to do that," he said.

"We're tired of having our small tribal harvest blamed for the decline of the salmon."

Wilferd Yallup, Yakima tribal chairman, echoed the concern for habitat improvements and harvest restrictions. He said Indian harvest of salmon has been cut steadily since the 1960s. Today, Indian harvests are administered by a federal court.

"All reasonable and necessary actions to restore our salmon must be taken, not just discussed,"

Yallup said. "This must happen before the tribes are asked to restrict their harvest. We are waiting to see changes in federal policies — at the dams, in the habitat, at the hatcheries. Perhaps Chief Kamiakin said it best at the Walla Walla treaty grounds in 1855 when he said, 'I have heard their words, now let them do as they have said.'" 

## "All reasonable and necessary actions to restore our salmon must be taken, not just discussed."

--Wilferd Yallup, tribal chairman,  
Yakima Indian Nation

# SACRAMENTO BASIN

# Blues

By John Harrison

## A sad, old saga in search of a new refrain.

**T**his is the story of a great river and its salmon.

A hundred years ago, before it was dammed for power and irrigation, the river gathered strength from dozens of tributaries and rushed down clear and cold from pristine mountains to the Pacific Ocean.

It was a prodigious salmon river. Pioneers of the 1850s passed down stories about salmon runs that filled the river from shore to shore. Canneries packed 5 million pounds of its salmon a year between 1873 and 1910.

Then came wave after wave of settlers. Railroad construction, water diversions, siltation and pollution from mining began to take a toll on salmon spawning and rearing habitat.

Today, it is a tamed and overappropriated river. Its salmon runs have declined. State and federal fish agencies wrote a plan to help the salmon, but it couldn't be put into action fast enough to help the fish. Then one of the river's salmon runs was declared an endangered species, and the federal government stepped in, under the authority of the Endangered Species Act of 1973.

### Sound familiar?

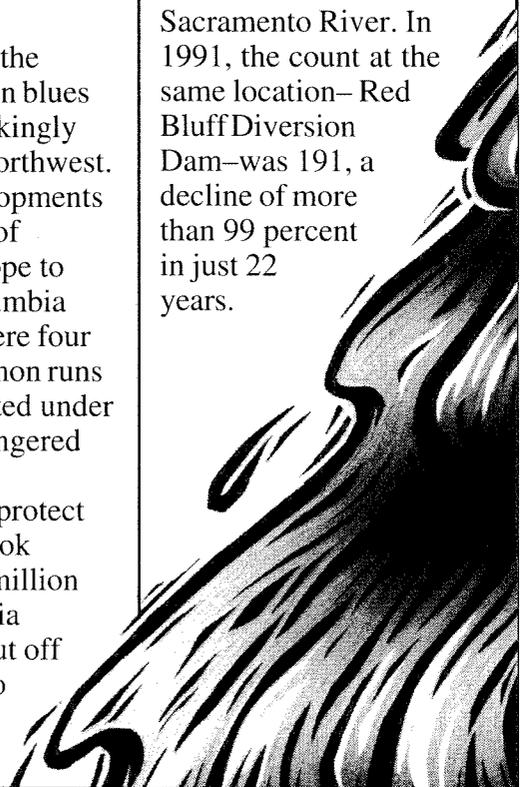
This river is not the Columbia. It's the Sacramento, in Northern California.

Set to music, the Sacramento Basin blues would sound strikingly familiar in the Northwest. But recent developments are just the sort of nightmare we hope to avoid in the Columbia River Basin, where four Snake River salmon runs are being protected under the federal Endangered Species Act.

This year, to protect winter-run chinook salmon, some 1 million acres of California farmland were cut off from Sacramento River irrigation water.

### What went wrong?

In 1969, 117,808 winter chinook salmon were counted in the Sacramento River. In 1991, the count at the same location—Red Bluff Diversion Dam—was 191, a decline of more than 99 percent in just 22 years.



**M**any factors contributed. Spawning and rearing habitat was modified or lost. Dams and water diversions of the U.S. Bureau of Reclamation's 3-million-acre Central Valley Project blocked juvenile salmon migrating to the ocean and adult fish returning to spawn. Predation by other fish played a part, and so did water pollution.

In November 1985, California and Nevada chapters of the American Fisheries Society petitioned the National Marine Fisheries Service to declare the winter run a threatened species. In response, state and federal fish and water agencies developed the "Ten-Point Restoration Plan and Cooperative Agreement" for salmon recovery. The plan called for habitat improvements, water temperature control, better fish passage at dams, ocean harvest reductions, predator controls — familiar actions to those who are following salmon rebuilding efforts in the Columbia River Basin.

But mere words on paper don't rebuild salmon runs. Action on the Ten-Point Plan was slow, and the winter run's decline continued.

Conservationists were angered by apparent insensitivity on the part of government agencies that were supposed to be

helping the fish. This, combined with steady bad news from the fish-counting station near Red Bluff, fueled a call from conservationists

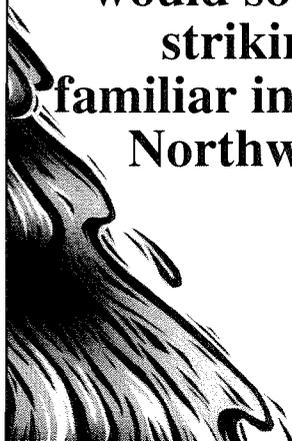
for more aggressive action by the National Marine Fisheries Service.

Petitions were filed to protect the winter run, and in response, the Fisheries Service appointed a team to devise a new recovery plan under the Endangered Species Act, stripping any control of the issue from California state and local governments.

For advocates of local or regional control of salmon rebuilding, it's a frightening scenario. For Central Valley Project farmers, it could mean economic disaster. For the Pacific Northwest, it's a warning.

**"T**he lesson from California is clear," says Ted Bottiger of Washington, vice-chairman of the Northwest Power Planning Council. "Not only do we need a regional plan that will protect salmon runs, but the region must work together to see that it is imple-

## Set to music, the Sacramento Basin blues would sound strikingly familiar in the Northwest.



mented, and all river users must contribute."

Last September, after more than a year of work, the Council adopted such a plan for the Columbia

River Basin. The Fisheries Service, which is preparing recovery plans for threatened runs of Snake River salmon, indicated it would use the Council's program as a foundation for its plans.

"Ours is a truly regional plan, representing the wishes of the four Northwest governors and reflecting wide-ranging public comments," Bottiger said. "A plan developed this way has a better chance of being implemented successfully than one developed with less public involvement."

### The Sacramento experience

It should come as no surprise that California's Ten-Point Plan for winter chinook salmon is not universally popular, and there is divided opinion about how thoroughly it has been implemented.

The National Marine Fisheries Service (NMFS) reviewed the plan after it was developed and declared it adequate. Although chal-

lenged in court, the decision stood.

On December 9, 1988, the Service noted in the Federal Register: "NMFS reaffirms its determination that the actions of state and federal agencies to restore the winter run of chinook salmon and its habitat adequately address the threats to the population, and that the population is not likely to become endangered throughout all or a significant part of its range in the foreseeable future."

**L**ess than one year later — spring 1989 — the winter run plummeted to 547 fish.

Faced with a lawsuit brought earlier by fish conservation groups to force a listing of the winter run under the Endangered Species Act, the Fisheries Service announced its intention to list the fish in August of that year.

Listing the winter run as a threatened species, which became final in November 1990, led to the creation of a Fisheries Service team to develop a recovery plan to replace the Ten-Point Plan. But again, there was little action. By Fall 1992, the Fisheries Service recovery team had met only once. A draft recovery plan is expected by July 1993, but insiders say that schedule is optimistic.

## California dreaming

In the Northwest, the Sacramento experience hasn't gone unnoticed. Last October, Washington Governor Booth Gardner told the Power Planning Council at a meeting in Olympia: "Look at what has happened to the Sacramento River winter chinook salmon, where they had a good 10-point program for recovery that never got implemented. The result now is chaos, bitterness and disaster. And it happened because no one rode herd on the agencies that ought to have taken action. We cannot be lulled into that fate."

But Jim Lecky sees it differently. He's the protected species coordinator at the Fisheries Service's Pacific Southwest office in Long Beach, California. The winter run is his responsibility.

"The Ten-Point Plan was implemented," he said. "It probably would have done a lot more good if we'd had some rain to help out."

**L**ecky blames drought and over appropriation of Sacramento River water for the salmon's problem. Politics, pollution and reclamation law

contributed, he says.

For example, the Ten-Point Plan called for a device at Shasta Dam to control the temperature of water released during salmon spawning periods downstream. But the device never was funded by Congress. It's authorized in legislation reforming the Central Valley Project — the bill was signed by President Bush in October — but no money has been appropriated.

Pollution in the Sacramento hurt salmon and sank another action item in the Ten-Point Plan — to reduce predation of salmon by squawfish. Plans for commercial sales of squawfish — a Southeast Asian market

## Farmers got their water year after year, despite lingering drought and devastated salmon runs.



was envisioned — fell apart when it was discovered the fish were tainted with dioxin from paper mill effluent.

Finally, water law as embodied in the

Central Valley Project, which dates to 1935, gave no consideration to the needs of salmon. Farmers got their water year after year, despite lingering drought and devastated salmon runs, until this year, when the Endangered Species Act forced the federal Bureau of Reclamation to reserve water for salmon. However, a major revamping is under way. Last year's Central Valley Project reform legislation obligates the Bureau to give equal consideration to fish and agriculture.

Meanwhile, major parts of the Ten-Point Plan have been implemented, Lecky says. Gates at Red Bluff Diversion Dam were raised to release water between December and April to help adult and juvenile fish pass. A hatchery program was developed. Attempts were made to restore spawning and rearing habitat and to control water temperature. And salmon harvests were restricted.

**B**ut the plan doesn't set schedules or deadlines for action. Compliance, in essence, is voluntary—a point critics pounce on.

"California's plan was a handshake deal all around. It was not enforceable in any way," maintains Bill Kier, a fisheries biologist who once worked for the California Department of Fish and Game and now has a consulting business in Sausalito. "It was an insidious way of trying to get around the Endangered Species Act. There was simply no way to force the state and federal water

agencies to implement the plan adequately."

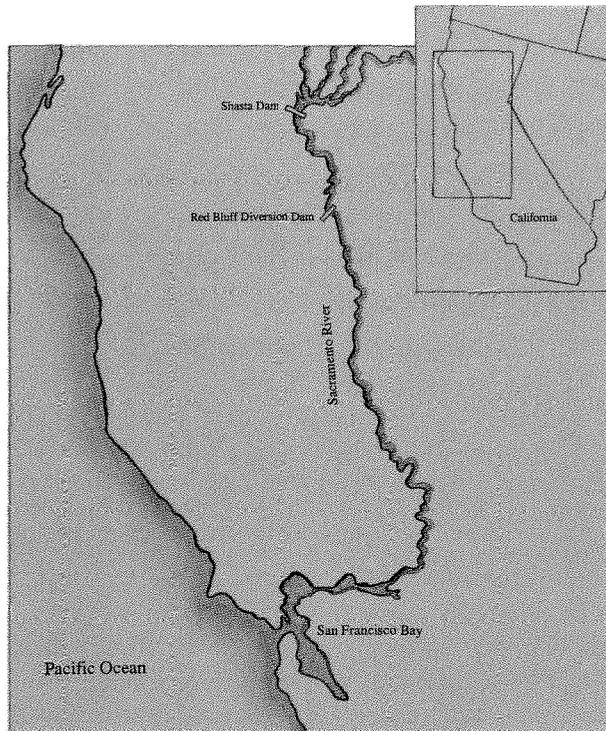


Implementation was spotty, at best — and not entirely because of bureaucratic inertia. Little was known about winter chinook hatchery production, for example, so early attempts were unsuccessful. But there was a substantial body of knowledge about the salmon's habitat requirements, and conservationists say habitat improvements should have proceeded at a much faster pace.

**T**he run had been declining steadily for more than 15 years: 53,000 fish in 1971, 35,000 in 1976, 20,000 in 1981 and then around 2,000 fish every year after that until 1989, when the number plummeted.

“It was the 1989 count that knocked the props out from the plan, but it was the Central Valley Project that drove the winter run into the ground,” Kier asserts. “If the Bureau had been directed years ago by its enabling legislation to give fish equal status for water with federally subsidized cotton farmers, the fish wouldn't have been destroyed.”

There is a bit of good news, however. The 1992 winter run numbered 1,180 fish. They are the progeny of the disastrous 1989 run, which numbered just 547.



## California's Sacramento River Basin

Lecky, of the Fisheries Service, attributes this modest success to luck and good management, and he is hopeful the run will continue to rebuild. While he is less optimistic about returns in 1993 and 1994, the 1995 run could be strong. This is because about 11,000 juvenile winter-run salmon were released into the river in 1992, the largest release to date from the hatchery program originally envisioned in the Ten-Point Plan.

### A lesson for the Northwest

Kier says the Sacramento River experience is instructional for those who hope to rebuild Columbia River Basin salmon runs. He said regional consensus on recovery measures is preferable to the California experience, which has been an almost nonstop court battle.

“Look, none of the reform (in Sacramento River water allocation) was initiated by government,” he says. “It's all

come under the threat of lawsuit, which none of us can afford. You know, it was lawyers who named California the Golden State.”

And there was the authority — some would say threat — implicit in the federal Endangered Species Act. “Up until the federal listing, the Bureau of Reclamation could say it was doing all it could under the Ten-Point Plan,” Kier argues. “The pedal didn't hit the metal until about one and a half years ago, when the Endangered Species Act compelled the Fisheries Service to move.”

That's a point the Power Council's Bottiger likes to emphasize. “Invoking the Endangered Species Act gets people moving,” he says. “In our case, we hope we are moving in unison with the Fisheries Service. Our regional response to the salmon problem should help the Northwest avoid the sort of Draconian measures taking place in California.”



# Who Gets Hurt?

Fishers were the first to suffer from efforts to protect Sacramento River winter-run chinook salmon, and now farmers are suffering, too. San Francisco Bay ports may be next.

The salmon were placed on the federal endangered species list in November 1990. The following February, the ocean sport fishing season was delayed two weeks to ensure that no winter-run salmon would be taken. This cost the area's charter boat operators — there are about 50 — about \$10,000 each.

Since then, sport and commercial fishing have been cut further, but Sacramento River water continued to flow at nearly normal levels to farms in the state's 3-million-acre Central Valley Project. Until last February.

In a stunning blow to farmers, the U.S. Bureau of Reclamation, which builds and operates federal irrigation projects, withheld Central Valley Project water to 1 million acres of farmland to hold more water in the Sacramento River for salmon.

Then, in the fall, hard times got worse — for farmers and for salmon.

**I**n September, state biologists reported a dramatic decline in Sacramento River fall chinooks, the most numerous of the river's four distinct salmon runs. Drought and Central Valley Project water diversions were blamed for the decline. Conservationists and commercial fishers, who consistently have acted in unison in the salmon crisis, sued the Bureau of Reclamation. They are seeking a federal court order that would force the agency to make more water available for salmon.

For farmers, that's just more bad news. "We've had 20 years of increasing demand for water and decreasing water supplies because of court decisions and drought," maintains Jason Peltier, who directs the Central Valley Project Water Association in Sacramento. The Association represents customers of the federal project.

But despite drought and water delivery cutbacks to protect salmon, farmers are raising as much alfalfa hay this year as they did last year, according to an article in *The Sacramento Bee*. To compensate for the loss of Sacramento River irrigation water, farmers are pumping more water out of the ground. In late 1992, some 25,000 wells in the Central Valley Project were being redrilled, as farmers dug deeper and deeper for precious water. In some places, the water table is being depleted rapidly, and ground is sinking as a result.

**O**ther farmers are leaving fields fallow and switching from large plantings of water-intensive crops, such as rice and cotton, to smaller plantings of crops with higher cash value, such as vegetables and melons. But the resulting oversupply of vegetables and fruits has forced prices down, depressing the market and further worsening conditions for farmers.

But Jim Lecky says farmers' complaints amount to scare tactics. Lecky is the protected species coordinator at the Pacific Southwest office of the National Marine Fisheries Service in Long Beach, California. Sacramento winter chinook are his responsibility under the Endangered Species Act.

"Our economic analysis shows that if the [Central Valley Project] system were run to benefit fish, it would more than make up for economic impacts through increased hydroelectricity sales and other benefits," he maintains.

Like fishers and farmers, ports could also feel the impact of salmon recovery efforts. The Fisheries Service is concerned about the impact of dredging in San Francisco Bay and in December was preparing to declare the bay part of the critical habitat for winter-run salmon. Earlier in 1992, the Port of San Francisco lost one of its largest customers because the port couldn't guarantee adequate water depth at its container terminal.

But the potential impact of Sacramento salmon recovery efforts goes far beyond industry. The Central Valley Project provides water to 4 million California households.

"A lot of that water goes to Southern California, and if the Endangered Species Act (ESA) means those people don't get their water, then I think you're going to see the ESA change in a way a lot of us think it should change," Peltier suggested. "We'll get away from the focus on farmers and loggers, and we'll talk about the impact on communities."

—JH

# Chairman Stan GRACE

New Council chairman abides by old western values.

*To hear Stan Grace speak, which can be a rare experience as he is a man of few words, is to hear the echo of values held most dear in another era. Grace, as his friends are quick to point out, is "a true Westerner." "Not a farmer," explains Ron Wilkerson, manager of the Western Montana Electric Generation and Transmission Cooperative, Inc.. "Stan was a cowboy and rancher."*

*This is an important distinction in Montana, where cowboys like Stan's father Tony still ran herds from horseback until the Second World War. Cowboys are Montana's special heroes. They exemplify openness and freedom—both the wide-open spaces and the simple virtue of being able to trust people in a less complicated time. Cowboys were the embodiment of common sense and self reliance. They were practical people who lived by their wits.*

*Stan Grace, the Northwest Power Planning*

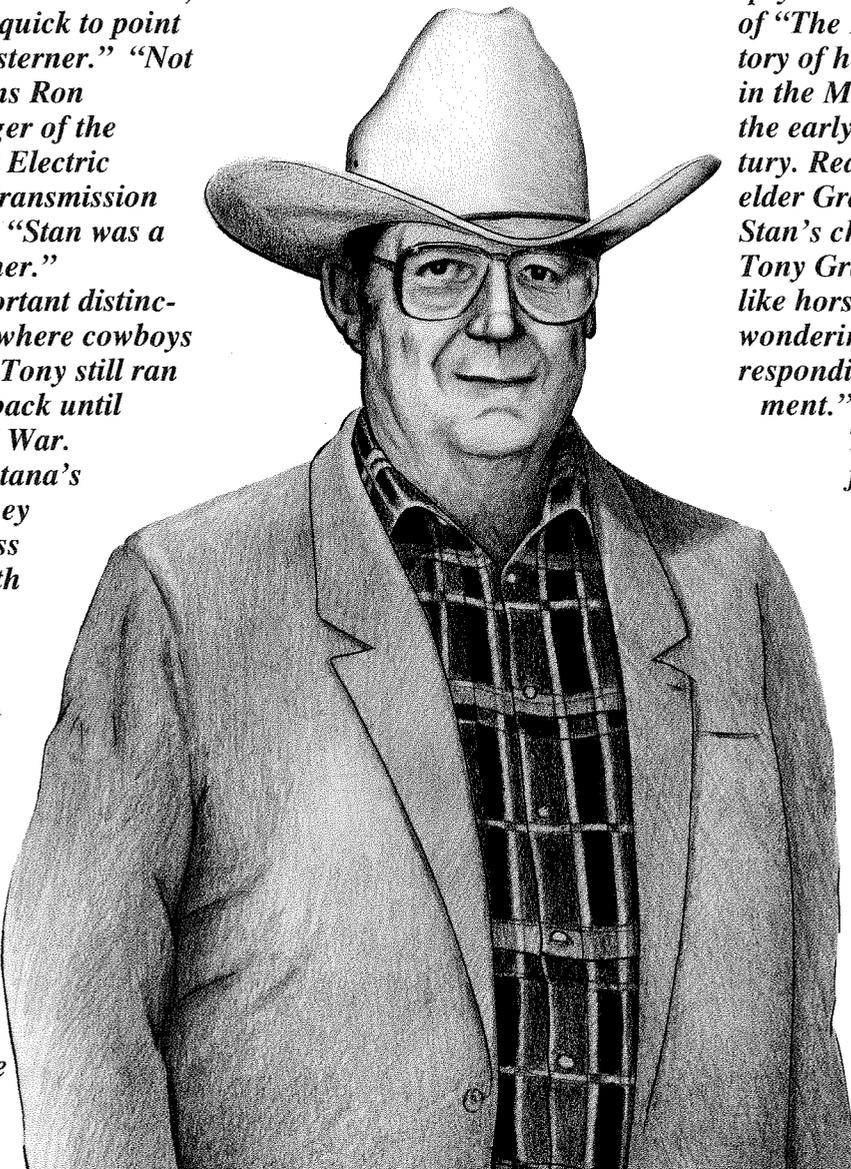
with Carlotta Collette

*Council's new chairman, was born and raised respecting those characteristics.*

*Stan's father, who is still spry at 102, is one of the heroes of "The Last Cowboy," a history of horseback cattle herding in the Montana "Big Open" in the early decades of this century. Reading the wisdom of the elder Grace, it is easy to see how Stan's character was shaped. Tony Grace says, "People are like horses: all different, but all wondering what's going on and responding to the right treatment."*

*Tony Grace retired from the open range when he was about 40, to marry and raise a family. He bought his own ranch in the West Yellowstone area of Montana. That's where Stan grew up.*

*Like his father, Stan took naturally to horses and to being out of doors rather than behind a desk. For four years he ran a dude ranch. At another time he broke Appaloosa horses at a ranch in*



the foothills of the Crazy Mountains.

He says he was a "hunter, trader, trapper, scout and guide, shepherd, cook and camp tender," and he's only stretching the truth a little.

In 1952, he entered the Navy "to see the world." Wryly, he says, "I saw Texas, Oklahoma, Tennessee and California."

After the service, he went to school in Bozeman at Montana State University, where he studied animal husbandry. But the jobs he faced after school were all "with the government." He didn't want to work for the government, so he turned instead to operating heavy equipment, first in construction and then in logging.

For almost 20 years, Stan ran a logging operation in western Montana, an experience that sometimes puts him on the opposite side from environmentalists in debates over cutting old trees and sparing streamside habitat. "I worked for 20 years protecting habitat as a logger," he argues.

"Logging at one time caused some problems," he says, "but those days are gone. We're beyond that now."

In 1983, Grace was elected to the board of the Ravalli County Electric Cooperative, Inc., in Corvallis, Montana. That's what first got him interested in the Northwest Power Planning Council. As he explains it, "At that time, the Council was coming out with threats that there would be a surcharge" on electricity purchased from the Bonneville Power Administration in communities that didn't adopt the Council's model conservation standards for new, electrically heated homes.

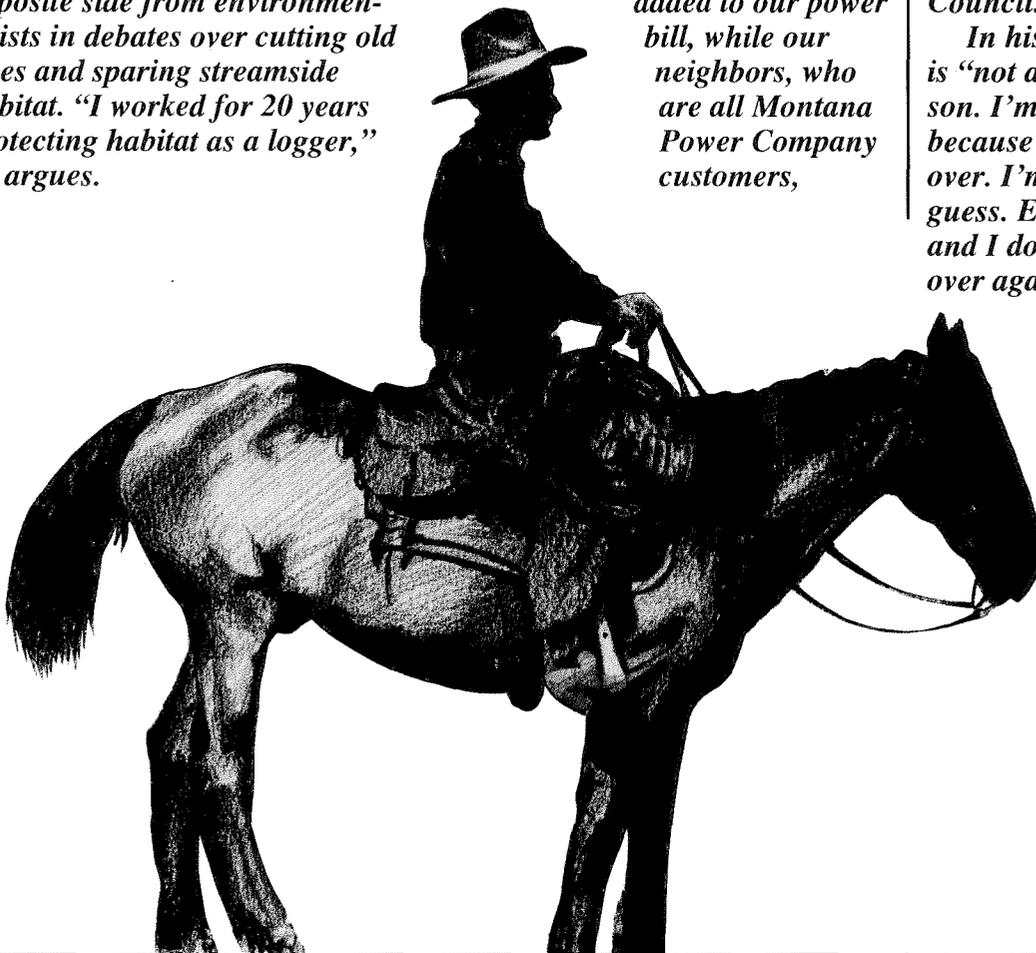
"I thought it was much easier to disagree with the Council than it was to go home and explain to my wife why we had 10-percent added to our power bill, while our neighbors, who are all Montana Power Company customers,

wouldn't have." (Montana Power doesn't buy its electricity from Bonneville, so it would have been exempt from any surcharge.)

Grace began to comment on behalf of rural Montanans and small utilities at Council proceedings. One thing led to another. Soon after Montana elected Stan Stephens as governor in 1988, Stephens appointed Grace to serve on the Council.

He has since earned the respect of his constituency, which he sees as broader than just Ravalli Electric, incorporating both eastern and western Montanans. He is viewed widely as a thoughtful man with "a deep understanding of human nature." He is seen as someone who "keeps his own counsel...sensible and pragmatic...a strong element in the ideological center of the Council."

In his own words, he says he is "not a good 'sound-bite' person. I'm not good at interviews because I want to think things over. I'm a little cautious, I guess. Either that or I'm lazy, and I don't want to have to do it over again."



**Q.** *The Council has been saying, in its power plan and more recently in its Strategy for Salmon, that now is the time for the region to take action to bring into balance our use of natural resources. As the Council's new chair, what are your priorities?*

We've worked hard the last few years just dealing with the planning. But plans are just theories about how to reach a goal. They don't guarantee results. I would like to try to work toward meeting those goals. I come from a practical background. I understand that there is quite a gap between the theory of any one thing and the practical application of that theory. You can be idealistically and theoretically correct and practically stupid, unless you can span that gap.

I would like to see us start enhancing the Council's credibility with the implementing agencies, so we can get their cooperation not just in developing, but also in implementing the Council's plans, both the power plan, and the fish and wildlife program. I think it's important that we get away from some of the divisiveness we've had and now try to implement those plans.

To get to the goal, and this comes from my having been a logging manager and rancher, I've learned you've got to take the best talent and cooperation that's available to you and make good use of it. I think you should put parameters on activities and give people a goal, and then give them good information and let them work toward that goal. I think if you give good people good information, they'll usually make good choices.

I can go back to a simple old country-boy analogy. When you

**I understand that there is quite a gap between the theory of any one thing and the practical application of that theory.**

herd sheep or move livestock, you decide where you want them to go, and then you move them in that way in a firm but gentle manner. Let them pick their course, but keep in mind that you are moving them toward that point.

Now if you get real excited about it and send the dogs in to them or try to drive them in a hurry or prescribe every step for them, you are either doing something that is impossible to do, or you scatter them so bad that you use all the energy that you would have needed to get them there just to round them up and head them in that direction again.

I think you have to recognize that life is dynamic, and society's needs and desires are constantly changing. I'm not as concerned

about instigating that change as I am about recognizing it and helping to provide for an orderly transition.

New ideas and directions need visibility to be marketed, but once they are illuminated, their degree of acceptance depends on their reasonableness and their practical ability to meet needs.

**Q.** *What are some of the changes that you see as necessary now?*

I think, as we've been saying, that it is a time for action. But I don't see an insurmountable problem on the power side of things. There are a lot more resource offers out there than anybody needs right now.

**Q.** *But a lot of that is gas-fired. Do you anticipate future problems with everyone turning to natural gas?*

Yes, I feel a little uneasy. Gas could come back to haunt us. Gas is the darling right now because it's available and the price is right. It is relatively cheap to build a plant and easy to site it. It is also relatively sound environmentally.

But I think we have to look at it practically. There is only so much fossil fuel. There is a limit. In our lifetime, we may never reach it, but there is a limit. That is why I think the future is in renewables, as well as nuclear.

One day, I think, we'll perfect ways to manage nuclear waste and handle it, and be able to use that energy. Other countries are using nuclear power.

**Q.** *Do you think the region can secure the 1,500 megawatts of energy savings we're shooting for by the end of the century?*

I think we can if we don't alienate people. If we work to make sure utilities aren't hurt by the effort. They are going to resist if it is not cost-effective for them.

When the Council first came out with conservation, it was almost like a new-found religion. From the standpoint of the utilities, it would have been easier to have sold it as a practical and cost-effective means of obtaining more electrical energy. But to conjure almost a religious fervor about this thing turned a lot of us off.

Conservation didn't fit us [Ravalli Electric Co-op] like it did a growing utility. It actually cut our revenues if we entered into it.

That's where the Council had real problems with many utilities. We're going to have to work through those problems.

**Q.** *You mentioned renewable energy supplies. Tell me more about your attitudes about renewables. What do you think of harnessing the energy from wind, the sun or geothermal?*

I think there is hope for all of those as technologies are improved, but again, they have to be brought on not as a religious experience, but as a practical means of obtaining energy. I don't believe, frankly, you could site enough windmills in the country to take care of all the future energy needs with wind.

The big problem we have in Montana is

transmission. I'd like to see us address transmission and plan for better east-west ties. It will make it more efficient for everyone, north-south and east-west, if we've got better transmission ties, and future capacity shortages could be alleviated.

**Q.** *Do you feel that wind is one of the biggest resources Montana can contribute?*

Not as big as coal. Coal can provide a larger and more reliable resource, if society chooses to use it. Wind is available and environmentally attractive unless you live where it is sited.

Reliability remains a problem.



**Q.** *That brings up the issue of balancing environmental concerns with economic growth and energy needs.*

I wish I knew how to balance them. I don't think society as a whole is willing to forego the energy advantages we have. Few are really willing to forego the uses of the Columbia River, and yet there is a limited resource there. We have to be a pretty cautious and deliberative body to try to come up with the proper balance.

What we're here for, in my mind, is to accommodate the Northwest Power Act. To try to bring about the charges of the Act. And that's one of them, to balance the needs of the environment along with the needs of the power system. People are going to have to be willing to make some choices. Can we conserve power? Can we do with fewer generating plants? What are we willing to forego? What sort of environmental quality will we choose?

**Q.** *The Council's work this past year on the Strategy for Salmon illustrated some of the difficult choices that must be made to save the salmon runs. How do you feel about the Council's salmon program now?*

I still have concerns about our fish and wildlife program. We lack the hard knowledge about the salmon that we had in forming the power plan. We've still got emotion and politics mixed up in certain measures, and we don't have good, solid evidence of their benefits.

Some say we can't pick and choose among all of these measures. We have to do them all. That's nonsense. We may have to

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balance.**

consider them all to see what really works, but we don't have to continue implementing them if they don't work. If some measures are not cost-effective, if they are not providing fish, then why should we keep implementing them? Out of penance?

**Q.** *How do you propose we get good evidence on what will work?*

I really think we're going to gain a lot of knowledge from the National Marine Fisheries Service recovery team for the endangered Snake River salmon. I think they are going to give us good insights. They don't have the political pressure we have on the Council. We need to continue to cooperate closely with them and complement their efforts with ours.

I think our call for certain scientific review groups on certain things will help, also.

**Q.** *How about the next program amendments—for wildlife and resident (non-seagoing) fish? What kinds of issues do you see there?*

When we start deliberating on resident fish, we're going to run into some real problems between resident fish and anadromous [ocean-migrating] fish, and what's good for both of them. If you are on the coast or in the I-5 corridor, and you're concerned about anadromous fish, and you're concerned about power, you've got different concerns than we have in this part of the country where we're net exporters of power, and we don't have salmon.

I think we'll always have that difference. When you get inland in Washington and Oregon, they also have a concern about resident fish, the same as we do in Montana. Again, we've got to go for balance. There is only so much water.

**Q.** *Tell me a little bit about your sense of what the Council does; the magnitude of the responsibility.*

It is a tremendous responsibility from the standpoint of the effect we can have on the Bonneville Power Administration and the whole Pacific Northwest power system, as well as the fish and wildlife program. We're setting the directions for the future. Hopefully, we won't make a lot of mistakes, and good judgment will prevail in our decisions. 

*"The city is an excellent laboratory in which to test our ability to thrive—or at least survive—in the new age."*

—David Morris,  
in "Self-Reliant Cities"

# LOCAL HEROES

by Carlotta Collette

**S**eventeen years ago, the city of Seattle, Washington, released its energy conservation report called "Energy 1990." One outcome of the report was the city's decision to not allow its municipal utility to participate in the Washington Public Power

Supply System's nuclear power plant construction program. It was a decision that saved Seattle's citizens millions of dollars.

More than a dozen years ago, in 1979, Portland, Oregon, became the first municipality in the United States to develop a detailed citywide plan to cut its energy use. The city plan involved

developing relationships with utilities to carry energy saving programs to community households. It encouraged public education on energy use and ways to reduce that use. It mandated homes having certain levels of insulation and other energy saving measures before they could be sold. It included founding

## Northwest cities and towns work together to save energy.

Portland Energy Conservation, Inc., which operated weatherization programs to help city residents comply with new city energy policies. That organization was spun off by the city as a private non-profit corporation that now works with utilities across the nation.

In a flier circulated when Portland's plan was adopted, city officials explained why it was important: "If we each had our own supply of energy, it wouldn't matter that you conserved, and I didn't. But we share a common supply. When I waste energy, you pay, too, because we both bear the cost of new supplies." By 1979, the cost of new supplies of electricity in the Northwest was beginning the climb that would culminate in rate hikes of more than 500 percent by the early 1980s. The nuclear power plant construction effort Seattle had abandoned was taking its toll on the rest of the region.

It was largely because of Seattle and Portland's experience, and that of other energy-conscious cities in the region, that the

**"If we each had our own supply of energy, it wouldn't matter that you conserved, and I didn't. But we share a common supply."**

*--Portland Energy Plan, 1979*

Northwest Power Act of 1980 was expanded to include tasks and funding for local governments to participate in the region's move toward efficiency. These local governments had already proven that they could be leaders in the Northwest's re-examination of its energy future.

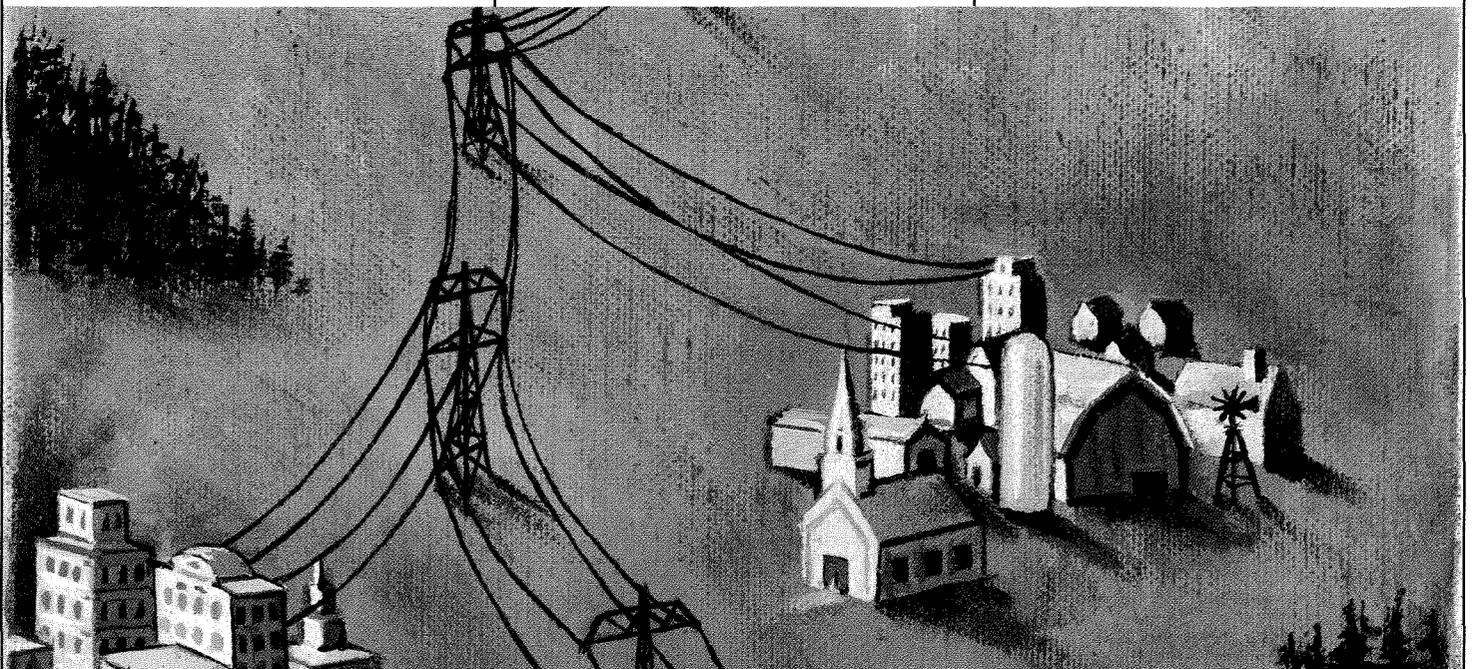
They could enact energy saving building codes. They could decide whether new power plants would be sited in their communities. They could influence energy education in their schools. And

they were powerful allies with utilities and others intent on maintaining an efficient, reliable and economical power system.

To help coordinate the work of cities and counties promoting more effective use of energy, the Bonneville Power Administration was asked to fund an energy coordinator to be attached to local government associations in each Northwest state. Each state's local government association formed an energy committee, with membership that included mayors, council members and commissioners.

For its part, the Power Planning Council created a staff position to serve as liaison among the local government associations.

Local government energy coordinators made their first priority the adoption of state and local energy building codes based on the Council's model conservation standards, which are now known collectively as the Northwest Energy Code.



The coordinators and the government bodies they work with have been successful. Since 1983, when the Council released its first power plan, which incorporated the model conservation standards, more than 85 percent of the electrically heated new construction in the Pacific Northwest has been brought under the efficiency mandate. The city of Tacoma, Washington, was the first to adopt the standards, in 1984.

By 1992, both Oregon and Washington had adopted state-wide residential building codes that meet the rigorous standards. An additional 46 cities and counties in Idaho and Montana have also signed on.

In 1991, when the Council adopted its latest Northwest Power Plan, local governments played a key role in the plan's development. The four local government energy coordinators helped write actions into the plan for their communities to carry out.

The plan notes that state and local governments must participate "if the region is going to be

**With better building codes in place or in the works throughout most of the region, what's left for Northwest communities to accomplish?**

successful in acquiring the conservation resources needed by the turn of this century... State and local governments have the ability to mobilize businesses and citizens throughout the region."

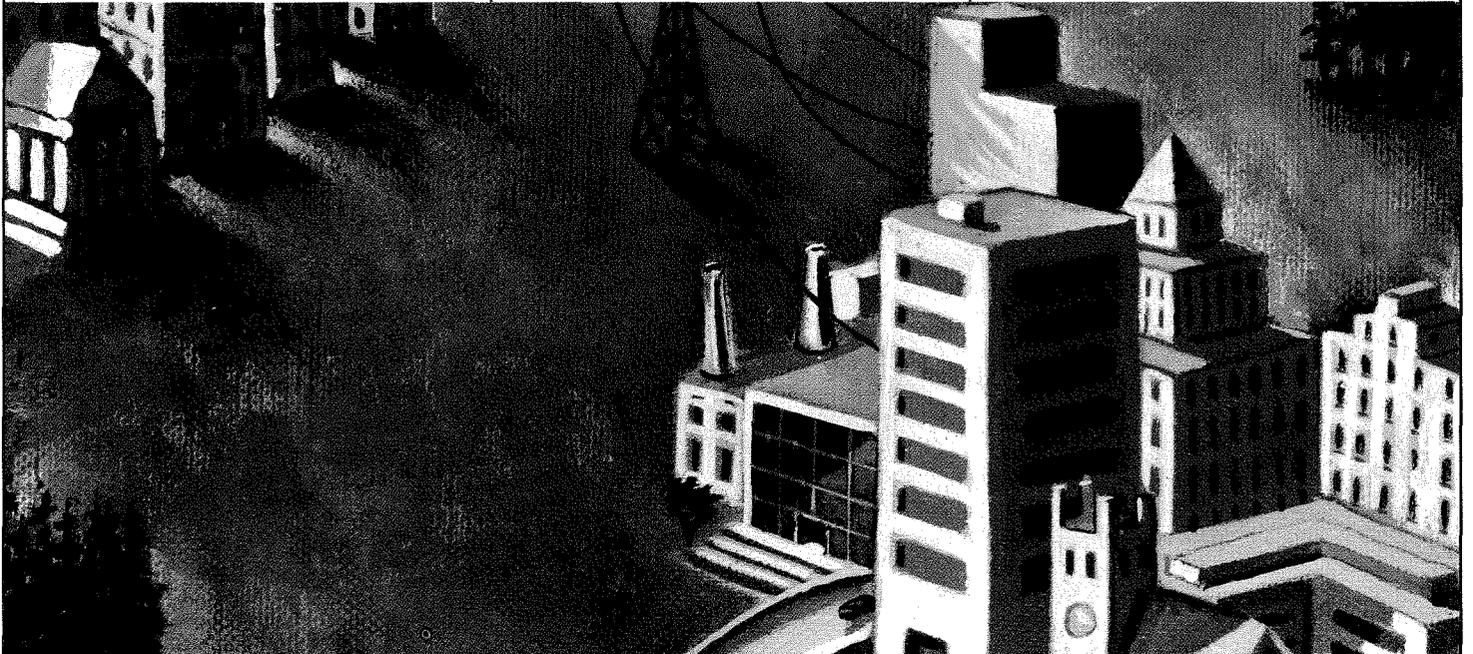
But with better building codes in place or in the works throughout most of the region, what's left for Northwest communities to accomplish? Plenty.

In October, members of the Northwest's four local government energy committees met together for the first time to draft

a new action list. Participants included mayors, city council members, county commissioners and appointed committee members from Idaho, Montana, Oregon and Washington. They were brought together and marshaled in their planning efforts by their local government energy committee coordinators: Deni Hoehne of Idaho, Tom Marvin of Montana, Jane Cummins of Oregon and Mike McCourt of Washington.

The initial challenge was just getting them away from their busy schedules. "We wanted to give them something extra," explains Deni Hoehne. "We needed to offer them something they could use back home, whether they were dealing with energy issues or anything else."

The local government coordinators, otherwise known as "the Gang of Four," decided to obtain the services of a professional who could teach participants basic communication skills under the guise of getting them "energized." Additional inspiration was



provided by two of the West's most articulate efficiency advocates—Ralph Cavanagh, from the Natural Resources Defense Council, and K.C. Golden, from the Northwest Conservation Act Coalition—and other regional energy experts.

Golden and Cavanagh echoed each other in appealing to the gathered officials to lead the region by taking action to help save electricity. Cavanagh noted, "With you, we have some chance of reaching the Council's conservation objectives. Without you, we have none." Golden stressed the fact that the kinds of actions called for in the Council's power plan require "about 6 million individual decisions."



his region's cities, states and counties were well represented at the gathering. At least 30 individual decision-makers with constituencies that include most

Northwesterners heard the challenge and accepted it. Some of their communities had already become models of community-based energy conservation.

Jerome, Idaho, for example, has its Jerome Conservation Partnership Project, which promotes both energy and water efficiency. City officials are working with the Idaho Power Company, the public schools and the state Department of Water Resources to educate the community, cut water use (a priority where irrigation and municipal pumping can be very costly) and save energy.

In Montana, where local governments must have state approval to go beyond state building standards, the city of Missoula appealed to the state and was approved for adoption of the Northwest Energy Code.

In Oregon, several cities have followed Portland in becoming far more energy conscious than just a decade ago. Along with their energy saving efforts, more than three dozen communities in this arguably unsunny state have adopted solar access ordinances to protect future home builders' right to sunlight on their structures.

Washington's city of Ellensburg has been working with the State Energy Office, other state agencies and the Bonneville

Power Administration in a pilot project to map out ways for conservation to influence the city's economic development. More than 85 percent of the town's residences, and most commercial and industrial enterprises have been made more efficient.

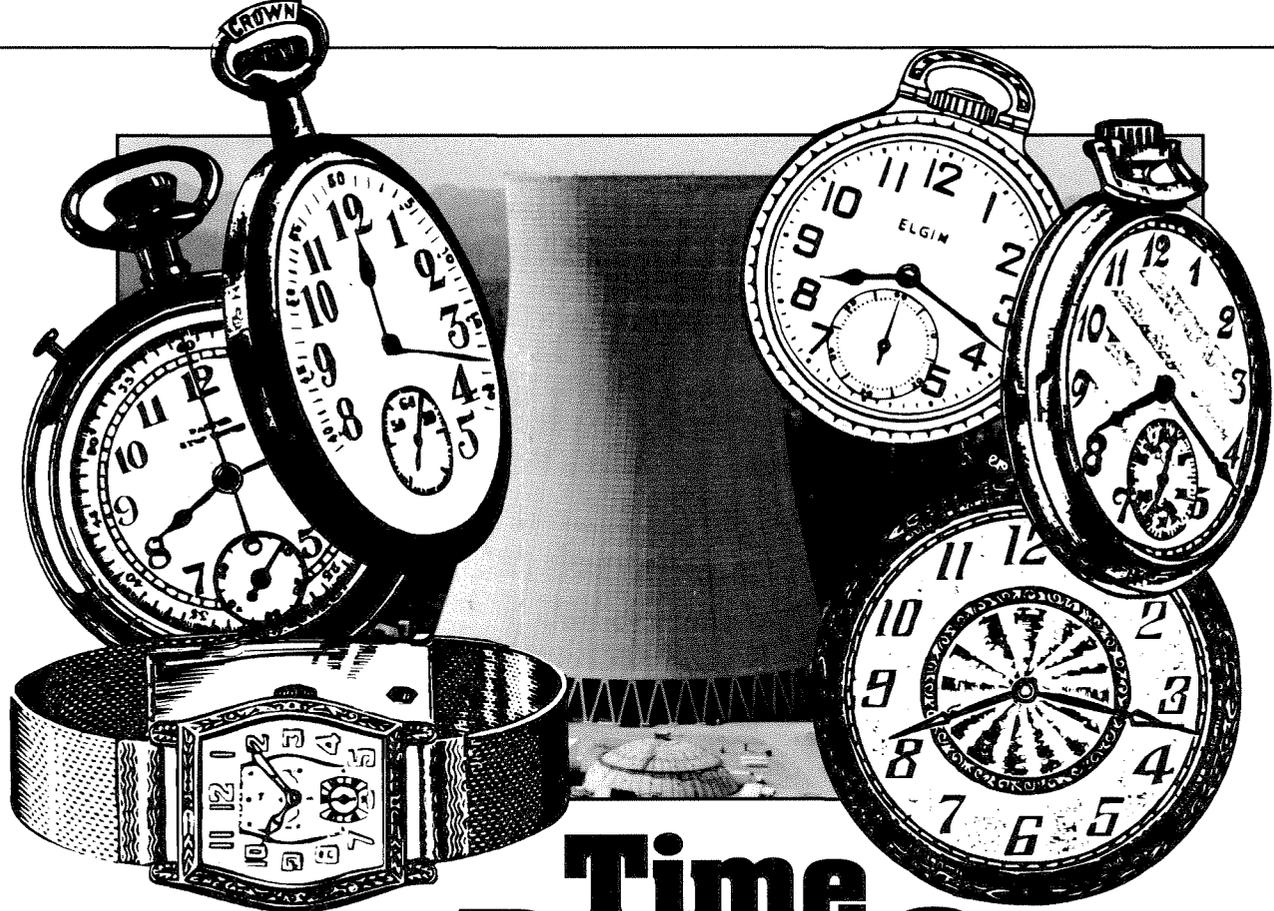
The local government officials meeting in October took heart from such cities and towns. They broke into small working teams to draft and refine strategies for making their own communities more energy conserving. From these strategies, the group identified a dozen priorities to work on in the coming year (see below for a condensed version of the list). And each participant pledged—in writing—to carry out specific actions.

They had met with regional experts, many of whom they plan to build partnerships with over the coming months. They had been inspired by examples from other communities. They had sharpened their focus, hearing the lessons learned elsewhere around the region. And they plan to regroup next year to compare notes on how well they have progressed. 

- Become models of energy efficiency.
- Educate both citizens and other government officials on energy issues.
- Develop a local government energy handbook, including actions and resources to fund actions.
- Mobilize communities to work with utilities in promoting energy conservation.
- Create and implement policies on efficient public buildings.
- Work with state utility regulators to help facilitate utility conservation efforts.
- Write, adopt and enforce local energy codes.
- Establish and maintain public/private partnerships, especially with utilities, to secure energy savings.
- Adopt solar access ordinances and research other solar applications.
- Explore and adopt alternative transportation strategies.
- Prepare and adopt alternative land-use policies aimed at saving water and energy.
- Analyze issues regarding renewable energy supplies such as wind and solar.



## Local Governments To-Do List



# Time Runs Out for Trojan

by Carlotta Collette

**O**regon's only nuclear power plant, a long-time source of noisy controversy, quietly slipped into history on January 4. The Trojan plant, located about 40 miles downstream from Portland on the banks of the Columbia River, had just survived its third assault from the state's voters in November, when two citizen initiatives that would have immediately terminated the plant were defeated.

One week after the vote, on November 9, the plant was shut down because of leaks in a repair to a steam generator pipe. Similar leaks had kept the plant out of service throughout 1991 and early 1992.

Portland General Electric (PGE), the plant's majority owner and operator, had only months earlier announced that the plant would be closed permanently as of 1996, in part, because repairs to

the pipes were only expected to hold through that date, and additional repairs would cost more than \$200 million. Given the relative low cost of other energy supplies the company could turn to, Trojan's attractiveness as a resource had already faded.

The decision in January to not restart the plant at all, was described by Portland General Electric Chairman and Chief Executive Officer Ken L. Harrison as "the best decision for our customers, shareholders and Oregonians." Harrison said, "It will be better to invest in energy efficiency, renewable resources and smaller plants, such as gas turbines and cogeneration facilities."

Such resources had also been proposed as part of the company's year-and-a-half least-cost planning process to meet an expanding market for its electricity.

The question of what to do with the ailing nuclear plant was the most critical and complex element in the utility's planning analysis. The company had studied the relative costs and benefits of three alternatives: 1) fully repair the plant now and continue operating it; 2) phase out the plant over four years; or 3) shut it down immediately. Utility planners at the time suggested that the least-costly option was to keep the plant operating for four years while replacement resources were secured.

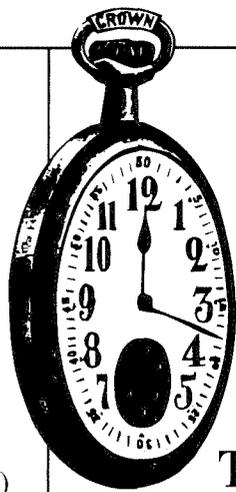
**B**ut that was before the most recent leaks, which cast doubt on the likelihood that the plant could ever be operated cost-effectively with full confidence in its safety. In January, corporate management at the Portland utility concluded that it could not.

"It is not prudent to spend more money to maintain Trojan to ensure the high level of safety we have always insisted on," Harrison said in his announcement of the plant's demise.

Oregon's Northwest Power Planning Council members, Ted Hallock and Angus Duncan, applauded the utility's decision. Hallock, who has long opposed nuclear power, called the closure historic. "It recognizes that the economic and safety risks which accompany existing nuclear electricity generation are too great to be a part of this or any other region's future."

Duncan called it "on balance, good news for Oregon and the region. We finally have shut the door in Oregon on this ill-fated technology," he added.

Duncan was one of more than two dozen outside advisors who



**"It is not prudent to spend more money to maintain Trojan"**

**--Chairman**

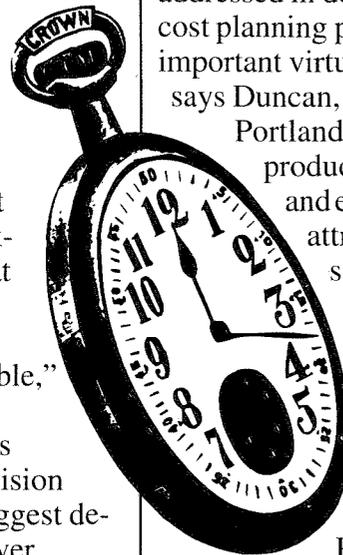
**Ken L. Harrison, PGE**

worked with the utility during its lengthy planning process. "During that planning exercise," Duncan explained, "it was important to see Trojan within the context of all reliable and affordable power supply opportunities the company could turn to.

"Trojan didn't fit for a number of reasons, some economical, some technical, others political. From a reliability perspective, even if it was fixed, it was probably not strategically wise to have it as the biggest single resource west of the mountains. Technically, it didn't have the best working history. On top of that was the question of whether we could really regard it as affordable," Duncan added.

All such considerations aside, the termination decision still was "probably the biggest decision the company has ever made," said David Heintzman, a nuclear energy specialist at Portland General Electric. "This decision was even bigger than deciding to build the plant."

**C**ompany Chairman Harrison concurred, calling the decision "gut-wrenching because of the effect on our employees and their communities."



One community element expected to be most affected by Trojan's departure is the public school system in Columbia County. The plant's taxes and other payments accounted for about 70 percent of school funding.

Some value to the community may be retained if the utility decides to site a replacement power plant — most likely gas-fired — at or near the Trojan site. But Trojan, with 1,300 employees, also is Columbia County's biggest single employer. And jobs at Trojan pay well. When the plant is fully retired, only a few people will be required to safeguard the site.

The issue of how best to replace Trojan's 660 megawatts of energy — about 25 percent of the company's total average requirements and enough to power most of Portland — was one the utility addressed in detail during its least-cost planning process. "An important virtue of the decision," says Duncan, "is that it frees up

Portland General Electric to produce a constructive and environmentally attractive new resource mix."

The company worked with the Bonneville Power Administration, the Oregon Department of Energy, Oregon's Public Utility Commission, the Power Planning Council, environmentalists and members of its advisory committees to produce the most cost-effective set of new resource alternatives.

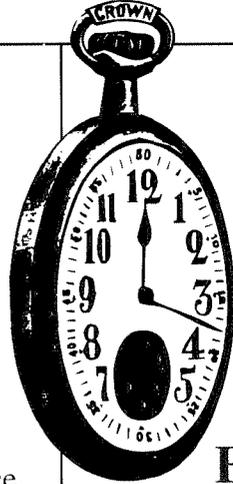
The list includes accelerating conservation efforts to secure 314 megawatts of savings (almost half

the electricity Portland now uses) over the next 20 years. It also calls for pilot projects aimed at securing about 100 megawatts from wind power projects and geothermal facilities that use the earth's natural heat to turn turbines.

**B**y far the greatest resource the Portland utility will rely on will be natural gas-fired combustion turbines. In the original four-year retirement schedule, the company had anticipated that it could build or contract for enough power plants by 1996 to supply about 500 megawatts of the 1,000 megawatts of gas-powered turbines it wanted to have online in the next 20 years.

The company's August decision had coincided with a period of comparably low natural gas prices. By announcing Trojan's planned closure while gas prices were down, the company was able to sign long-term contracts that locked in the lower gas prices and predictable supplies.

But company planners had argued that even the four-year resource acquisition schedule was very optimistic. "We have to move extremely aggressively to make the 1996 date," reported Portland General Electric's manager of least-cost planning, Lee Barney, before the company's immediate-shutdown decision.

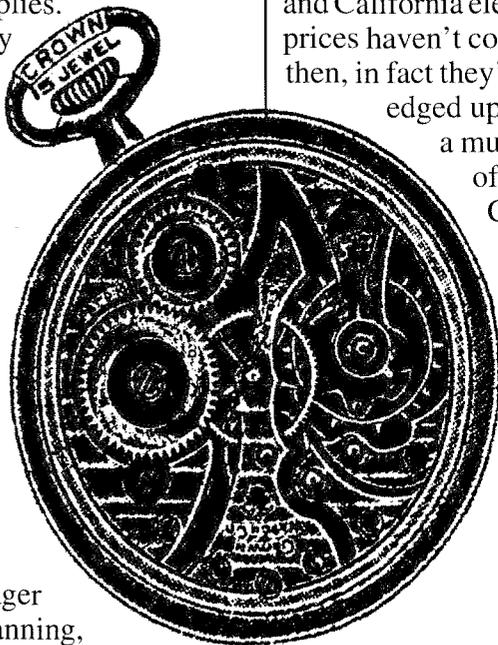


**"The decision frees up Portland General Electric to produce a constructive and environmentally attractive new resource mix."**

**--Angus Duncan**

Now the utility will rely heavily on purchases of electricity from California, where an economic recession has made a buyer's market in the electricity industry. "When PGE did its analysis last year," explained the Council's Duncan, "it assumed certain price and availability figures for both natural gas and California electricity." Gas prices haven't come down since then, in fact they've probably

edged up a bit, but there's a much greater supply of electricity in California now, and Portland General Electric can get a much more competitive price for power now.



**H**ow will the utility's decision affect ratepayers? Whether Trojan kept running or not, rates were likely to go up some, said Duncan. "But rates shouldn't go up as much with the closure. This is PGE's least-cost option."

Least-costly, yes, but still very expensive. Turning off a nuclear power plant isn't a matter of flicking a switch or pulling a plug. Even a planned decommission can take more than a decade. Premature shutdown poses unique problems that are only beginning to be addressed by the Nuclear Regulatory Commission and the few utilities that are faced with the prospect of returning a highly radioactive facility to what is called "green pasture" status.

One big problem is the cost of decommissioning and who should pay it. Electricity rates generally include both operating costs for power plants and the costs that will be needed to decommission the plants when their operating lifetimes are reached. This is true whether the plants are nuclear, gas, coal, oil or any other sort. Since Trojan is only halfway through its planned lifetime, there is only between \$30 million and \$100 million in the decommissioning account.

Because Portland General Electric is an investor-owned utility, either ratepayers or shareholders could be expected to come up with the remaining amount. If the utility is allowed to rate-base the decommissioning, which could amount to about \$500 million, according to company announcements, Oregon electricity consumers must absorb the expense. If the state's Public Utility Commission decides instead to compel shareholders to

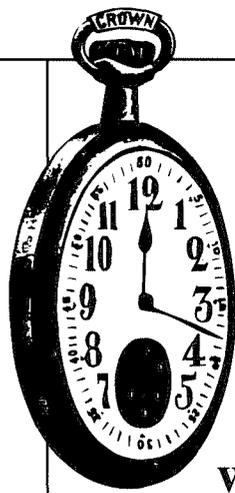
finance decommissioning by narrowing the profit margin on company stocks, investors will be paying. The ballot measures that would have closed Trojan in November also would have required shareholder backing for the decommissioning costs.

**S**uch a strategy worries Duncan who sees it as a form of punishment for the cost of decommissioning Trojan to be treated any differently than for any other sort of power plant. "The Public Utility Commission ought to determine whether the utility operated the plant in compliance with all applicable state and federal regulations and industry standards. It ought to determine whether PGE met any other criteria that would apply to a plant like Trojan.

"For any plant, there would be decommissioning costs. We don't want to send the signal to PGE or any other utility planning to prematurely shutdown an expensive power plant, that if they do the prudent and least-cost thing for their ratepayers they will be penalized.

"We don't want to penalize them for taking the least-cost course if that means shutting down a plant early when they still have unrecovered capital in it or where they haven't accumulated enough decommissioning money. Otherwise they won't shut plants down, and we will have uneconomic plants operating and costing the ratepayers more."

The Portland utility hopes to be able to continue to bill ratepayers for both operating and decommissioning costs throughout the original planned lifetime of the plant. "Operating expenses



## One big problem is the cost of decommissioning and who should pay it.

should go to about 60 percent of the \$150 million it takes to run the plant for a year," soon after complete shutdown, explained Dave Heintzman. Within a year or so, those costs should drop to about \$15 million, Heintzman added.

Until adequate decommissioning funds are available, there is likely to be little decommissioning activity. The most radioactive elements, the fuel rods, will be removed from the plant and held onsite in an indoor storage pond where their radioactivity can decay for the next five years or so.

"About 99 percent of the radioactivity is gone within one year," Heintzman said, "but the fuel rods are still generating a lot of heat." Pond storage is expensive because the facility must be secure and pond levels and temperatures must be closely monitored.

**A**fter the initial cooling, the fuel rod assemblies can be moved into massive, air-filled casks and stored in fenced areas on concrete pads. This open-air storage is much less costly.

Eventually, the plan is to move the spent fuel to a high-level radioactive waste storage facility. The federal government has designated a site in Yucca Flats, Nevada, for permanent burial of

high-level radioactive waste. But opening dates for such a facility have been repeatedly moved out into the future.

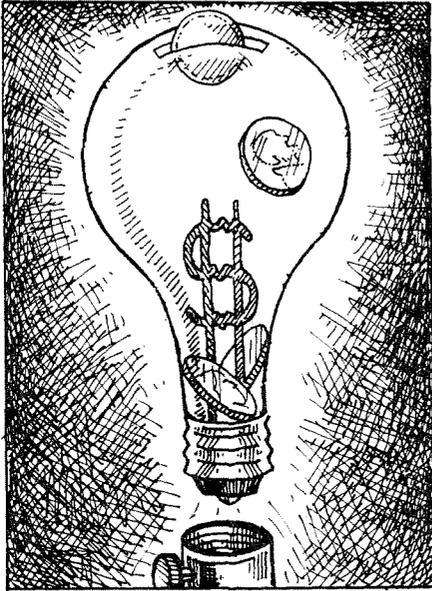
All the low-level radioactive material, including the cut-up reactor vessel, piping, pumps, pressurizer vessel and steam generators, will likely be shipped in barges on the Columbia River to Hanford, Washington, for long-term storage.

When decommissioning is complete, sometime in the first decades of the next century, the Trojan site should be clean, by federal standards. Portland General Electric will have moved beyond the most controversial endeavor it has ever undertaken. 



# SHORTS

## The Region



**Big building, big savings.** U.S. Bancorp recently replaced about 100,000 light fixtures in its 43-story headquarters building in Portland, Oregon. The new, more efficient lighting equipment is expected to cut electricity use about 33 percent and save the company about \$55,000 a year. [Source: The Oregonian, October 30, 1992.]

**Natural gas shortage may prompt rationing.** Alberta is exporting so much natural gas that a severe winter could increase demand beyond the ability of the gas industry to supply, the Calgary Herald newspaper reported. Nova Pipeline Company recently reported that by the winter of 1993-94 its supply will fall short of peak demand by up to 1 billion cubic feet daily for 55 days. Rising exports to the United States are the chief reason for the supply problem. [Source: Calgary Herald, October 23, 1992.]

**Improved irrigation management saves electricity.** In Grant County, Washington, where irrigated agriculture is the main industry, farmers cut their irrigation electricity use 15.5 percent last year. In coordination with the Bonneville Power Administration and participating farmers, the Grant

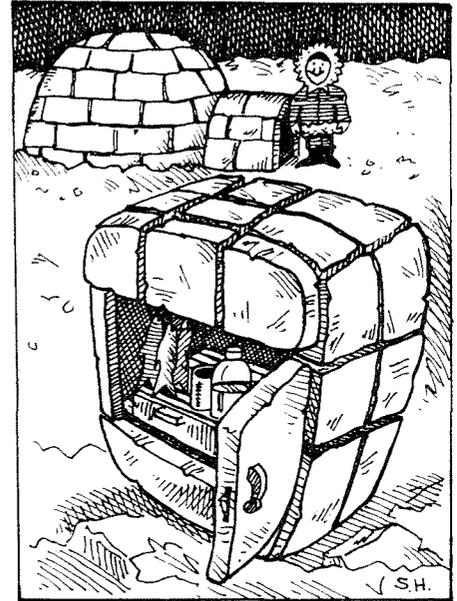
County Public Utility District offered irrigation scheduling services to maximize the efficiency of irrigation. Bonneville estimates that this irrigation management can save up to 600 kilowatt-hours per acre, per year in pumping costs, in addition to saving water. [Source: Conservation Monitor, October 1992.]

## The Nation

**Tie your mortgage to energy savings.** The Federal Home Loan Mortgage Corporation is now offering a mortgage that gives credit for energy savings. Home buyers will qualify for a mortgage deal that is more generous than average if the buyers can show potential monthly energy savings. In announcing the program, the agency said it is responding to buyers and builders who are showing increasing concern about energy conservation and environmental protection. [Source: Energy Conservation Digest, June 1, 1992.]

### **Energy efficiency could meet half of all growth in U.S. electricity use.**

Estimates indicate that programs designed to save energy could meet half, or more, of all new electricity demand in the United States, according to Jim Wells, associate director for energy issues at the U.S. General Accounting Office. Wells told the U.S. House Environment, Energy and Natural Resources Subcommittee last summer that efficiency programs could reduce energy consumption up to 15 percent by the year 2000, and by more than 50 percent in areas that already have active energy-conservation programs. California, for example, could satisfy 61 percent of future demand for power through conservation programs. Oregon and Washington could cut future use by more than half, Wells said. [Source: Energy Conservation Digest, June 16, 1992.]



**Build a better refrigerator, win \$30 million.** A group of electric utilities is offering a \$30-million prize to anyone who can develop a refrigerator that uses 25 percent to 50 percent less electricity than the most energy-efficient models currently available. Refrigerators and freezers use about 20 percent of the nation's electricity. In addition, these super refrigerators would use no chlorofluorocarbons, which destroy ozone in the atmosphere. A total of 23 utilities serving about one-fifth of the nation's households are offering the prize. Prototypes are expected by June 1993.

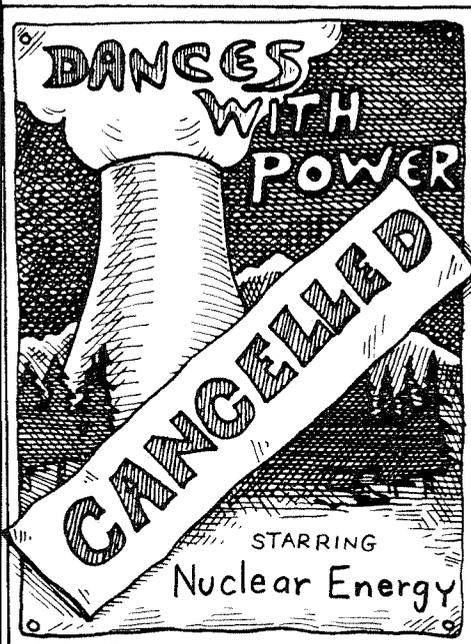
## The World

**Swedish research links cancer with electromagnetic fields.** Studies recently completed in Sweden establish a correlation between the proximity of high-voltage transmission lines and the incidence of cancer, particularly leukemia in children. Research in the United States found no such correlation, but focused on concentrations of low-voltage distribution lines, such as those that deliver power through neighborhoods, and

# SHORTS

not on high-voltage transmission lines, which deliver bulk loads of power from generating plants to substations. The Swedish studies appear to have scientific merit, but homes in the United States and Canada generally aren't built as close to transmission lines as they are in Sweden. [Source: Clearing Up, October 26, 1992.]

**Report says nuclear power waning worldwide.** The number of nuclear power plants around the world is dropping, according to a report by the Worldwatch Institute, World Information Service on Energy and Greenpeace International. According to the World Nuclear Industry Status Report: 1992, there were 421 nuclear power plants in commercial operation in January 1992, 10 fewer than in January 1989. The world's nuclear plants provide less than 17 percent of the world's energy, according to the report. Nuclear plant construction has



ceased in Belgium, Italy, Spain, Sweden and Switzerland. In the United States, no nuclear plants have been ordered in 14 years, and a total of 119 were canceled by utilities

between 1972 and 1990. [Source: Worldwatch Institute news release, June 1992.]

**Ozone loss could harm fisheries.** Depletion of the Earth's ozone layer could increase the amount of solar radiation that reaches the surface of the planet's oceans, and that could damage phytoplankton in the water. Phytoplankton is an important link in the ocean food chain — literally a building block for all higher forms of life. Ultraviolet radiation also could damage surface-dwelling fish eggs, warns the United Nations Environment Program in a recent report. One apparent cause of ozone depletion is the release of chlorofluorocarbons from industrial processes. By the year 2000, this could have a serious impact on the world production of fish, the scientists reported. [Source: National Fisherman, November 1992.]

— Compiled by John Harrison

# CALENDAR

**January 26-28** — "Stream Habitat Classification: Application of Geomorphic and Ecological Principles," Corvallis, Oregon. Current approaches to stream habitat classification and application of habitat information for better resource management will be discussed. For more information: Conference Assistant, Oregon State University, Forestry Conference Office, phone 503-737-2329, FAX 503-737-2668.

**February 10-11** — Northwest Power Planning Council meeting in Washington.

**February 18** — "Regional Utility Conference: Laying the Cornerstone for the Conservation Power Plant" at the Columbia River Red Lion in Portland, Oregon. Sponsored by the Northwest Power Planning Council and others. For more information:

Judi Hertz, Northwest Power Planning Council, phone 503-222-5161 or 800-222-3355, FAX 503-795-3370.

**March 10** — "International Global Warming Solutions Symposium," Portland, Oregon. Focus will be on ideas and approaches that can reduce carbon dioxide emissions, including building energy efficiency, transportation alternatives, renewable resources, solid waste recycling and tree planting. For more information: Susan Anderson, Portland Energy Office, 1120 S.W. Fifth Avenue, Suite 1030, Portland, Oregon 97204, phone 503-823-7222, Fax 503-823-5370.

**March 10-11** — Northwest Power Planning Council meeting in Helena, Montana.

**March 8-12** — "Affordable Comfort Conference" at the Adam's Mark Hotel in Philadelphia, Pennsylvania. Sponsored by the Affordable Comfort, Inc., the Pennsylvania Energy Office

and others. Presentations at the conference will be given by experts in housing, energy, utility programs and public policy. For more information: Diane Tirio, phone and FAX 412-373-0482.

**March 24-26** — "Making a Difference," the sixth national demand-side management conference in Miami Beach, Florida. Sponsored by the Electric Power Research Institute (EPRI), the U.S. Department of Energy and others. For more information: EPRI, 3412 Hillview Avenue, Palo Alto, California 94304, phone 415-855-8900, FAX 415-855-2041.

**May 3-4** — "On Track: Demand-Side Management Program Evaluation Techniques and Tactics," San Francisco, California. Experts will discuss successful techniques and tactics for evaluating utility conservation programs. For more information: Tom Vogt, phone 510-528-5566.

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



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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

- 91-04 1991 Northwest Power Plan-Volume I
- 91-05 1991 Northwest Power Plan-Volume II
- 92-21 Columbia River Basin Fish and Wildlife Program  
-Strategy for Salmon
- 92-21A Columbia River Basin Fish and Wildlife Program  
-Strategy for Salmon-Volume II
- 92-23 1992 Annual Report to Congress

#### Mailing Lists

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

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## Two Thumbs Up!

Salmon and hydropower—two marvels of the Pacific Northwest. Both face severe challenges. The salmon runs are down while the region's need for energy is growing.

**A Time for Action** (15 minutes) and **Journey of the Kings** (28 minutes) tell the story of the unique regional effort to secure the low-cost electricity the Northwest requires, while protecting the salmon that are so much a part of our heritage.

The videos and related information suitable for schools, as well as church or civic groups, are available on loan at no charge. Contact the Council at the phone numbers above to borrow a copy.



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