New hope for their return...
A few years ago, Verne and Mildred Kuhl decided it would be a good idea to weatherize their Hood River home. The wind slicing in from the Columbia River Gorge made their home of 43 years somewhat less than cozy on wintery nights.

So, they put some insulation in the windward wall and part of the ceiling and closed off certain rooms during the winter months. The Kuhls were ahead of many people in that they took even these measures. But, like most people who weatherize their homes, they went only part of the way.

As a result of a “here and there” approach to home energy conservation, it has been difficult to really gauge the effects of energy conservation on a whole community.

About two years ago, the Natural Resources Defense Council (NRDC), a non-profit environmental advocacy organization, and Pacific Power & Light (PP&L), an investor-owned utility, came up with a “what if” idea. What if, they reasoned, we took an entire community and paid its homeowners to do everything right.

Thus began the Hood River Conservation Project, a two-year, $20-million research project designed to see just how much energy can be saved under nearly ideal conditions. Hood River, a city of 15,000, was selected because it represents a variety of conditions. An hour east of Portland on the Oregon side of the Columbia, it lies in the transition area between the western marine-influenced weather and the drier, more extreme climate east of the Cascades. The city climbs from river level up steep hills so that it embraces a variety of micro-climates.

NRDC and PP&L proposed the idea to the Bonneville Power Administration, which agreed to fund the project. This called for paying Hood River homeowners the full cost of tightening and insulating their homes to very high levels. The measures to be incorporated into the homes included heavy insulation, dehumidifiers and heat exchangers, glazing, caulking and weatherstripping, outlet and switch-plate gaskets, electric water heater wraps, water flow regulators, and heat pump conversion where necessary.

The Northwest Power Planning Council, Northwest Public Power Association, and the Pacific Northwest Utilities Conference Committee joined NRDC, PP&L, and Bonneville in helping plan and design the project.

Approximately half the city’s 6,100 homes are electrically heated and will be eligible for the program. An intensive marketing program is going on to interest homeowners in signing up. Given that there are no costs to the homeowner, a high level of participation is anticipated.

Even in its early stages the project has become the biggest communitywide conservation program of its kind, and Hood River proudly boasts it is the “Energy Capital” in a billboard outside the town.

Over 300 people had signed up for the project before the first house was weatherized. The Kuhls, whose house was first, held an “open house” for a “press party” announcing the project. Mildred Kuhl reported a bonus as a result of the full insulation in her home. Not only is it warmer now, but the noise has been cut down. “We don’t hear the traffic even, and it used to be so loud. The youngsters down the street on skateboards don’t rouse us anymore,” she said.

Peter Johnson, administrator of Bonneville, said of the project, “This represents the theme of the regional Planning Council. We believe in the development of (conservation) capability.”

COMING NEXT: The project involves highly sophisticated monitoring systems installed in 320 sample homes to record before and after patterns in energy use. ENERGY NEWS will carry a story on the monitoring phase of the project in the near future.
Two new faces join Council

Two new members have recently joined the Northwest Power Planning Council. Kai Lee, an associate professor from the University of Washington, was named last fall by Washington Governor John Spellman to replace Dan Evans, who was appointed to the U.S. Senate. Oregon Governor Victor Atiyeh recently named nuclear engineer Donald Godard to replace Alfred Hampson, on the Council. Hampson declined appointment to another term in order to devote more time to his law practice.

Lee, 38, who teaches environmental studies and political science, is also an adjunct faculty member for the Institute of Marine Studies and on the board of the Applied Physics Laboratory. He had also served as a White House Fellow to the Secretary of Defense.

He is known for considerable research and had served as a consultant to the Council prior to his appointment. He prepared "The Path Along the Ridge," a framework for flexible planning that was later adopted into the Council's 20-year plan. He has a bachelor's degree in physics from Columbia University and a Ph.D. from Princeton University.

Godard, 36, has been administrator for the siting and regulation division of the Oregon Department of Energy. Previously, he was an assistant manager for Teledyne Wah Chang in Albany, Oregon, and had also served as a member of Admiral H. G. Rickover's staff in the Navy's reactors division in Washington, D.C.

He holds a bachelor of science and engineering degree from Oregon State University and a master of science and engineering from the University of Illinois.

Both men were appointed to three-year terms and are subject to approval by their state legislatures.

Hampson retires from Council

Alfred Hampson, Oregon, announced his retirement from the Northwest Power Planning Council to devote full time to his law firm of Hampson, Bayless & Murphy.

Hampson was best known on the Council for his work in the fish and wildlife program. He was also unofficially the Council's "resident grammarian" and the person most credited with keeping the 20-year plan in plain and proper English.

Hampson has been chairman of Oregon's State Energy Facility Siting Council and chairman of the state Travel Information Council. He is a former member of the Salmon Advisory Committee to the state Department of Fish and Wildlife.

He graduated from Stanford University and received his law degree from Harvard Law School.

NOTICE

BPA Billing Credits Policy: Petition for Review Filed

On September 23, 1983, BPA published its final Billing Credits Policy, creating a mechanism for channeling BPA payments to independent developers of conservation and generating resources. The Natural Resources Defense Council (NRDC) and the National Wildlife Federation (NWF) have filed a petition for review in the Ninth Circuit Court of Appeals challenging certain provisions of the Policy, which waive cost-effectiveness requirements for generating resources that are candidates for billing credits.

Copies of the NRDC/NWF petition can be obtained by calling or writing the BPA Office of Public Involvement, P.O. Box 12999, Portland, OR 97212 (1-800-547-6048).
Amendments submitted for F & W plan

Some 139 amendments from 28 entities have been proposed for the Northwest Power Planning Council's fish and wildlife program, according to Jan Chrisman, director of the Council's fish and wildlife division.

The bulk of the amendments, 58, deal with fish propagation (section 700) of the program. Another 31 amendments address resident fish (section 800) and 19 deal with wildlife (section 1000).

Other program areas receiving proposed amendments included downstream migration (section 400) ten; upstream migration (section 600) six; Yakima River Basin (section 900) five; ocean survival (section 500) three; and future hydroelectric development (section 1200) three each; and program goals (section 200) and coordination of river operations (section 1300) two each.

No amendments were sent in for the water budget (section 300) and the fish and wildlife committee section (1100).

The amendment process was built into the Council's fish and wildlife program to provide flexibility and fine-tuning and to allow for implementation problems which could not have been foreseen, according to Edward Sheets, the Council's executive director.

Entities proposing amendments included the U.S. Bureau of Land Management, U.S. Army Corps of Engineers, Indian tribes, state fish and game departments, utilities, the U.S. Forest Service, Crown Zellerbach, fish and wildlife agencies and organizations, and private individuals.

Copies of the proposed amendments will be available in February. Information for obtaining the amendments is featured in a box in this issue of Energy News.

The Council and its staff will review all amendments through June of this year. This process will include public hearings, consultations with interested parties, discussion of staff issue papers at open meetings, and acceptance of written comments. Public hearings on the amendments will be held in each state.

New twist on fish and chips

Someone has finally come up with the quintessential "fish and chips" story.

The U.S. Department of Energy announced that fish researchers plan to implant a computer chip, about the size of a grain of rice with tiny antennae, into young fish. The chip will allow scientists to track salmon and steelhead as they migrate to the ocean and back. The tag, developed by a private firm working with the National Marine Fisheries Service, is expected to become widespread at Northwest hatcheries by 1988. Bonneville Power Administration is funding the project.

A scientist will be able to aim a decoder or data scanner at each dam's fishway and retrieve information on the same fish at several stations. This will permit fish managers to locate juvenile fish moving downstream to the ocean and determine the best time to release water from the dams to make their trip easier and safer.

Each chip can store 34 billion separate codes and has a service life of 100 years. The only problem left to researchers is figuring out where to insert the chip so that it won't harm the fish or end up on someone's dinner table as, literally, fish and chips.
Tacoma adopts new standards for conservation

Tacoma, Washington, became the first city in the region to adopt new building codes which comply with the Northwest Power Planning Council’s model conservation standards.

The ordinance, which will go into effect June 1, 1984, covers all new residential and commercial buildings, remodels, and additions constructed after that date. Early adoption will qualify the city of 160,000 population for financial incentives provided by the Bonneville Power Administration to cover local enforcement.

The model standards set “energy budgets” for the space heating of residential homes and offer a number of ways to meet those budgets such as insulation, glazing, heat pumps, solar features, and control of air leakage. For commercial buildings, the standards also set efficiency requirements for equipment used to heat, ventilate, air condition, and light the buildings.

The model conservation standards are part of the Council’s 20-year power plan which emphasizes conservation as its priority. Emphasis was put on new buildings, according to Edward Sheets, executive director of the Council, because of studies which show the cost of introducing energy saving features into existing homes is approximately twice as much and produces far lower energy savings.

Sheets also pointed out that the standards do not represent a dramatic departure for Northwest builders. “Many of the residential standards are nearly identical to the energy conservation guidelines recommended by the National Association of Homebuilders. The standards for commercial buildings are very similar to those already in Oregon and Washington codes, while the lighting standards for large office buildings are patterned after those adopted in California.”

Sheetz said the Council considered three factors in developing the model standards — benefits to the region, to the local economy, and to the consumer. “These energy-saving features will mean more comfortable homes, more jobs in the local labor force, and lower energy bills for the entire Northwest,” he said.

Model program ‘rates’ home energy efficiency

A model program developed by shelter industry representatives seeks to integrate energy efficiency considerations into the home mortgage process. The program uses a Uniform Energy Rating System to determine a home’s energy efficiency.

The rating system measures the heat-keeping performance of a house and estimates its annual energy use and energy cost. After the appraiser has determined a house’s energy performance, the house is given one of five ratings, from “Poor” to “Very Efficient.” The rating can then be used by consumers and by the shelter industry in evaluating the affordability of a home.

An energy-efficient home enhances a homeowner’s ability to make monthly mortgage payments because less money is required for utility expenses. As more lending institutions allow higher loan-to-debt ratios on homes that are very efficient more people qualify to buy a home. In Washington state, about 7 percent more of the population could qualify to buy an average-priced house if energy efficiency was taken into account.

“The real benefit of the Shelter Industry Program is that it provides the way for the market place to incorporate and promote energy efficiency through voluntary industry efforts,” said John Teutsch, Jr., chairman of the Washington State Shelter Industry Advisory Committee and president of Rainier Mortgage Company.

The program has been endorsed by the Better Home Loan Mortgage Corporation (“Freddie Mac”) and the Federal National Mortgage Association (“Fannie Mae”). Both have agreed to allow their lenders to increase the loan-to-debt qualifying ratios for families who want to buy energy efficient housing.

The program is presently underway in the Puget Sound area and will soon get underway in the Portland metropolitan area. Ten lending institutions in the Puget Sound area are now using the Uniform Energy Rating System. More than 150 Puget Sound real estate appraisers have received training on the use of the rating system. In June of this year, more than 375 energy rating sheets were completed by appraisers for banks.

“The program is unique because it was started and run by the shelter industry,” said Jay Luboff, director of Western Resource Institute, which developed the program. “Consequently, we’ve been able to develop a common reliable, uniform language that is useful to lenders, appraisers, realtors, builders, and utilities alike.”

Initial funding for the program’s development was provided by the Washington State Energy Office, with later support from the Oregon Department of Energy and Pacific Power and Light.

The Northwest Power Plan-
Council praises BPA work on two-year plan

The Bonneville Power Administration won praise from the Northwest Power Planning Council for its efforts toward implementing the Council's two-year action plan. When it adopted its two-year power plan last April, the Council also included a two-year action plan specifying actions various entities, particularly Bonneville, were to take in the immediate future. The two-year action plan included 115 action items for Bonneville.

In December, the Council completed a detailed review of BPA's first six months of progress in implementing the plan. The development of energy conservation among all consumer groups — residential, commercial, industrial, agricultural, and government — is the main thrust of the two-year action plan.

Bonneville got high marks from the Council for its efforts to meet interim conservation objectives, particularly in the residential sector. However, the Council did express concern that more effort is needed in other sectors. The agency was urged to put more attention and more of its budget into commercial, industrial, and agricultural sectors.

Specifically, the Council's letter suggested that Bonneville redirect a portion of its funds in the 1985 budget from existing weatherization and street and area lighting programs toward conservation efforts in nonresidential sectors. The Council also urged Bonneville to take the plan's five-year targets into account as it develops future budgets.

The Council's assessment of Bonneville efforts was based on detailed reviews of the agency's workplans as well as meetings between Bonneville and Council staff.

Based on that review, the letter, signed by Council Chairman Keith Colbo, stated, "Bonneville appears to be on the path to successfully implementing the plan. The Bonneville staff has made a good faith effort to meet the plan's requirements."

Inter-Tribe letter critical of BPA

The Columbia River Inter-Tribal Fish Commission (CRITFC) has sent a letter strongly critical of the Bonneville Power Administration to the Northwest Power Planning Council.

The letter, signed by CRITFC Executive Director Timothy Wapato, centers on the goals study (section 201) of the Council's Fish and Wildlife Program. It accuses Bonneville of "standing in the way of implementing what many consider to be the very cornerstone of the Council's Fish and Wildlife Program."

Section 201 of the program calls for Bonneville to fund a study by the fish and wildlife agencies and tribes to identify salmon and steelhead losses due to the Columbia River hydroelectric system and to set goals for the restoration of the affected stocks.

The letter charges that Bonneville has delayed beginning the goals study, has failed to honor financial commitments to the Inter-Tribal Commission and individual tribes, and has made alternate proposals which are not consistent with the Council's fish and wildlife program.

The letter urges the Council to see that the 201 study is completed quickly and according to program directives because, as Wapato said, "many Northwest lives and livelihoods depend on salmon and steelhead."

The Council has placed the goals study as a priority item in its 1984 agenda.
Council finds for completion of WPPSS 3

WPPSS 3, the mothballed nuclear power plant at Satsop, Washington, is a good power buy for the region and should be completed, according to a resolution by the Northwest Power Planning Council.

The Council endorsed preservation of the plant at its November 2-3 meeting in Seattle after reviewing a major staff analysis on the cost-effectiveness of keeping or terminating the plant. The Council also heard public testimony from several groups.

In its motion to retain the plant, the Council also urged the region to seek a financing mechanism to resume construction of the plant, which is approximately 75 percent completed.

The Council also expressed concern over disparate financing problems facing the public and private owners of the plant, problems which could present a major threat to completing the project. While Bonneville owns 70 percent of WPPSS 3, private utilities own 30 percent.

While endorsing completion of the plant based on cost to the region and future power needs, the Council stopped short of saying when construction should resume. A staff analysis said that the cost differences between immediate restart and delayed restart were “too close to call.”

Luce report tries to solve WPPSS puzzle


A major report designed to solve some of WPPSS’ woes came out to mixed reviews in mid-November. The Luce report called for replacing WPPSS with a new federal entity called the Northwest Energy and Conservation Financing Corporation. The corporation would be run by seven directors appointed by governors and approved by the U.S. president.

The corporation, under the Luce proposal, would complete plants 1 and 3 (number 2 has just been completed) and assume legal liability for the 2.25 billion debt attached to plants 4 and 5.

The plan also called for a ten-year, 72 cents-a-month surcharge on all electric ratepayers in the Northwest to finance a payoff to bondholders for plants 4 and 5. The bondholders would receive about 36 cents for every dollar invested, with less going to speculators. The surcharge expected to raise about $81 million a year, would apply to customers of both private and public utilities whether or not they were members of the WPPSS consortium.

The 73-page document is the product of a blue ribbon panel appointed by the governors of Oregon and Washington. Headed by Charles Luce, former Bonneville administrator, the panel also included former Appeals Court Judge Herbert Schwab and United Airlines Chairman Emeritus Edward Carlson.

Luce was optimistic about the panel’s proposal at its official unveiling. “I think the region is ready to settle this thing,” he said. But Congress must approve any action, and most experts do not expect the WPPSS web will be untangled easily or swiftly.

The WPPSS plant 2 at Hanford received a low-power license from the Nuclear Regulatory Commission in late December and has begun loading fuel. The license will allow the plant to go to five percent power for a testing period. Approval for full power could mean the 1,100 megawatt plant will be in full operation by July 1984.
Colbo looks at the Council's future

Do you see the Council taking any major new directions in the immediate future?

I don’t see any significant changes in direction. The path the Council has followed is very predictable. Our goals were laid down fairly explicitly by the Act. We’ve engaged ourselves in meeting those goals in an arduous public process that has been hammered out in four states.

We do, however, face a change in the job that is now before us. We have made the transition from developing a 20-year plan and are into the stage of implementing it. Now the long-term work begins. We must fine-tune the plan, change and adapt it where that’s needed, play watchdog to the region’s power needs, test, and guide the implementation of both the energy plan and the fish and wildlife program.

When I think of all we have to do, I cannot help but be somewhat surprised that now that the plan has been developed some people are raising the question of the Council’s future role.

If the Council were to go away, we’d be back where we were except that we’d have a great blueprint for the future — on paper. The plan, excellent though it is thanks to input from throughout the region, will be worthless if it stays on paper.
Now the long-term work begins.
We must fine-tune the plan, change and adapt it
where that’s needed, play watchdog...

Has the fact that there is now an energy surplus taken some of the pressure off the Council’s work?

That assumes that the only problem the region faces is an energy deficit and when we don’t have a deficit, then we don’t have problems. But we can and do have problems during an energy surplus. The WPPSS fiasco has shown us that developing unneeded, expensive energy is a problem at the other end of the spectrum. We need constant planning to prevent both extremes.

Another thing we cannot overlook is that the energy surplus deals primarily with only one side of the Council’s work. We are not one-dimensional. The Act specifically charged us with balancing the needs of our fish and wildlife with our region’s energy needs.

The Council’s charge to dramatically improve the lot of the Columbia Basin’s fish and wildlife may some day be an even bigger story than all the WPPSS headlines. Without an immense effort, the Northwest could easily lose one of its greatest natural resources.

In the next few months, we are going to be hearing much more from the fish and wildlife program, particularly since the amendment process has begun. This does not represent a new direction for us. Our interest has always been there. But, at times, the energy headlines overshadowed this important area.

What do you believe are the greatest challenges facing the Council now?

Keeping our momentum. We’ve got an excellent plan, but there are a lot of side issues that could distract us. It’s critical that we stay focused. We’ve got to monitor our two-year action plan and Bonneville’s response. We can’t spread ourselves too thin.

Our most pressing business is to institutionalize the plan among the major participants in the region and to improve the plan. The plan has never been represented as perfect. Now is the time to begin the refinement process.

Our two-year action plan calls for developing a minimum of new resources, mostly conservation. The plan also calls for further studies, research, demonstration projects, and additional dialogue among the region’s interests. After two years, the plan will be revised. That is one of the plan’s strengths and a major reason why the Council is just beginning its work.

Even if nature cooperates, political, social, economic, and technological forces either alone or in combination could make significant changes in the region’s needs.

Right now our most important task is helping the Bonneville Power Administration to lay the groundwork for a conservation delivery system, so that when the region does need more power, we will have the ability to deliver with the priority resource — conservation. I do have some concern that BPA’s distraction with current cash flow problems and the Administration’s concerns with the federal debt limit are a very real threat to conservation actions that must be taken now.

What is the likeliest scenario for the future of the region?

That’s the most common question I encounter. The best answer to what the regional economy will do is that it will fall within a specific range. Our plan can respond to what happens within that range, and that’s a great strength of our program. It is flexible. We’ve got to continue to maintain that kind of flexibility.

Abnormal occurrences, such as the unexpected loss of resources, will require this region to respond to maintain a reliable and cheap power supply. As required by Congress, the resources now contemplated by the Council include the successful completion and operation of WPPSS plants 1 and 3. But this is certainly a debatable assumption at this point.

We could be looking at a much different situation if these plants are not completed. Apart from the obvious financial impact on BPA and the private investors, immediate resource plans would be reviewed and updated. We have run our computer models to test against this happening to determine the responsiveness of the basic plan. While the plan will respond, it is only viable if it is followed in action and not delayed or frustrated.

Do you expect to see individual changes in Council members as the Council undertakes new leadership?

I expect the Council will mature as a cohesive group, and I expect changes in individual Council member’s approaches. I think you will find individuals taking a
The Council's charge to dramatically improve the lot of the Columbia Basin's fish and wildlife may some day be an even bigger story than all the WPPSS headlines.

more active role within their states as well as within the Council.

My feeling is that each member brings a unique background and strengths to the Council. I'd like to tap those strengths and backgrounds, and I think it will be easier to do so in this phase of our work.

Do you see any problems created by the rivalry for the chairmanship? Did that have any effect on the Council's stability?

As I view the Council at the time this was going on, there were seven people appointed by the governors of four states, all of whom were well qualified. All bring tremendous background and experience to the Council. Yet only one Council member could follow Dan (Evans). I'm not sure that that was an enviable thing to do.

It's natural the job was sought after. Sure there were strong feelings. But they are being put behind us. It's not the first time strong feelings have been expressed, and I expect there will be other times. But we've never failed to resolve our differences and work together for the region. After all, I was a compromise candidate, and that means compromise was possible.

Do you have special interests that may influence your participation in particular areas of the Council?

My particular background indicates administration. I will probably tend to look more to the internal operations of the Council now. I will free myself from some committee assignments so that I can focus on the general operations of the Council and its staff.

I may spend more of my time insuring that the public participation role is elevated. Council members also need to give more input and more direction. It's not enough to carry on public involvement within their states. This is a regional program.

Of course, I'll always have a soft spot for fish and wildlife, partly because of my background, but mostly because it is so important.

How would you characterize the Council? How is it unique? What are its strengths?

We are a unique organization. We've demonstrated the ability to respond to problems through a public process that had been untried. That process is terribly critical, and it will continue.

The public process was a charge Congress gave us, and it was truly unique. We carried it out, and I firmly believe in it. That doesn't mean I thought it would work as well when I took it on. Now I would not choose to do it any other way.

The Council is the region's forum, the one place where all the many interest groups can go. It is the neutral in a field where there are many players and many public interests. The Council has neither ownership in any interest nor does it espouse a cause outside its Congressional charge.

The Council also gets its strength from the plan's flexibility. It is designed to be changed as needed. The plan calls for a flexible mix of resources so that, regardless of what the future is, there will be a reliable supply of power.

I cannot overlook the Council's staffing as another one of its strengths. We had to assemble a first-rate team quickly, and we came up with one of the finest staffs in the Northwest. They've done a marvelous job in meeting goals and deadlines.

Finally, the thing that makes us truly strong and unique is that the Council represents a regional approach to problem solving. The entire region has an investment in the Council's success.

Do you think the Council could become a prototype for other similar regional groups in other parts of the country?

Possibly. I could think of no higher compliment than to be replicated in other regions. You don't need to have an energy problem for a regional group to work. We know energy fits the process, but it could be any other problem so long as it is an issue that binds the region together.
At one time, around 600,000 adult salmon and steelhead returned annually to the famed Yakima River basin, second only to the Columbia River in record fish runs. Members of the Yakima Indian nation freely harvested fish from the river, which now borders a 45-mile stretch of their reservation in central Washington.

Those days are but a memory now because the advent of agricultural development in south-central Washington in the early 1900s drastically altered the natural river flows in the basin. Nine diversion dams, numerous canals and storage reservoirs were erected in the basin to divert water for irrigation. Most of these water projects were built without fish ladders and screens.

In addition to the absence of proper passage facilities, the availability of water in
The ability of irrigation and fisheries interests and federal power agencies to overcome their differences and work for the enhancement of the Yakima is now being tested.

The Yakima basin is often in question. In low-water years, sections of the river below some diversion dams have occasionally been dry, ruling out any possibility of fish migration.

Despite such obstacles, the Yakima Basin is now recognized by agricultural, power and fishery interests as potentially a great resource for anadromous fish.

Recent progress in implementation of section 900 of the Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program has renewed hope that, with proper passage facilities, salmon and steelhead populations in the Yakima could be increased to around 10,000. Section 900 of the Council's Fish and Wildlife program calls for the installation of ladders and screens at Yakima Basin water projects.

The ability of irrigation and fisheries interests and federal power agencies to overcome their differences and work for the enhancement of the Yakima is now being tested. But at the moment, most parties involved in the Yakima enhancement effort are optimistic that fish restoration efforts are on the right track.

"We're very encouraged by the active participation of the Council and BPA in moving the project forward," Regional Bureau of Reclamation Director William Lloyd, said. The need to erect fish passage facilities in the basin had been identified for years, he said. Recent efforts by the Council and BPA should provide the "capital and push to get it (enhancement effort) over the top."

Because many of the proposed projects are estimated to cost over $1 million and have a useful life of at least 15 years, Bonneville must have congressional approval of the spending before construction begins. BPA also needs approval to transfer these funds to the Bureau of Reclamation, which owns and/or operates most of the projects.

The Council has taken a lead role in designing an amendment to Senate Bill 1027 to secure necessary authorization and has encouraged BPA and the Bureau of Reclamation to initiate the design phase of the work in expectation of legislation passage.

On an upbeat note, BPA recently executed an agreement with the Bureau to conduct pre-design work on some of the highest priority projects in the basin, which include Roza Diversion Dam, Roza Powerplant, Sunnyside Diversion Dam, Easton Diversion Dam, Wapato Diversion Dam, Toppenish Creek Diversion/Satus Unit, and Old Reservation Canal.

The estimated budget for the FY84 pre-design work is $150,000. The work will include preliminary engineering studies, preparation of documents needed to satisfy the National Environmental Policy Act (NEPA), identification of the necessary 1027 to secure permissions, and preparation of construction schedules and cost estimates for each project.

The Bureau of Reclamation will be on a fast track to complete pre-design work by February 1984 for passage facilities at four of the Yakima water projects — Sunnyside, Old Reservation, Wapato and Toppenish/Satus Unit, as requested by the BPA.

BPA's plans for enhancement of the Yakima basin are "proceeding rapidly," according to Janet McLennon, BPA assistant power manager for natural resources and public services. "We are doing everything we have the authority to do and are seeking more authority to do things faster," she said.

BPA has also requested the Bureau of Reclamation to provide it with construction cost estimates for the Sunnyside, Wapato and Toppenish/Satus facilities for inclusion in its budget requests which BPA Administrator Peter Johnson will deliver to Congress in February.

The Bureau of Reclamation is funding pre-design work at the Prosser Diversion Dam and the Washington Dept. of Ecology at the Horn Rapids Dam.

The Council hopes that construction of fish passage screening measures at high priority projects can be completed by FY85 and that construction of all proposed projects will be final by FY87.

Most participants in the Yakima enhancement effort are encouraged that, after a frustrating impasse, some significant strides are being made.

Agency representatives are "putting their minds together to get the project off the ground," according to Walt Larrick, fisheries biologist for Yakima basin irrigation districts. "We finally have a process started. . .but it's just a beginning."

The irrigation districts he represents support the enhancement efforts underway in the basin, Larrick said. "We need to work it out so irrigation can co-exist with the fish" and no interest suffers, he added.

BPA's McLennon said she's optimistic the agency can "make significant contributions to improving conditions for anadromous fish runs." "We hope we'll get a top dollar result," she said.

The Council hopes that construction of fish passage and screening measures at high priority projects can be completed by FY85...
Water budget promises hope for migrating fish

by Susan Skog

Passage conditions for migrating anadromous fish were greatly improved in 1983, raising hopes that implementation of the Northwest Power Planning Council's water budget is off to a good start.

An above average water year coupled with more intensive coordination between the agencies which operate the Columbia River dams, fish and wildlife agencies, and Indian tribes provided better passage conditions for anadromous fish than in many past years. That upbeat assessment comes from the first annual water budget report recently submitted to the Council and the Bonneville Power Administration. The report was prepared by Malcolm Karr, the tribal water budget manager, and Mark Maher, water budget manager for fish and wildlife agencies in the Columbia River basin.

The Council's Columbia River Basin Fish and Wildlife Program, adopted in November 1982, calls for a “water budget” to improve streamflows on the mainstem of the Columbia River and the Snake River during spring migration of salmon and steelhead. The plan also calls for improvements to existing dams to aid migration and other measures to preserve fish and wildlife in the Columbia basin.

The Council's fish and wildlife program is funded and implemented by or through BPA, the Bureau of Reclamation, Corps of
Survival of downstream migrating juvenile salmon and steelhead in 1983 was estimated by fish and wildlife agencies to be the best since before 1975.

Engineers, and the Federal Energy Regulatory Commission — the four federal agencies with authority over hydroelectric projects in the basin.

The 1983 year is not officially considered a water budget year by the Corps of Engineers because an agreement between the owners and operators of the Columbia River basin hydroelectric system already was in place before the Council completed its program. But this past year was valuable as a trial run to test the abilities of the dam operators, agencies, and tribes to work together to manage the system.

Spring runoff conditions in 1983 were above average at the two water budget monitoring points — Lower Granite Dam on the Snake River and Priest Rapids Dam on the mid-Columbia — providing flows critical to fish during the spring migration between April 15 and June 15.

In fact, yearling chinook and steelhead migrated between Lower Granite and John Day dams in about 10 days. The water budget report indicates these travel times are the lowest for yearling chinook since 1973 (when estimates were first begun) and are the second lowest for steelhead.

This past year has been an excellent one for testing the flexibility of the hydropower system in dealing with the constraints of the water budget, according to Karr. To his surprise, the Columbia River dams have much more flexibility for all purposes — power production, fish migration, and other uses — than previously realized, Karr says. "I feel comfortable about the ability to provide relatively good passage conditions for fish in any year."

The water budget managers say they used the past year to develop the close communication and monitoring needed to fine-tune the operations of the dams on a daily basis. The trust and communications established with all parties "is a must, and we're gaining in that area," Maher said.

Monitoring the operations of the hydropower system on a daily basis has allowed the water managers to "anticipate" the needs of the fish and react quickly to make needed changes to aid fish migration, Karr said. As a result, there was more effort to protect anadromous fish than in the past and these efforts paid off. According to the report, "operation of traveling screens, transportation equipment, adult fishways, and spill and flow management were accomplished more efficiently and effectively in 1983 than in previous years."

Survival of downstream migrating juvenile salmon and steelhead in 1983 was estimated by fish and wildlife agencies to be the best since before 1975 when the lower Snake River projects were completed. Preliminary counts of adult migration of salmon, however, were still below average. Spring chinook counts at Bonneville Dam, for example, were 45 percent below the ten-year average. Some upriver counts were better, the report indicates.

On the other hand, steelhead runs rose dramatically. Preliminary count of the steelhead run at Bonneville Dam indicates the run is the largest river return since at least 1973.

Due to the exceptional water year, the water budget managers came to grips with a problem which occurs during high water years — the increased presence of dissolved gas which can harm fish. During the spring runoff, when reservoirs are filled to capacity, the excess water often must be spilled, increasing the likelihood of dissolved gases.

By early May, dissolved gas in the system had increased, prompting the water budget managers to monitor the types of spills at all Columbia River projects. To control the presence of dissolved gas, spills were often transferred from mainstream Columbia River to tributary projects. The managers also requested that the timing of spills and hatchery releases of fish be coordinated to "avert any significant dissolved gas problem which might otherwise have occurred," the report states. The meticulous attention paid to controlling the problem produced "gratifying" results, Karr said. No "significant" dissolved gas bubble disease was noted in migrating adult and juvenile fish, he said.

Major problems must be resolved for the water budget to be fully implemented in future water years. Perhaps most critical is the uncertainty over the amount of water that will be provided for the water budget from Dworshak Reservoir, operated by the Corps of Engineers, and from Brownlee Reservoir, operated by the Idaho Power Company.

Storage releases from these Idaho-based reservoirs is especially critical in low-water years to provide adequate flows for migrating fish. A low-water year would be characterized by the the low spring flows that were observed in 1973 and 1977. Maher and Karr say they and the project operators are working to resolve the problem.

Better methods to monitor migrating smolts are needed, and the water budget managers have developed a smolt monitoring program for FY84 BPA funding. A team of bio-statisticians has been assembled with representation from Indian tribes, fish and wildlife and federal power agencies, and utilities to develop an acceptable and statistically valid method of monitoring and counting smolts.

More experience also is needed to balance the needs of fish with the requirements of the hydroelectric system in low-water years. But the water budget managers are encouraged that great strides were made in managing the hydroelectric system for different uses, helping them to resolve future conflicts.

"If we have continued cooperation and coordination, then we can look forward to a steady increase in salmon returning in future years," Karr said.
Detailed discussions about firm surplus power sales between the Northwest and the Southwest, principally California, have been simmering for months. These discussions recently gained momentum in early December when the California Energy Commission responded to several conceptual approaches for a long-term sale. The approaches were advanced by an informal working coalition of representatives from Northwest utilities and the Bonneville Power Administration.

Several months ago, the Northwest came to the bargaining table armed with two specific approaches which could lead to the transfer to the Southwest of 1500 average megawatts of firm surplus power for a period of 15 years, beginning in July 1984. Current thinking is that the sale would be a systemwide transaction, based on a mix of firm surplus from generating resources owned by both Northwest utilities and BPA.

Randy Hardy, executive director of the Pacific Northwest Utilities Conference Committee (PNUCC), said the two alternatives were advanced to the Southwest to move discussions off dead center. "It's fish-or-cut-bait time," Hardy said. "We've offered them (California utilities) two fairly clear choices based on what they've been telling us they need." The Northwest has essentially told the Southwest "it's time for you to indicate if you're serious," about securing a sale for firm power from the Northwest, Hardy said.

In a December 9 letter from the California Energy Commission, Commission Chairman Charles Imbrecht and California Public Utilities Commissioner William Bagley responded that the Northwest's conception of the sale falls short of meeting the needs of California utilities. However, they urged the Northwest to intensify future discussions to clarify the nature and duration of the sale, signaling to the Northwest that the door for more formal negotiations may be open early next year.

The California response outlined eight outstanding issues that stand in the way of accepting the framework for a firm power sale as drawn up by the Northwest. The price of the power, whether it will be guaranteed for at least a 15-year period, and the future availability of non-firm energy were cited as issues that will need further study.

Hardy, who said he was "mildly encouraged" by the December 9 letter, pre-
It's insane to send the power south for the benefit of California industries when it could be used to displace oil and gas-fired use in the Northwest for 50 percent power savings, Collins said.

dicted that the Northwest would respond to it after January.

The Northwest has sold energy in the Southeast since the early 1960s, but most of the energy has been non-firm surplus power, available during the spring run-off periods on an interruptible basis. Now the Northwest is projected to have additional surplus power from the completion of new thermal resources — such as the WPPSS 2 plant and Colstrip 3 — and is anxious to secure a firm sale, warranting a higher price for the non-interruptible power. (See Northwest Energy News, July/August, 1983.)

The first of the two ideas advanced by the Northwest would provide for the sale of 1500 megawatts at a fixed price for a five-year period with a "rolling" five-year commitment every year after up to 15 years. The proposed price for the electricity is 4.5 to 5.0 cents per kilowatt hour in the first year and 6.0 to 6.5 cents by the fifth year.

The price of the power under this proposal is expected to remain constant until the latter part of the 15-year contract, when it is expected to climb to 7.5 to 8.0 cents as the Northwest begins to develop more expensive new energy resources.

The first alternative would include a five-year pull-back provision under which Northwest utilities would be able to withdraw from the contract on five years' notice if their own loads grow faster than predicted or they are unable to deliver the promised energy.

The second alternative, which most interests Northwest privately-owned utilities, would guarantee the sale of firm power for 15 years at a fixed price of 6.0 cents per kilowatt hour for the first ten years, with the price escalating in the last five years, again depending on the type of new resources developed. The second proposal contains no call-back provision and is based on the idea that the Northwest's firm power should command a higher price because of the risks in committing to a long-term sale.

California Energy Commission advisor Gary Simon says the concepts proposed by the Northwest are "not entirely satisfactory" but show enough flexibility that an arrangement could possibly be worked out. While Simon stopped short of predicting if a deal could be struck, he added that he is "still cautiously optimistic the two sides could move to ground where both are comfortable."

Northwest utilities are less optimistic that a contract will be finalized with the Southwest in the immediate future. There are "two dozen major stumbling blocks" which could kill the chances of a deal, Hardy said. "Even under the best of circumstances, there's a one-in-ten chance of consummating a deal." But he said the benefits from such a sale could be so substantial that it's well worth pursuing.

Part of the Northwest's pessimism stems from California's reluctance to enter into any contract for firm power at a higher price, if it jeopardizes its long-standing ability to purchase non-firm power at bargain-basement prices.

California has jumped at the chance of idling some of its oil and gas-fired capacity, which cost as much as 6.0 cents per kilowatt hour to operate, when Northwest non-firm surplus power was available at 0.5 cents. (In BPA's new 1984 rate schedule the non-firm rate went to 0.9 cents.) California power utilities purchased 2,000 megawatts from the Northwest in 1982.

The Northwest's negotiating position will only become credible when it takes the necessary steps to use the non-firm power within the region, blocking off the Northwest's access to the inexpensive power, according to Charles Collins, Washington state Power Council member. As a representative of the Council, he has attended recent meetings between Northwest and Southwest utilities. "It's insane to send the power south for the benefit of California industries when it could be used to displace oil and gas-fired use in the Northwest for 50 percent power savings," Collins said.

Until the Northwest uses its non-firm power within the region, it's doubtful that an "advantageous" contract between the two regions will be struck, Collins said, because the negotiations will continue to get hung up on factors such as the price of the power. "We have a fundamentally flawed market situation. We can't deal with price until we deal with supply," he added.

Only when the Southwest is unable to covet the Northwest's non-firm power will it begin to compare the price of its firm power with the Northwest's, Collins said.

The Northwest's pessimism about securing a long-term arrangement with California was underscored by a recent power sales deal negotiated between British Columbia Hydro and the Los Angeles Department of Power and Water and the cities of Burbank, Glendale, and Pasadena. Up to 400 megawatts will be sold by the Canadians for the next three years for 2.0 to 2.2 cents/kilowatt hour, markedly undercutting the Northwest's desired price.

The California/B.C. hydro arrangement only reinforces that there are many available markets from which California can pick and choose to meet its needs on a short-term basis. And it may continue to rely upon short-term purchases of power and forego a long-term arrangement with the Northwest because "a bird in the hand is always worth two in the bush," Hardy said.

Simon of the California Energy Commission asserts that attractive short-term purchases of surplus power are always desirable under certain conditions, but the Southwest would rather have the assurance of a long-term, firm sale. "We're willing in California to pay a higher price for a long-term contract," he said.

He cautioned, however, that the Southwest is unwilling to pay too high a price for that security. "It's been made clear that if the Northwest wants to build new thermal plants to support a sale out of the region ... the price would be too high to be attractive," Simon said.

To keep the price of power low enough to entice the Southwest, Northwest utilities must take risks and be innovative in executing the Council's energy plan, Simon said. The Northwest though, would like to come close to recovering its costs from the development of new thermal resources scheduled to come on-line in 1984.

Colstrip 3, a coal-fired plant in Montana scheduled to come on-line in 1984, is expected to cost at least 6.0 cents per kilowatt hour. The plant's owners include Montana Power Co., Puget Sound Power and Light Co., Portland General Electric, and Washington Water Power.

"The Northwest has offered us 1500 megawatts. We could use all of that ... if the price were right," Simon said. California has a capacity of 42,000 megawatts and projects it will need 13,000 additional megawatts by 1990.

Still another major obstacle to a smooth
If the Richter scale were used as a barometer to register the success of recent discussions it would only register a 2.0, Schultz said.

resolution of the power transfer is the inadequacy of current transmission capacity between the two regions. The Northwest is operating under the assumption that the transmission capability must be increased to handle at least the 1500 megawatts proposed in the sale.

"Transmission constraints present one of the greatest hurdles to increased interregional transfers," concludes Wheaton. "It appears that the present transmission capacity cannot support a large firm surplus sale without displacing some other sale."

The transmission question is one that a committee of Northwest utilities has been wrestling with for months, according to Merrill Schultz, director of the Intercompany Pool, a private utility organization. The committee has been studying a range of possibilities and has whittled down the current alternative to nine different scenarios.

Two inland proposals would emanate out of Garrison, Montana. One line would be built through southeastern Idaho and go directly to Los Angeles. The other proposal involves running a line through south central Idaho to San Francisco.

Under another inland scenario, a line would be built beginning at the Dworshak Dam in northern Idaho, near Lewiston, and continue through the Hells Canyon area on the Idaho-Oregon border and on to the San Francisco area.

Two "coastal" alternatives are also being explored. One would parallel the existing direct-current transmission line which now runs from northern Oregon to southern California. The other alternative would parallel the existing alternating current lines, which run from the John Day Dam in northern Oregon to southern California. The other alternatives fall within the basic framework of these scenarios.

Northwest utilities are searching for a transmission alternative that "does the most work for the fewest dollars," Schultz said. California utilities have given no indication which alternative they would prefer.

Meanwhile, Schultz remains pessimistic about prospects for finalizing a sale with California in the near future. If the Richter scale were used as a barometer to register the success of recent discussions it would only register a 2.0, Schultz said.

Beyond the usual difficulties with negotiating such a complex transaction, there is the added difficulty of coordinating the participation of all affected and interested parties in both regions.

There are approximately 40 players in the Northwest and an equal number in the Southwest, according to the California Energy Commission's Simon. "Each individual holds a vote... and anyone could block it."
Until the final hour, Bonneville held out hope that enough utilities, especially the private utilities, would enter into the agreement.

After months of in-house analysis and negotiations with the Bonneville Power Administration, the Northwest's largest utilities rejected a conservation contract offered by the federal agency in July to 130 eligible utilities. When the October 31 deadline arrived, the region's private utilities, the cities of Seattle and Tacoma, and most of the public utilities that generate a significant amount of their own power, turned their backs on the 20-year contract.

After the final tally, 101 utilities, representing 40 percent of the region's electric heat customers, signed the contract. This allows them to receive BPA financial assistance for home weatherization and street lighting programs. About $150 million has been budgeted by BPA for these two programs over the next two years. The agency has also budgeted about $200 million for demonstration and pilot programs that it intends to develop in the commercial, industrial and agriculture sectors over the next two years.

Until the final hour, Bonneville held out hope that enough utilities, especially the private utilities, would enter into the agreement. BPA expressed serious disappointment that the majority of the region's utilities decided to "go it alone" with their own conservation programs.

"The simple truth is that their (utilities') decision not to sign will significantly increase the difficulty of carrying out a coordinated regional conservation," BPA administrator Peter Johnson said in a prepared statement.

The region's private utilities largely balked at signing the BPA contract because they alleged the cost of the agreement far outweighed any benefits their ratepayers would receive. At issue was a conservation contract charge requiring the utilities which generate their own power to pay for their participation in BPA-sponsored conservation programs.

The utilities argued that the contract charges were burdensome and would cost them more than pursuing conservation independently of BPA.

Puget Sound Power and Light Conservation Director Gary Swafford said the contract charge dampened the utility's enthusiasm for the contract. Puget Power estimated it would have paid about $37 million and received about $20 million in benefits over the next 20 years for current BPA programs, Swafford said.

Likewise, Pacific Power and Light estimated it would have cost the utility an additional $7 million over the next two years without any assurance of future benefits after 1985 to offset the up-front charge. Jim Pienovi, PP&L vice president of energy services, said the utility hasn't closed the door on further discussions with BPA on the contract. In fact, PP&L hopes the economic disadvantage of the contract can be eliminated so the utility could "be in a better position to look at signing the contract," Pienovi said.

Idaho Power Director of Conservation Management Cal Bowen estimated the Boise-based utility would have paid between $20 to $23 million to participate in the contract. Philosophically, Idaho Power also opposed bearing a heavy financial burden to help other areas of the Northwest catch up to its already aggressive conservation efforts, Bowen said.

From BPA's perspective, the contract charge wasn't the major stumbling block to acceptance of the conservation agreement. The absence of concrete conservation programs, such as pilot programs to carry out the Council's two-year action plan, may have caused utilities to shy away from the contract, according to Gene Ferguson, BPA conservation implementation manager.

Major utilities say no to BPA contracts...for now

by Susan Skog
BPA charged that the utilities' claim that there weren't enough benefits to persuade them to sign the contract is just a smokescreen.

The non-signers said they “didn’t have enough assured benefits to compensate for the contract charge,” Ferguson said. The charge then looked “inflated” to the utilities because they could only examine the economic benefits from BPA’s existing weatherization and street lighting activities. Unfortunately, the utilities were only able to do a “very narrow, short-term economic analysis," Ferguson said. Most of the region’s private utilities have already established an impressive track record in residential conservation.

Steve Hickok, BPA assistant administrator and conservation manager, charged that the utilities’ claim that there weren’t enough benefits to persuade them to sign the contract is just a smokescreen. When all the smoke is blown away, utilities face two clear impediments to signing the contract, he said.

First, the private utilities don’t want additional conservation in the immediate future because they don’t want to see their loads reduced. Second, the utilities didn’t want to bear the costs of the Council’s two-year action plan, which they view as expensive, Hickok said.

The private utilities didn’t oppose the philosophy of sharing conservation costs through a charge, but are too financially strapped now from other obligations to invest in additional conservation, Hickok added.

The utilities can’t look at the long-term benefits of conservation investments until more pressing short-term problems are dealt with, he said.

Puget Power, Portland General Electric Co., Pacific Power and Light and Washington Water Power have collectively invested nearly $400 million in the now-defunct Skagit-Hanford nuclear plant, which was to have been built in Washington. FGE and PP&L have also invested millions of dollars in the Pebble Springs nuclear plant, which was also shelved. Finally, FGE, PP&L, Puget Power and Washington Water Power Co. have collectively invested more than $700 million in the stalled WPPSS three nuclear plant.

The utilities have asked their respective utility commissions to recoup their investments in Skagit-Hanford and Pebble Springs by melding them into their rate base, based on the premise that they were prudent utility investments. Some of the utility requests have been granted, but the majority of the sunk costs may be absorbed by the utility’s stockholders.

The utility’s plans for new thermal generation went awry, so they are understandably cautious about investing in conservation at this time, Hickok said.

Though he feels their concerns are “short sighted,” he admits that if he were in the utilities’ shoes, he might be sufficiently frightened about the current financial malaise and make the same decision about the conservation contract, Hickok said.

“As disappointed as I was, I recognize that this is the environment we have to deal with,” and BPA is looking for ways in which the private utilities can participate in the regional plan without jeopardizing their financial positions further, he said.

Thus, BPA is now grappling with the limited reach of its conservation efforts in light of the strong regional effort called for in the Northwest Power Act and reflected in the Council’s plan.

The refusal of the utilities to enter into the agreement “limits the magnitude of our programs and our flexibility in developing future conservation programs,” Ferguson said. “We still need to tap into the IOUs (investor-owned utilities) to share experiences with them and learn from their activities.”

Hickok said BPA has many options to involve the private utilities in implementation of the Council’s two-year action plan, which the agency intends to outline to the Council. One idea is to pursue some conservation programs in tandem with the utilities, which would share in the cost of the program. If utilities are considering a program which would help BPA carry out regional energy conservation efforts, then BPA might try to “link up with them,” Hickok said.

At the same time, BPA will be cautious about sticking by those who signed the conservation contract “and not give the store away” to the non-signers, he added.

The agency will also try to find a more acceptable way to recover conservation costs for possible inclusion in the next rate request, which would be filed in the summer of 1984, he said.

In the meantime, the agency is looking into the future and intends to offer the conservation contract again next summer, Hickok said. Before fiscal year 1985 programs are started, the agency would “open the door to see if anyone else wanted to come in,” he said.

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**CALENDAR**

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<tr>
<td>January 27</td>
<td>BPA, billing credits policy — cost-effectiveness determination/ close of comments.</td>
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<tr>
<td>January 31</td>
<td>PNUCC load forecasting committee meeting, Portland.</td>
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<tr>
<td>January 31</td>
<td>BPA, request for commercial sector financial field tests/proposals due by 5 p.m.</td>
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<tr>
<td>February 1, 2</td>
<td>Northwest Power Planning Council meeting in Coeur d’Alene, Idaho.</td>
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<tr>
<td>February 15</td>
<td>BPA, revised proposed impact aid policy/close of comment period.</td>
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<tr>
<td>February 22, 23</td>
<td>Northwest Power Planning Council meeting in Missoula, Montana.</td>
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<td>March 14, 15</td>
<td>Northwest Power Planning Council meeting in Eugene, Oregon.</td>
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<td>April 4, 5</td>
<td>Northwest Power Planning Council meeting in Boise, Idaho.</td>
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FISH & WILDLIFE AMMENDMENTS ORDER FORM

- Please send me a copy of applications for amendments to the Council's "Fish and Wildlife Program:"

NAME ____________________________

ORGANIZATION ____________________________

ADDRESS ____________________________

- NOTICE: One copy will be sent to each organization free. Additional free copies will be available upon request for each 1,000 members in the organization. For example, an organization with 3,000 members would be entitled to three free copies.

All other additional copies will be at a charge of $25 to cover printing, binding, and mailing costs.

Number of copies requested. Check enclosed (if applicable).

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