High Country News

October 13, 1986

Vol. 18 No. 19

A Paper for People who Care about the West

One Dollar



The Columbia River: An Age of Reform

WATER



Indians fishing at Celilo Falls before it was inundated behind The Dalles Dam

Western Water Made Simple

The second of four special issues starts on page 6

WESTERN ROUNDUP

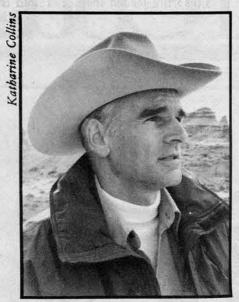
Hodel favors BLM wilderness in Wyoming

During a visit last month to Wyoming, Interior Secretary Donald Hodel talked with reporters about wild horse roundups and wilderness.

Looking at remote Adobe Town, one of several BLM wilderness study areas in the state, Hodel said he favors wilderness designation in southwestern Wyoming and does not agree with those who say deserts are not appropriate as wilderness. Hodel pointed out that wilderness described by Christ in the Scriptures was "more akin to this area than mountains and trees."

Hodel was not so sure about deserts in Utah, however. When asked whether he agreed with his advisory panel's recent recommendations against wilderness designation for BLM lands in Utah, Hodel said he was "not familiar with the Utah situation."

But he was familiar with the Environmental Protection Agency's criticism of Utah BLM's 10-year wilderness study process that culminated recently in 1.9 million acres



Secretary of Interior Donald Hodel

recommended for wilderness. Hodel said, "EPA may have been out of line in its critical remarks" and added that the agency is "rethinking some of their criticism."

EPA's Dale Vodehnal, who heads the impact statement branch at EPA's regional office in Denver, disagreed. "I don't see our position changing," he said.

Recently, he added, an "extremely upset" Roland Robison, who is the Utah BLM director, came to Denver to express dissatisfaction with EPA's opinion that Utah failed to approach wilderness designation region by region. Vodehnal said Robison asked the EPA to clarify its authority to make comments and asked for more examples to support criticism of its draft EIS. Vodehnal said his office will replace its original comments on the BLM draft with more specific examples and an explanation of how his agency's concerns relate to the

On the subject of wild horses, the Interior Secretary said he was convinced by his visit that the roundups are humane and should continue. Hodel said he also supports the sale -- currently prohibited by federal law -- of horses not adopted after the annual roundup.

-- Katharine Collins

High Country News

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Dear friends,

Mother Nature was kind to the staff during the preparation of this issue on the Columbia River. She sent day after day of unremitting rainfall, so we were able to get a feel for what it must be like to live in the Columbia River Basin.

Of course, not all of that basin is in a rainbelt. Some is as arid as any part of the intermountain Rockies. Ever accommodating, the weather cleared during the last day or so of production, reminding us of what the sun is like, and revealing mountains that are newly snowcapped. Nearby Grand Mesa, we hear, has three feet of snow and excellent cross country skiing.

With the clearing came the crisp weather of fall, although thus far we have been spared a freeze. Not that it makes much difference. The shorter days and cooler weather mean that the green tomatoes and strawberries just sit there, defying even the surviving grasshoppers to chew on them.

The wetness has been a nuisance here, but it has been a tragedy in parts of Montana. That state, in the news last year because of drought, is now waiting for flood waters to drain away.

The Paonia weather has not deterred visitors. Lee Sayre, a long-time reader from Colorado Springs, came through for apples and

fall colors. Ed Quillen, one of the very few people we know who supports himself by freelance writing, came by with wife Martha and daughters Abigail and Columbine.

One of their survival tricks, the Quillens said, was to live in downtown Salida, Colorado, where they can walk to school, shops and saloons. But Salida is being hit by the economics affecting most rural Rocky Mountain towns, and they may soon have to drive their 1965 slant six Dodge Dart, which has all of 60,000 miles on it, out to the highway to shop.

-- the staff

HOTLINE

Bridger-Teton plan

The long-awaited draft Bridger-Teton Forest Plan will call for a 38 percent reduction in timber harvesting and the eventual closing to logging traffic of the Union Pass Road according to an "advance overview" of the 1,800-page document. The 16-page document was provided to the press to briefly describe the draft plan and its accompanying environmental impact statement, which will be released this month. Bridger-Teton information officer Fred Kingwill said he anticipates a "furious reaction" to the recommended closure of the 4-mile section of the Union Pass Road recently realigned by Louisiana-Pacific. The realignment approved by Forest Service Chief Max Peterson in June allowed L-P to begin hauling its 2.4 million board foot Little Sheep Mountain timber sale near Pinedale over Union Pass to its Dubois mill. Kingwill said he also anticipated resistance to the proposed cutback in annual green sawtimber harvesting from the current 26 mmbf to a new level of 16 mmbf. L-P's chief forester in Dubois, Bob Baker, said he will do everything in his power "to see that the Forest Service does not write off this community." He said he would work to keep the Union Pass Road available for logging and to assure annual green sawtimber harvesting levels at 35 mmbf, the amount he said is needed to sustain existing industry. Public comment on the Bridger-Teton draft plan will be "unusually extensive," Kingwill said, because of unprecedented public interest in the management of the 3-million-acre forest. Kingwill said the public comment period will last 120 days, 30 days longer than required, and will conclude in February 1987.

Recovering grizzly

The Montana Department of Fish, Wildlife and Parks is circulating a draft memo calling for the delisting of the grizzly bear from endangered species status in Montana's Northern Continental Divide ecosystem. The memo states that the ecosystem's estimated 549 to 813 grizzlies exceed the goal of 560 bears listed in the area's 1982 Grizzly Bear Recovery Plan. The department also says the bear population meets or exceeds the plan's population characteristic requirements -- reproductive rate, litter size, mortality rate, etc. -- and other criteria for changing the grizzly's 11-year status as a threatened species. Delisting would only affect the grizzlies in the Northern Continental Divide region in northwestern Montana, and would not affect those in the Yellowstone area. No groups have protested the memo yet, but Tony Povilitis, director of the Campaign for Yellowstone's Bears, questioned the move. "With all the development going on in the intermountain West, it might be unwise to think the population is so secure that it no longer needs protection." The memo is being reviewed by the U.S. Fish and Wildlife Service, the Forest Service and the National Park Service.

Anschutz wins at Mosquito Creek

The Anschutz Corp. won the last round in an 11-year battle over its Mosquito Creek oil well application when the Interior Board of Land Appeals rejected a last ditch challenge from Wilson, Wyoming, resident Mark Altman. The ruling gives Anschutz the go-ahead to drill an exploratory well at its Mosquito Creek site in Wyoming's Bridger-Teton National Forest. Residents from nearby Wilson and Jackson Hole fought the well as part of their increasing resistance to oil and gas encroachment on the area's recreation-based economy. Anschutz has begun upgrading the road to the well site, but the company has not said when it plans to install the drill rig. Members of the environmental group Earth First! have promised a protest at Mosquito Creek.

How long until grizzly 104 explodes?

A grizzly sow and her two cubs have been delighting people with their antics near the east gate to Yellowstone National Park.

The threesome have been near the Pahaska campground and east gate off and on all summer. Lately they've "been putting on quite a few side shows," according to Wyoming Game and Fish bear expert Larry Roop.

He said people have followed, hounded and moved in on the bears as close as 20 feet, and some people have yelled at the sow to get her to sit up.

"That is a very aggressive bear when she wants to be," Roop said. "I've seen her in some vicious fights and saw her recently chase off a big, aggressive male that came around. She's a little terror."

Pahaska and east gate regulars dubbed the sow "Arnie," after golfer Arnold Palmer. "She gathers a crowd like Palmer, and when she moves, the crowd moves too," Roop said.

The four-year-old grizzly, Number 104, was first captured in 1983 and has been in the east gate area intermittently since. She is "relatively unafraid" of people, Roop said. She recently dug into a camper's cooler and also walks through the campground. He thinks another grizzly in the area -- but one they have never been able to collar -- is a sibling of hers. That bear is young to have cubs, but also has two.

The concept of a "safe, neutral bear" is gaining public favor, Roop said, but he has problems with it. That idea is leading people to forget how dangerous a grizzly can be.

He said bears are not typically neutral to anything in their environment, except maybe trees or rocks, and they throw and rip them apart looking for food. Everything else is either prey, or like another bear, a competitor.

Grizzlies like 104 are actually just tolerating people when they appear unconcerned about human presence, Roop said.

He said grizzlies will treat people like a competitor, and when people stress or upset them, they'll just walk away, maintaining their poise.

"But one of these times she's going to get a little ticked off, and someone is going to get really hurt." Roop said most of the seven or eight people that have been killed in Glacier Park in the last 20 years have been killed by sub-adult bears that as cubs were classified as "neutral."

"They are not aggressive at first, but later become aggressive," he said. "These neutral bears are time bombs."

Meanwhile, boxes that were installed in the Shoshone Forest as bear-proof are proving not to be, Roop said, as two Cody hunters in the Crandall area recently found out

Bob Morris and Donovan Allen had stored dog and horse feed, hamburger, eggs, bacon, bread, peanut butter and jelly, Spam and other food items in the metal box provided by the Forest Service at their campsite. On their first night out, Morris said a big bear, probably 500-600 pounds and five feet tall, came into their camp and after 45 minutes had torn open the

He said the boxes are about five feet long and 18 inches high and wide. They are "quite solid" and made of about one-eighth inch steel. But the two spring-loaded snaps that hold the top down are the weak spots, he said, because the bear broke one off, got his claws underneath and ripped the other side off. "He was rewarded nicely," Morris said, and left them only one package of freeze-dried food, a small can of pudding and a candy bar.

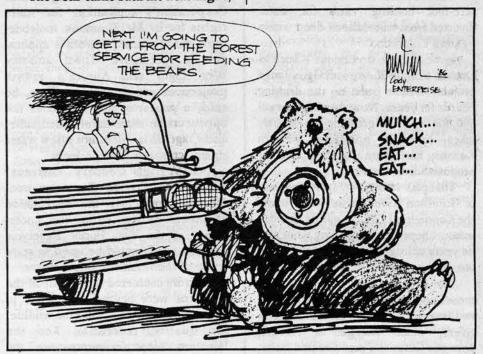
He said the bear tearing the box apart sounded like a "car accident." Two men have their hands full moving an empty box, he said, but the bear was breaking small trees off as it moved the box about 100 yards from their camp through trees.

The bear came back the next night,

but their dog chased him off. He returned a third night, "for the scraps," again after dark when all they could see him with was a flashlight, and this time they managed to scare him off by firing shots over his head. As during the other two nights, they stayed in camp and watched him him from about 50 feet away.

"Being out of food, we were the only things left to eat, and I think he knew that too," Morris said of their reasons for going home early.

-- Bruce McCormack



Bears without berries

Bears are hungry this year, but where they are finding food they are also finding trouble. Biologists in the Yellowstone National Park area report that scarce food and an increasing population are driving black bears and grizzlies down from the hills in search of easier pickings.

A grizzly sow and her cub were shot in early September while dining on a rancher's sheep near the northern border of Yellowstone. Another grizzly caused over \$1,000 in damages by raiding the larder of a home in West Yellowstone, Montana. The bear was attracted by dog food outside the back door.

In Ennis, Montana, a beekeeper shot a black sow and cub who had their paws in his beehives. Bears cost him over \$4,000 this summer, he said. On the eastern border of Yellowstone, near Cody, Wyoming, bears slashed

and bit into the tires of vehicles parked at trailheads. A state bear expert speculates the bears like the smell and consistency of the "rubber donuts." Nearby, one or more grizzlies caused thousands of dollars in damage, smashing the cabs of pickup trucks and ripping the seats down to the wire frames in search of food, reports the Cody Enterprise.

Sitings and run-ins with bears are up over last year throughout the West, says Glen Erickson of the Montana Department of Fish, Wildlife and Parks. Erickson attributes the rise to a poor white pine nut crop, a bad berry season and more bears. A lot more cubs were born this year, especially grizzlies, he says. In Yellowstone alone, 22 female grizzlies with young were seen this summer. Last year only nine were spotted.

-- Steve Hinchman

BARBS

His next book will be titled: I Kill for Excellence.

Tom Peters, who co-authored In Search of Excellence, has also written A Passion for Excellence.

He ought to know, he works for them.

Interior Secretary Donald Hodel told the Rocky Mountain News that "as a trustee for the Indians, I wouldn't advise them to trust the state. I wouldn't advise them to trust the federal government, either." Hodel was referring to informal and unsigned agreements between Colorado, New Mexico and the Ute Indians for cost-sharing in the Animas-La Plata water project in southwestern Colorado.

Heck, if they could find someone that wonderful, they should run him for president.

The Summit County Journal in Colorado's ski country printed the following paragraph: "To complete goals, (shopping center developer Leo) Molinaro suggested that a management entity be appointed who has the hard-boiled business acumen of a developer with a gleam of the public interest in the eye."

Who says Americans aren't interested in international news?

A reader asked the following question of *Parade* magazine: "A great deal of publicity was accorded Diana's virginity prior to her marriage to Charles. But I saw nothing in the press about Sarah Ferguson's virginity or lack of it prior to her marriage to Andrew. Is that no longer a consideration?"



Wasting the West

Legislators from 13 Western states meeting in Colorado Springs, Colorado, recently were unanimous on the issue of the nation's first high-level nuclear waste dump. They sent Congress a resolution urging a suspension of all work on siting and development of a nuclear waste repository until work on a second repository begins. The Department of Energy was directed by Congress to locate two repositories in different regions of the country. Instead, the DOE narrowed finalists to Washington, Nevada and Mississippi for the first burial ground, while postponing a search in the East indefinitely. Western legislators fear that unless forced, Congress will never base an underground dump in the East, and that would leave the West bearing more than its share of the nation's nuclear waste burden. Eighty-five percent of the spent nuclear fuel produced in the country comes from east of the Mississippi River.



Coal on the range

Wyoming was home to seven of the nation's 10 most productive coal mines in 1985, according to a recent report by the National Coal Association. The Black Thunder surface mine near Wright, Wyoming, led the nation for the second year in a row with over 23 million tons of bituminous coal produced, followed by the Kerr McGee Corp.'s Jacobs Ranch Mine with almost 13 million tons produced. Both lie in Wyoming's Powder River Basin. Altogether the seven Wyoming mines produced over 92 million tons of coal last year.

A \$100 million split

The Senate and House split over building roads in national forests may be as deep as the Grand Canyon, environmentalists say. On Sept. 16 the Senate voted 53-42 to fund \$246 million for forest road construction in fiscal year 1987. Those funds would pay for new timber roads into currently roadless areas. However, the House has approved only \$148 million, a figure the Forest Service estimates will cost the logging industry 24,000 jobs in the next two years. The issue is now in committee, but environmental groups predict a confrontation when the Senate version of the bill returns to the House.

Pale and leafless

Colorado's aspen may look sick, but the trees are not dead yet. Large stands throughout the state, and especially on the Western Slope, have been ravaged by epidemic numbers of the large aspen tortrix, a relative to the spruce budworm. The tortrix is a dark green caterpillar that feeds in early summer by folding and chewing aspen leaves, leaving the trees pale and leafless. Later, the tortrix turns into a gray moth and lays its eggs in tent webs on the trees. "There's not much you can do with the aspen tortrix but let it take its course," says Bill Jarrell, a forester for the Grand Mesa, Uncompangre and Gunnison National Forest. The tortrix's life cycle is two to three years, but healthy aspen can be defoliated three years running and still come back, he adds. Compounding the problem this year is a leaf blight called Marsonia Populi, or ink spot. The blight's worst effect thus far is that it spoils a usually colorful fall.



Artifacts trial

A federal jury in Salt Lake City acquited Allan (Buddy) Black Sept. 19 of charges that he dealt illegally in relics stolen from Indian ruins on public land. The case against Black, a southeast Utah native who now lives in Henderson, Nevada, was based on controversial testimony from Earl Shumway, a convicted artifact looter now on parole. Defense attorney Edward Brass blasted Shumway's credibility, calling him the "Adolf Hitler" of archaeology, who has destroyed thousands of sites. Prosecuter Bruce Lubek of the U.S. Attorney's office responded, "I'm not asking you to give him (Shumway) a medal. But why would he lie? He's real unpopular down there because he's telling on everyone," the Times-Independent of Moab, Utah, reported. Shumway, who said he made his living for five years by selling looted Anasazi artifacts, became a federal informant last spring. His confessions led to a series of federal raids on homes and businesses in the Four Corners region, and among those netted for illegal possession of Indian artifacts was Buddy Black's father, Calvin, a San Juan county commissioner. Looting Native American ruins and dealing in artifacts is a violation of the 1979 Archaeological Resources Act.

A Colorado city looks westward for water

Colorado's war over water between the growing, urbanized Denver area and the shrinking, rural Western Slope is now being fought on three fronts. The two long-term battles are the Denver area's desire to build Two Forks Reservoir on the South Platte River, and the Aurora-Colorado Springs effort to build Homestake II in the Holy Cross Wilderness near Vail.

Thus far, Denver and its 46 or so city-county-water company partners have spent \$30 million on a still incomplete environmental impact statement on Two Forks. If built, Two Forks, located east of the Continental Divide, will become a 1.2 million acre-foot holding tank for water diverted from watersheds deep within western Colorado.

Some of those diversions -- such as Denver's Eagle-Piney and Gore Range projects -- have been on the drawing boards for years. Now Aurora, a city of 300,000 that is growing so quickly jokes have it annexing western Kansas, has come up with another proposed diversion.

That plan to divert 73,000 acre-feet of Gunnison River basin water under the Continental Divide got its first day in court Sept. 26, beginning what may be years of litigation. The result was a one-year extension of the case.

The proposal calls for a 15-mile tunnel under the Collegiate Range and two reservoirs on the Taylor and East rivers, which merge at Almont, between Gunnison and Crested Butte, to form the Gunnison. Aurora's legal filing aroused the objections of 42 parties. Gunnison River Water Court Referee Aaron Clay called it the largest case in the history of the basin and noted it is the district's first transmountain diversion case.

At the informal hearing (which went untaped and unrecorded), Clay said he had called the meeting to familiarize himself with the legal issues and to have the parties inform the court of their intents. Aurora's attorney John Dingess sought to limit the scope of issues while many objectors raised concerns well beyond the ordinary scope of water rights

Aurora's application for the water rights in April took Gunnison County by surprise. The city claims the water may be drawn from the basin without purchasing or leasing any old rights. Aurora's junior status on the first-in-time, first-in-right ladder has not lessened its determination to obtain new water supplies to take the thirsty, expanding Front Range community into the 21st century.

But the 42 objectors swamped the water court office in the 30 days after Aurora's filing. They cited the following problems:

•The Virgil and Lee Spann ranches noted that the division engineer, a state official, has asserted that all rivers and streams in the upper Gunnison basin are overappropriated, which means more water is claimed than is available.

 Almont residents, who live less than one mile downstream from the proposed 198-foot-high Almont Reservoir Dam, worried about a drop in property values.

•Impacts on fish and wildlife and riparian habitat were raised by the Gunnison Angling Society. Others protested the possible effects on air quality, salinity of the Colorado River, local economic development and local tax burdens.

•The state Division of Wildlife noted that the Roaring Judy Fish Hatchery would be inundated by the Almont Reservoir and that finding a replacement site would be difficult and expensive.

•The Colorado state engineer, whose job includes the administration of the complex system of legal water rights, said the application did not contain enough information to determine if the project would injure senior rights. Others noted that Aurora's \$300 million estimate left out the costs of land, lawsuits and inflation.

 Crested Butte, using an argument from its case protesting Amax Corporation's application for water rights for its Mt. Emmons molybdenum mine, claimed Aurora's application is speculative. Town attorney Wes Light said Aurora's growth projections are unrealistic. Thus, he said, a project of this size does not appear to be immediately justifiable, and Colorado law does not allow water rights for speculative projects.

•The High Country Citizens' Alliance, a Crested Butte environmental group, took the speculation argument further, citing the uncertainty of the Two Forks Reservoir project, which would be used to store some of the Gunnison Basin water.

Aurora countered that many of the concerns were beyond the scope of Colorado water law. Fish and wildlife, air quality, recreation and the Western Slope economy are the responsibility of state and federal agencies and the state Legislature, Dingess said. Aurora has promised full mitigation and compensation for injuries to property and the fish hatchery and relocation of a state highway that would be inundated.

Gunnison County Attorney Rikki Santarelli argued that the water court should be concerned with the broader public trust, a legal doctrine that says private interests must be balanced with the overall best interests of the public.

Clay seemed to agree with Aurora that many of the issues belong in other forums. His main concerns were the availability of the water and possible injury to senior water rights holders. He granted a one-year extension of the hearing to give Aurora and the Upper Gunnison River Water Conservancy District time to negotiate a deal.

Though neither Dingess nor the River District's attorney Dick Bratton specified the nature of the bargain, the potential prize for Gunnison may be construction of a group of small reservoirs that the Upper Gunnison District has long sought. Since Aurora's April announcement, Bratton has several times publicly noted the possibility that Aurora's project could help the local economy, which is based on cattle, skiing and summer recreation, and a college.

The Water District last year released a study of six potential locations for dams on Gunnison country creeks. At that time Bratton noted that agricultural interests could not afford to pay for those projects, but recreation interests might. He has suggested that stabilization of the flows of the small streams might benefit local fisheries.

The small reservoirs could also replace the proposed Almont Reservoir, since its function is to provide replacement flows to downstream water users. The Almont Dam on the East River has aroused far more opposition than the Pieplant Dam on the upper Taylor River, which would store the water before its diversion under the Divide.

-- Gary Sprung

Visitors don't care

Relocating camping facilities from Fishing Bridge in Yellowstone National Park will have little or no effect on "gateway" communities, according to a recent study done for the National Park Service. The independent researchers detected little campground loyalty, a general lack of familiarity with the park and an overwhelming desire to spend time observing wildlife -- particularly the grizzly bear. Virtually no one filling out the 11-page questionnaire said they would have altered their entrance or exit from the park if their current campground were closed. Park concessionaires, local communities and Wyoming politicians have all cited economic concerns for opposing the closure of Fishing Bridge, which is prime grizzly bear habitat. The study was released by the National Wildlife Federation, which is suing the Park Service to force the agency to honor its promise to close the campground.

Dredging squashed

The Interior Department said it will not appeal a 1985 U.S. District Court ruling that bans dredge mining in Idaho's Salmon River Wilderness Area. Interior's decision was declared a "total and complete victory" by the Idaho Conservation League. Rick Johnson, the League's public lands coordinator, told the Idaho Mountain Express that now the Middle Fork of the Salmon River "will not ever be degraded by dredge mining and will remain protected as Sen. Frank Church intended." The League brought the case to court in 1983 by contesting four Forest Service approved dredge applications for the Middle Fork. Two years later, Judge Ray McNichols ruled that Congress intended to ban all dredge mining when it granted wilderness status to the area. Interior made that decision final when it canned the Forest Service's intentions to appeal.

Hitting its stride

Plagued by start-up problems, Unocal Corp. reported good news recently for the nation's first commercial oil shale project. Unocal President Richard Stegemeier said most of the kinks in the Parachute Creek plant in western Colorado have been worked out and that continuous production will begin this fall. The \$650 million plant was completed in September 1983, but its cooling system and rock-scraper never fully functioned. The plant operated at full capacity for the first time this July, when it processed about 12,800 tons of shale ore a day. Unocal has so far produced 159,000 barrels of raw shale oil, which must be further refined into high-grade crude oil. The plant is designed to produce 10,000 barrels of raw shale oil per day.

BULLETIN BOARD



John Running photo from the book, Blessed By Light

BLESSED BY LIGHT

Blessed by Light: Visions of the Colorado Plateau, is a book to savor. It features 80 color photos by a number of professionals who have grown to love this rugged land. Photographers include Stephen Trimble, Wallace Stegner, John Running, Dennis Turville, Larry Ulrich, Tom Till, Jeff Gnass, Philip Hyde, Catherine Veile, and Michael Collier,

Their varied and stunning portraits of the Colorado Plateau are divided into several sections: rock, water, canyons, mesas, plateaus, mountains and time, and quotes are sprinkled throughout from writers such as Edward Abbey, Ann Zwinger, John McPhee, Willa Cather and Colin Fletcher. Publisher Gibbs M. Smith says he is contributing one dollar for each copy sold to an environmental fund "to aid in the effort to establish and preserve wilderness areas on the Colorado Plateau."

Peregrine Smith Books, Box 667, Layton, UT 84041. Cloth: \$34.95. 96 pages, 80 color photos.

EARTH RESTORATION

Restoring the Earth is a collection of essays describing how individuals and groups took action to recreate the integrity of damaged environments. John Berger tells of a California pharmacist who saved a redwood forest and planted 10,000 trees with the help of his friends. Another example is a Pennsylvania mine inspector who repairs strip-mined lands. In his foreword, Rep. Morris Udall calls these and other stories "an inspiration and a beginning."

Alfred A. Knopf, 201 E. 50th St., New York, NY 10022. Hardback: \$18.95. 241 pages.

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A WILDERNESS HANDBOOK

The Stanford Environmental Law Society has published a layman's guide to the BLM wilderness review process called Wilderness Preservation: A Guide to Wilderness Selection on the BLM Lands, by K. Jack Haugrud. The handbook offers technical assistance to anyone who wants to take part in the review process. There are tips for interpreting the agency's wilderness criteria, following the process of "interim" management, reviewing mining regulations in study areas and making case studies of past decisions. The Bureau of Land Management oversees 270 million acres, of which over 24 million acres qualify for wilderness

Stanford Environmental Law Society, Stanford Law School, Stanford, CA 94305. Paper: \$10 plus \$1.50 for postage and handling. 124 pages.

LEAN AND CLEAN

The Environmental Policy Institute recently published a report on the importance of continuing research on fuel-efficient cars. The report, Improving Domestic Automobile Fuel Economy After 1985: Economic and Policy Implications, discusses fuel-economy standards in the last five years that have decreased our reliance on imported oil. Author Arnita Hannon proposes that we keep the pressure on through continuation of a gas guzzler tax and enactment of graduated increases in the federal gas tax. The Reagan administration, reacting to pressure from some American auto companies, advocates a slackening of fuel-efficiency standards for cars and trucks sold in the U.S. The report is available from the Environmental Policy Institute, 218 D Street SE, Washington, D.C. 20003.

TALKING IT OUT

Environmental disputes don't always wind up in the courtroom, contrary to popular belief. A book just published by the Conservation Foundation, Resolving Environmental Disputes, traces the growing use of mediation over the past decade. Author Gail Bingham analyzed 160 cases where negotiation was tried and found that three-quarters successfully reached agreements that were implemented 80 percent of the time. Bingham includes an extensive bibliography on the dispute resolution field, as well as 50 profiles of cases from around the country. Several federal agencies use negotiationrelated techniques to develop regulations, and five states require that waste-storage facilities negotiate with the community for an agreed site.

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UTAH CANYON COUNTRY, the first book in the new Utah Geographic Series, is now available! Includes authoritative text by Moab author F.A. Barnes, 162 color photos by the West's finest photographers, color maps and charts, and a foreword by Ted Wilson, former mayor of Salt Lake City. Send \$14.95 plus \$1.00 for postage (\$15.95 total per book) to: Utah Geographic Series, Box 8325, Salt Lake City, Utah 84108. Money-back guarantee if not fully satisfied.

ARIZONA WILDERNESS MEETINGS

The Arizona Bureau of Land Management is reviewing its remaining wilderness study areas and will hold a series of public meetings where people can voice their concerns. All meetings are in Arizona unless noted, and will begin at 7 p.m. and last about two hours. Dates and locations are: Oct. 28, Phoenix District Office, 2015 Deer Valley Rd.; Oct. 30, Chamber of Commerce Meeting Room, 333 W. Andy Devine Ave., Kingman; Oct. 30, Suverkrup Junior High School Multipurpose Room, 1590 Ave. C, Yuma; Nov. 3, Wallace School Gymnasium (Dome), 1650 Navaho, Parker; Nov. 3, Ruth Brown School, 241 N. 7th, Blythe, California; Nov. 5, Smoketree Elementary School Multipurpose Room, 2395 Smoketree Ave., Lake Havasu City. Send written comments to Bill Carter, Team Leader, Bureau of Land Management, 2015 W. Deer Valley Road, Phoenix, AZ

A COLORADO ATLAS

Kenneth Erickson and Albert Smith have written the new and first-ever thematic Atlas of Colorado. Maps throughout the 74-page book of climate, vegetation, geology, surface stream flows, land use, air pollution, water quality, population trends, origins of out-of-state skiers and more are well done, and a good research tool. Most of the statistics date back to 1980 or earlier, which is not a problem in most cases but a disaster in the "energy trends" category. Missing from the book are population data for towns and cities of the state.

Colorado Associated University Press, 1338 Grandview Ave., Box 480, University of Colorado, Boulder, CO 80309. Paper: \$9.50.

MONTANA MANAGEMENT PLAN

MONTANA MANAGEMENT PLANT The Bureau of Land Management in Montana is developing a West HiLine Resource Management Plan that will affect Glacier, Toole, Liberty, Hill, Blaine, Choteau, northern Fergus and southern Phillips counties, and include the upper Missouri River. BLM is considering alternatives that range from emphasizing resource production to environmental protection. Send comments and concerns to District Manager, BLM, Airport Rd., Lewistown, MT 59457.

ACCESS

NEAT STUFF

HERBAL HEALTHCARE PRODUCTS from regionally wildcrafted and organically grown herbs: teas, salves, lineament, cough soother, herbal extracts. Send SASE for product information: Wyoming Wildcrafters, Box 874, Wilson, WY 83014. (4x19p)

DISTINCTIVE NATURE NOTECARDS and stationery by Rocky Mountain artists. Mountain scenes, wildlife, wild flowers. Send \$1 for catalogue and sample: Westwind, Box 9078, Dept. G11, Missoula, Montana 59807.

SINGLE? ENVIRONMENTALIST? PEACE-ORIENTED? Concerned Singles Newsletter links unattached like-minded men and women, all areas, all ages. Free sample. Box 7737-B, Berkeley, CA 94707.

RECYCLED PAPER. Free color catalog of environmental notecards and recycled office and printing paper. Earth Care Paper, 325-56 Beech Lane, Harbor Springs, Mich. 49740. (7x13p)

CLASSIFIED ADS cost 20 cents per word, pre-paid, \$5 minimum. General rates for display are \$6/column inch camera-ready; \$8/column inch if we make-up. For ad rate brochure, write HCN, Box 1090, Paonia, Colorado 81428 or call 303/527-4808

WORK

ALASKA Center for the Environment (non-profit organization) seeks executive director to start Jan. 2, 1987, who has experience in fund development, fiscal management, organizational skills, volunter recruitment, and knowledge of environmental issues to administer Center's daily operations, develop annual operating plan, provide leadership on environmental issues/education, develop membership/fund plans with the board, and aid children's environmental camp. Applications due Nov. 1, \$18,000 plus benefits, contact Search Committee, ACE, 411 West 6th, No. 1A, Anchorage, Alaska 99501. (1x)

A NEW LEADER

The board of the Greater Yellowstone Coalition has chosen Ed Lewis of Phoenix, Arizona, as its new executive director. Lewis, a practicing lawyer, currently chairs the Arizona chapter of the Nature Conservancy and is a member of the Commission on the Arizona Environment. Lewis will take over duties at the coalition's Bozeman, Montana, office in December. The Coalition's first director, Bob Anderson, was dismissed shortly before the coalition's annual meeting in June.

RESTORING ECOSYSTEMS

The University of Colorado at Boulder will host a one-day conference, Beyond Boundaries: Restoring Region-Wide Ecostems, to explore the ecosystem a proach to public land management. Biologists Reed Noss and George Wuerthner will be featured speakers at the Nov. 15 conference. The 9 a.m. registration is \$8 at the University Memorial Center, Room 235. For more information, contact the CU Environmental Center, Campus Box 207, University of Colorado, Boulder, CO 80309 (303/492-8308).

A COLORADO PESTICIDE NETWORK

The Colorado Pesticide Network, an ad-hoc group of activists concerned with pesticide use and abuse, has published its first issue of the *Pesticide Network News*. The bi-monthly newsletter will serve as a forum for network members and will cover statewide pesticide issues, list resource information and hotline numbers. To obtain a copy contact Elizabeth Otto at CEC/Pesticide Network, 2239 E. Colfax Ave., Denver, CO 80206.



UTAH SKI COUNTRY, the second book in the Utah Geographic Series, will be available Nov. 1, 1986. This beautiful 128-page book by Brooke Williams includes more than 160 color photographs by Chris Noble and others, four full color maps, and 40,000 words of beautifully writeen text. Available in softcover (\$15.95) and hardcover (\$24.95). Orders received on or before Nov. 7, 1986 will receive a 15 percent pre-publication discount. Send \$13.55 plus \$1.00 for postage for softcover (\$14.55 per book) and \$21.25 plus \$1.00 for postage for hardcover (\$22.25 per book) to: Utah Geographic Series, Box 8325, Salt Lake City, Utah 84108. Money-back guarantee if not fully satisfied. (S29-027)





WATER

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Special Water Issue Number 2: THE COLUMBIA RIVER: AN AGE OF REFORM, Oct. 13, 1986.

This is the second in a series of four special issues under the general heading: Western Water Made Simple.

This issue describes the Columbia River basin's efforts to recover the great salmon and steelhead trout fisheries that were diminished or destroyed by overfishing, pollution, logging, damming and irrigation. The recovery effort is notable for the role played by the region's Native Americans and for the experiment in regionalism created by passage of the Northwest Power Planning Act.

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THE STUFF OF MORAL TALES, by High Country News publisher Ed Marston.

Will just enough be done -- by increasing the number of fish hatcheries, by limiting logging, and by rationing the fish take -- to keep the salmon runs marginally alive? Or will more far-reaching steps be taken to bring back the spirit, as well as the fish, of the good old days.

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The authors follow a young salmon, or smolt, from its spawning place in the high country downstream, past innumerable physical and bureaucratic barriers, to the ocean.

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THE DAMMED COLUMBIA, by writer and activist Chuck Williams.

Chuck Williams, whose forebears gave Lewis and Clark some trouble on their way down the Columbia, describes the natural history of the region, and then tells how the river has been reworked to provide kilowatts, acre-feet, a route for barges into Idaho and other goods of the modern age.

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SALMON: CONTINUITY FOR A CULTURE, by writer Cynthia Stowell.

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A WORKING RELATIONSHIP, by Chuck Williams.

A few years ago, the Fish Wars were raging between the Indian fishing tribes and the states of Oregon and Washington, with the salmon taking most of the casualties. Today, the spirit of war has been replaced by a working relationship, and the salmon are doing (relatively) well.

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THE UPPER BASIN VIEW, by conservationist and freelance writer Pat Ford.

It is in the nature of river basins to create enmity between upstream and downstream. The Columbia River is no exception. Idaho and the Sho-Ban tribe see the downstream interests as shutting them out of fishery decision-making. The downstream tribes see Idaho as having earlier cheerfully dammed the Snake River to within an inch of its life, and now interested only in flooding the river with that sportsman's delight -- hatchery reared steelheads -- to the detriment of a balanced and healthy fishery.

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THE CHAINSAW MASSACRE, by retired Forest Service biologist Hadley Roberts.

High mountain streams don't have dams, but they do have loggers, and the mud spawned by roading and logging in Idaho can be as deadly to salmon reproduction as the highest concrete dam.

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SHOWING THE WEST THE WAY, by writer Verne Huser.

The reaction to the intense development of the Columbia River basin led Congress to enact the Northwest Power Planning Act, and the four northwest states to create the Northwest Power Planning Council as a balance to the giant, pro-kilowatt Bonneville Power Administration. The Council has already played a major role in the Northwest, and it may also serve as a model for the West in its search for a regional way to deal with resource questions now dominated by the federal government.

Thank you

High Country News gratefully acknowledges the support of the 777 Fund of the Tides Foundation in the development of these four special issues, and in the circulation of 28,000 sample copies to persons and institutions interested in Western water.

The writers

Ed Marston has been publisher of High Country News in Paonia, Colorado, since 1983.

Charles Wilkinson is professor of law at the University of Oregon. He is an authority on Indian and Western resources law, and has written numerous articles and books. He is curently at work on *The Lords of Yesterday*, which describes how 19th century resource laws, such as the 1872 Mining Law, affect decisions today.

Daniel Keith Conner does full time research at the Sea Grant Legal Program at the University of Mississippi. He has both a law degree and training in oceanography.

Chuck Williams, a freelance writer and photographer, recently became the editor of CRITFC News, the newsletter of the Columbia River Inter-Tribal Fish Commission. He is part Cascade Indian and an enrolled member of the Grand Ronde Tribes.

A Portland, Oregon, writer and photographer, Cynthia D. Stowell is completing work on a book about the people of the Warm Springs Reservation. Faces of a Reservation will be published by Western Imprints, the press of the Oregon Historical Society, in March 1987.

Pat Ford is a freelance writer and conservationist in Boise, Idaho, and a frequent contributor to *High Country News*. He directed the Idaho Conservation League for several years.

Hadley Roberts is a retired U.S. Forest Service wildlife biologist living in Salmon, Idaho. He currently works as a wildlife consultant and big game guide.

Verne Huser is a program associate in Santa Fe, New Mexico, with Western Network, a nonprofit research and mediation organization that works in the natural resources area.

The water drop design that serves as the logo for these four special issues on water was created by Lester Doré. An artist and conservationist, Doré lives in the Ocooch Mountains of southwestern Wisconsin and commutes to the University of Wisconsin at Madison, where he is taking art classes.

COLUMBIA RIVER BASIN

RIVER LENGTH [miles]	1,214(3)
BASIN SIZE [square miles]	259,000(3) 258,000(2)
AVERAGE ANNUAL RUNOFF [acre-feet]	180 million (2) 185 million (4)
AVERAGE FLOW AT RIVER MOUTH [acre-feet]	185 million(5)
IRRIGATED LAND [acres]	7.0 million (1)
RESERVOIR STORAGE CAPACITY [acre-feet]	41 million [active capacity] (4)
HYDROPOWER CAPACITY [megawatts]	22,000(4)

Sources noted are as follows: 1) Bureau of Reclamation; 2) The Salty Colorado, 1986, by Taylor Miller, Gary Weatherford and John Thorson, printed by the Conservation Foundation and John Muir Institute at Inter-Collegiate Press, Shawnee Mission, Kansas; 3) World Book Encyclopedia, 1986 edition; 4) Bonneville Power Association; 5) The Upper Colorado River Basin and Colorado's Water Interests, 1982, by the Colorado Forum, Denver, Colorado.



Seagulls find easy fishing below Little Granite Dam where smolts leaving the bypass, spillway or turbine passages are often stunned and disoriented

The stuff of moral tales

Will just enough be done -- by increasing the number of fish hatcheries, by limiting logging, and by rationing the fish take -- to keep the salmon runs marginally alive? Or will more far-reaching steps be taken to bring back the spirit, as well as the fish, of the good old days?

by Ed Marston

Imost since the 1805 voyage of discovery by Lewis and Clark, rivers and streams in the Northwest's Columbia River basin have been mined. Salmon have been overfished, timber overcut and water fouled. The final insult to the Columbia River was its transformation into a series of lakes by a chain of federally built dams.

This post-World War II Era of Federalism has created enormous amounts of cheap hydroelectric power, large expanses of irrigated desert lands, locks and canals that have made Lewiston, Idaho, an ocean port, and

intense logging.

The federally financed development of the Columbia River basin fed on itself and created an apparent need for ever more electricity. That led to the multibillion dollar attempt to build five large nuclear power plants. The resulting debacle, combined with other economic and social changes, created what could be called an Era of Reform.

The focus of reform is the salmon, an extraordinary fish whose spawning requires clean, cold, pure mountain streams in the upper reaches of the basin, a flow of unpolluted and sufficient water to carry the young salmon downstream to the ocean and conditions to let the adult salmon survive several years in the ocean. It then needs a fighting chance at making it back upstream to spawn in its home gravel bed.

For 100 years the salmon has been

sacrificed to overfishing, and its habitat has been traded away for logging, irrigation, dams, canal and lock building and pollution. The salmon's habitat must stretch, unbroken, for thousands of miles, so no one county, state, or nation could protect the fish, or had incentive to do so. By all logic, the salmon should be doomed. Instead, thanks to the Northwest's fishing tribes and an independent judiciary, the fish is on its way back. The story of that recovery is the stuff of which moral tales are made.

The articles in this special issue of High Country News are about the Columbia River basin and its salmon. The spirit of those articles is of reform hanging on by fingernails. The tribes fear that they, and the fish they have fought for, will be overwhelmed by greed, development and racism.

Reformers worry that the welter of laws, treaties, and jurisdictions supposedly dedicated to saving the salmon will instead mangle the recovery effort. In the upper basin, the timber industry and the road-minded Forest Service threaten the spawning beds with silt. A huge output of hatchery fish could create a monocultural zoo -- a vast stocked preserve for fishermen -- instead of bringing back a tough, adapted natural population of salmon

The human efforts to bring back the salmon have been Herculean. But those efforts might have been for naught without the reversal of an historical tide. That tide ran strongly for development from the latter part of the 1800s until the 1970s; its reversal has become visible only in the last few years.

The shift is most clear in the case of electric energy. The effort begun in the 1970s to build five WPPSS (an acronym for the Washington Public Power Supply System, and pronounced, mockingly, WHOOPS) nuclear power plants in the Northwest is part of history. Four plants are cancelled or mothballed, and the story of WPPSS is one of gross miscalculation of future electric power needs, corrupt contractors, incompetent workers, defaulted bonds, and a let-the-good-times-roll attitude that led to disaster.

But even the sinking of billions into non-producing power plants couldn't bring a supply and demand balance to the region's electric power market. Despite the loss of 80 percent of the planned nuclear power, continuing changes in its economy and increased conservation have left the Northwest with a surplus

It had been exporting the surplus to California. But that market is drying up thanks to new power plants (started before the West's glut became apparent) in the Southwest and to conservation. In the Northwest itself, the region's big electric consumers—the aluminum smelters—are in trouble. Logging is on the ropes. Irrigated agriculture in the arid parts of the Columbia basin is in the same trouble as elsewhere.

In the short run, the Northwest's electric power glut is hurting the effort to recover fish and wildlife. The Bonneville Power Administration, the region's federal electric energy distributor, is squeezed for funds and is cutting back on its building of fish ladders and other recovery steps.

Should the glut continue -prolonged by conservation, as well as power plants kept in service through improved maintenance and less use, and wind, solar and cogenerated power -- then the time may come when economics puts a different value on the river basin's resources.

It is said that those who gaze into crystal balls end up chewing on ground glass. Certainly that has been the experience of the experts who predicted an ever-increasing need for power in the Northwest. What are those experts saying today? The conventional wisdom is that the West is experiencing a particularly deep slide in the market for all commodities. But when that slide ends, in a year or two, the pendulum will reverse and the market for aluminum, for logs, for food from irrigated agriculture will come back. At that point, the camphor will be blown away from the mothballed WPPSS plants and the Columbia's hydroelectric turbines will again be spun for every possible kilowatt.

But it is at least possible that the pendulum, whose reversal the experts expect momentarily, has only begun its swing away from commodities and the kind of water development practiced by the Army Corps of Engineers and Bureau of Reclamation. If that is true, economists in the 1990s may put more long-term value on a salmon fishery and free-flowing river stretches than on kilowatt-hours, irrigated fields and barge canals.

Ten years ago there was no talk of re-reclamation, of the decommissioning of dams and the de-channelizing of rivers. Only Native Americans and some impractical idealists believed the salmon fishery could be brought back, and they saw that happening only by learning to live with dams, barge canals and irrigated agriculture. Today, guided not so much by environmental commitment as by new economic realities, re-reclamation is a possible future.

A great loneliness of the spirit

The authors follow a young salmon, or smolt, from its spawning place in the high country downstream, past innumerable physical and bureaucratic barriers, to the ocean.

Charles F. Wilkinson
and
Daniel Keith Conner

And what is there to life if a man cannot hear a lovely cry of a whippoorwill or the arguments of the frogs around a pond at night? For all things share the same breath -- the beasts, the trees, the man. The white man must treat the beasts of this land as his brothers. What is man without the beasts? If all the beasts were gone, man would die from a great loneliness of spirit, for whatever happens to the beast also happens to the man. All things are connected. Whatever befalls the earth befalls the sons of the earth.

--Chief Seattle, letter to President Franklin Pierce, 1855

In Aug. 13, 1805, after several weeks of near starvation while seeking a route over the Continental Divide, Captain Meriwether Lewis enjoyed an appetizing meal. Guests of a small band of Shoshoni Indians on the Lemhi River in what is now Idaho, Lewis and Clark had been seeking evidence that they had indeed crossed the Great Divide. It was Captain Lewis' supper that convinced him: a piece of fresh roasted salmon, which he ate "with a very good relish."

On their journey down the Snake and Columbia rivers, Lewis and Clark everywhere saw evidence of the salmon economy on which the livelihood of Northwest Indian tribes was based. Reaching the Columbia River on Oct. 17, Clark recorded that the water was "crouded with salmon." He added, "The number of dead Salmon on the shores & floating in the river is incredible to say... Chinook salmon were then at the height of their fall run, and the astounded explorers were witnessing a natural spectacle that drew much comment in the journals and memoirs of early explorers and settlers of the Pacific Northwest.

By any standard of measure, Pacific salmon and their relative the steelhead trout are an ideal symbol of the bounty of nature: large, extravagantly numerous in their natural state, perpetually selfrenewing, and easily caught. Virtually every river on the Pacific coast of North America, from Monterey Bay in California up to Alaska's Bering Peninsula, once teemed with salmon fighting their way upstream from the ocean to spawn. Late in the 19th century, old-timers would gather to swap tales of those Arcadian times when one could walk across a river on the backs of migrating fish. One crusty old liar named Hathaway Jones -- a regional Munchausen of Oregon folklore who lived on a remote stretch of the Rogue River -- outclassed them

all by telling of the steelhead run of 1882 when the fish were so thick in the riverbed that there was no room for water.

Throughout the nineteenth century and well into the twentieth the Columbia basin produced more salmon than any other river system in the world. No one alive today will ever see salmon runs so wondrous as those observed by William Clark or Hathaway Jones (much less the ones he lied about). Today the fabled salmon and steelhead runs are gone from more than half of their former Columbia basin habitat, and are severely depleted in the rest. Indeed, no fish anywhere has been so intensively exploited as Columbia basin salmonid species. Both nature and humans make extreme demands on them, and for that reason salmon have been called the world's most harassed fish.

If the Pacific salmon is a symbol of natural bounty, it also stands as a testament to the eagerness with which humans have sacrificed wild animals on the altar of economic development. The plight of these fish illustrates an unfortunate irony of conservation policy: In former eras society compounded the conflicts between economic development and resource conservation by providing too little regulation of common-pool resources; today, on the other hand, we overregulate them with a proliferation of uncoordinated laws in which too many government bodies have a hand.

A combination of circumstances makes Columbia basin salmonids uniquely vulnerable to over-exploitation, to habitat degradation or to bad management.

First, a strong consumer preference makes the salmon fishery one of the world's most valuable, with a yearly catch of some 400,000 metric tons.

Second, all salmonid species are prized sport fish, and the yearly pursuit of a tackle-busting steelhead trout approaches a cult religion in the fervor and dedication of its practition-

Third, humans have used the fish's compelling migratory instinct to its detriment. Migrating salmonids are not easily deflected from their course; stretch a net or a trap in front of them and they will blunder right into it in a singleminded determination to make their way upstream. So eager are the fish to leap obstacles in their upriver journey that with a little skill they can practically be induced to jump into a bucket.

Fourth, migrating salmonids just before spawning tend to congregate in concentrations that lend a degree of credibility to the tales of 19th century yarnspinners. In former times they could be scooped up almost a dozen at a time, an open invitation to excess. There are people alive who, as farmboys, simply waded into spawning streams and flipped the big fish up on the banks with pitchforks.

Finally, the extraordinary migratory habits of salmon and steelhead have worked against them in a way that places the demands of nature in conflict with human institutions. Some species of Columbia basin salmonids range over thousands of miles during their four- or five-year lifetimes, and all stubbornly persist in crossing, whatever the risks, the boundaries humans have devised. Migratory fish cannot be successfully confined like many other wildlife populations (if you landlock salmon, they become dwarfs), and effective protection is for that reason all the more difficult.

Because of this unique combination of strong consumer demand and the animal's sublime indifference to jurisdictional boundaries, the salmon fishery may be the most difficult of all to regulate effectively.

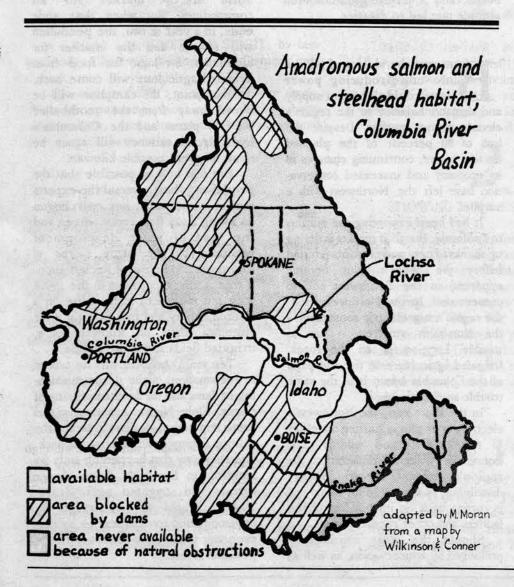
Add to this the complex legal milieu that has developed over the past 12 years as a result both of the federalization of fisheries law and a series of decisions in federal courts that protect Indian fishing rights. Stir in the staggering effects of habitat degradation caused by dams and logging practices, and you have in the Columbia basin what is probably the world's most complicated fishery management situation.

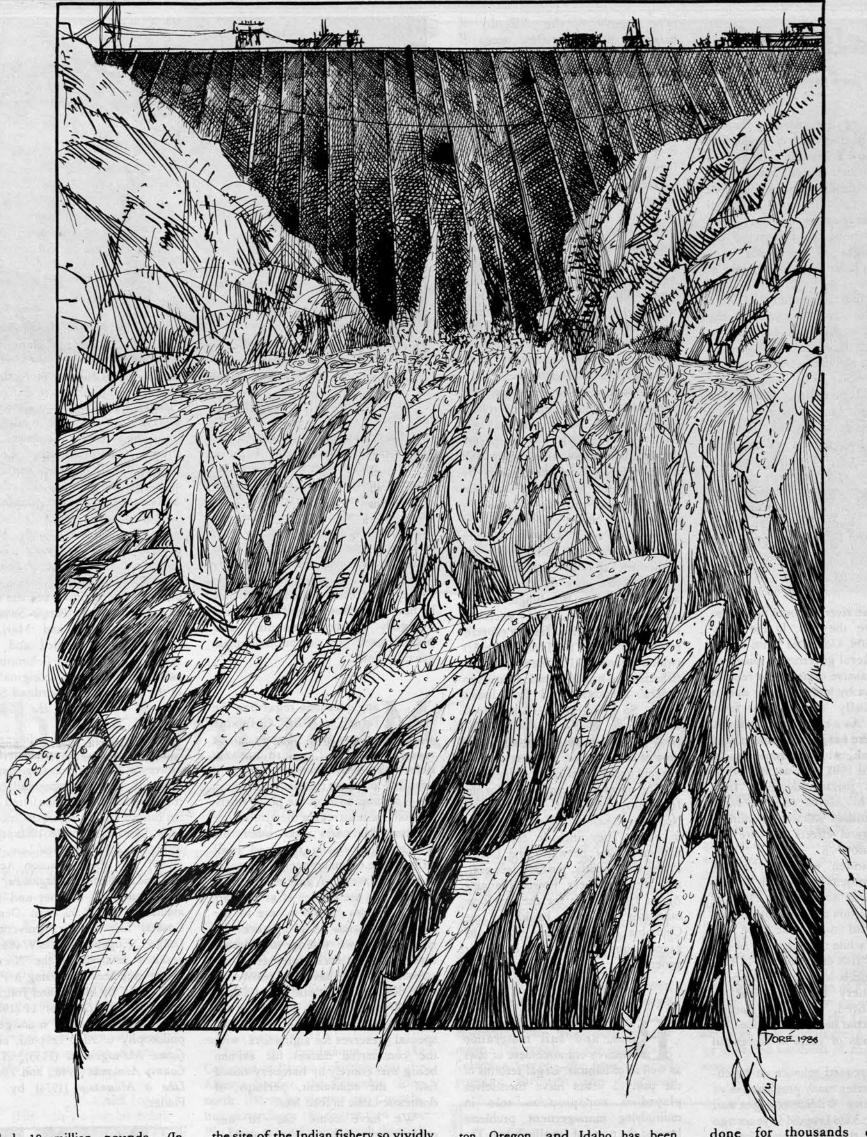
On Sept. 14, 1805, not long after their first taste of Pacific salmon, Lewis and Clark camped on the banks of the Lochsa River, a small but spectacular river that rises just west of the Continental Divide in the Idaho panhandle. (See map on pages 12-13). The Lochsa is relatively far up the part of the Columbia River basin where salmon still run, and a fingerling that hatches in this river must travel through a representative sample of the structural obstacles and management jurisdictions that today characterize the Columbia basin. Thus, we have chosen a Lochsa River fish to represent the plight of all Pacific Northwest salmonids, and of the Columbia River itself.

A nineteenth century Lochsa River hatchling would have smoothly migrated downstream into the Clearwater, Snake, and Columbia before reaching the ocean. A four-year journey would have carried the juvenile fish thousands of miles northward into the Gulf of Alaska, perhaps as far as the Aleutian Islands, before it turned to begin its homeward journey.

A returning salmon migrating up the Columbia to spawn in the Lochsa in 1805, when Lewis and Clark were rafting down the river, would have encountered a vigorous Indian fishery. The explorers, passing more than 100 stations where they observed Indians fishing, on Oct. 22 reached Celilo Falls, 200 miles upstream from the mouth of the Columbia. Here was as grand a spectacle as the Columbia basin has ever offered, a place where Indians had been fishing for at least 9,000 years. At Celilo Falls, Indian fishermen dipped their nets into the churning waters, where fish struggled to leap the height of the cataract with prodigious bursts of energy.

The aboriginal fishery Lewis and Clark saw was no mere cottage industry: the annual salmon harvest





exceeded 18 million pounds. (In comparison, the 1980 total commercial catch of Columbia River salmon was 6.8 million pounds.) The Columba River tribes were a mercantile people; bales of dried and pounded salmon jerky were a medium of exchange among inland tribes. Modern Indian court cases have been brought to preserve a small measure of that way of life.

The late twentieth century Lochsa River salmon we are following faces obstacles far more lethal and implacable than Indians with spears and dipnets. The worst of these are dams. As recently as 30 years ago, a salmon bound for the gravel bar of its birth far up the Lochsa River had only two dams to cross -- both equipped with fish ladders.

In 1956, the most difficult upstream obstacle was Celilo Falls,

the site of the Indian fishery so vividly described by Lewis and Clark. At that time Indians still fished there by traditional methods. But a vital part of the heritage of the Pacific Northwest was about to disappear under 75 feet of water, as the gates of a new dam were closed at a settlement called The Dalles.

n a Sunday afternoon in April 1956, representatives of the fishing tribes gathered for the last time to hold their ceremonies on the bluffs overlooking the falls where years before Lewis and Clark had smoked a pipe of peace with their ancestors. Within the year, Celilo Falls, one of the last natural monuments of the river as Lewis and Clark knew it, was gone.

Today, the landscape of Washing-

ton, Oregon, and Idaho has been thoroughly reworked as a result of hydropower development. Hardly any major stream of the 260,000-square-mile Columbia River watershed has been left unaffected. The unobstructed Columbia of 1805, down which Lewis and Clark drifted with only a single portage at Celilo Falls, is today a stairstep series of slackwater reservoirs.

Only 50 miles of the 1,214-milelong section of river from the first dam up to the Canadian border now remain free-flowing. A once wild river that drains a land area larger than France and whose annual discharge into the ocean is more than twice that of the Nile has become meek and submissive -- a series of back-to-back placid computer-regulated lakes.

Fifty years ago, there were no dams on the Columbia. As they had

done for thousands of years, migrating salmonids deftly leapt the few natural obstacles. Today the main-stem Columbia has 11 dams; its principal tributary, the Snake, has 10. In the entire basin there are now 79 hydroelectric projects, each with a capacity of 15 megawatts or more. The Columbia-Snake is the most highly developed river system in the world, supplying more than 80 percent of the region's electrical energy.

Hydroelectric projects have been ruinous to the health of the salmon runs. The dams have permanently blocked fish access to vast regions of spawning habitat and inflicted high mortality on downstream migrating juveniles by obstructing passage. Because they have flooded spawning beds, altered flow patterns, and warmed water temperatures, less

(Continued on page 10)

Loneliness...

(Continued from page 9)

than half of the spawning habitat available in the time of Lewis and Clark is now accessible to migratory fish, and much of what remains has been transformed into an environment hostile to fish propagation. Recent salmon harvests in the river have hovered around 10 percent of the historic highs of the 1880s -- a decimation in the most literal sense of the term

A wild fish hatching in the Lochsa River must now accomplish the passage of eight dams, both in the downstream direction as a juvenile, and then in the upstream direction as an adult seeking its spawning stream Juvenile fish mortality may approach 25 percent at each of the eight dams during periods of low river flow. In addition, a beleaguered wild hatchling must compete with hosts of its better-fed, and therefore larger, hatchery-bred cousins. The dams have exacted a far higher toll than anything else has, but competition from hatchery-bred fish is further reducing the number of wild survivors.

s the river has been tamed, so have the fish. In the early 1 1960s, Columbia basin states and the federal government joined to mount a massive campaign to rebuild salmon runs by increasing the output of artificially reared fish from hatcheries. As a result, only about 30 percent of the basin's salmonids today are wild fish, with the ratio rapidly declining. In 1981, the vast network of public and private hatcheries from California to Alaska released more than one billion salmon hatchlings, with ecological effects that are yet largely unknown.

This sudden expansion, rather than supplementing natural stocks, has itself been an important cause of further depletion of wild salmon runs. Leaving wild stocks to fend for themselves while tending to the needs of hatchery fish only makes wild fish more vulnerable to increased competition. Hatchery fish also tend to become inbred, displacing natural gene pools that have been responsible for thousands of years of successful adaptation.

This increased reliance on hatchery fish worries many practitioners of fishery science. Wildlife ecologist and philosopher Aldo Leopold 50 years ago contributed the fundamental insight that wildlife conservation is better accomplished by protecting animals' habitat than by interfering with the animals or their life cycles. Today, many see that habitat restoration is the preferred route to strengthening the salmon. Carefully planned stream improvement projects and adequate protection from overfishing will allow depleted fish runs to rebuild themselves.

One example of more or less natural enhancement would be to allow dams to spill water at times when juvenile fish need a steady flow of cold water to move them toward the ocean. The "water budget" program developed under the provisions of the Northwest Power Planning Act of 1980 provides a mechanism to do just that. The water budget is an attempt to deal with a critical problem appreciated

only recently -- the difficulty of balancing the water-flow needs of juvenile fish with power, irrigation, and flood control. The water budget allocates increased flows at those times of year when downstream migration is highest. This approach gives fishery agencies partial control over the quantity and timing of river flow over the dams.

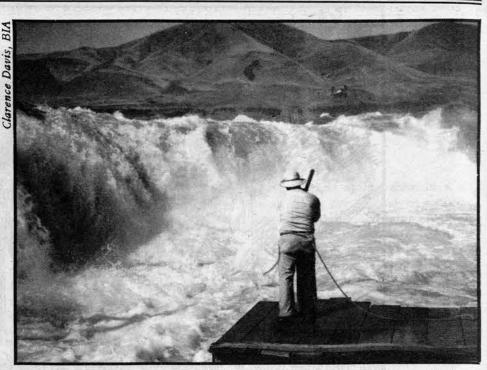
Despite recent advances in habitat enhancement, human-made hazards to the fish remain, and they are not only physical. As a result of legal and political events of the past 12 years, fishery managers must now untangle legal snarls and complex networks of responsibility that were undreamed of when Celilo Falls disappeared under the reservoir behind The Dalles Dam just 30 years ago. Today's scientific, legal, and jurisdictional problems are nothing short of labyrinthine.

The wide-ranging migration of a Lochsa River chinook that now travels to the Gulf of Alaska and back will carry it through 17 separate management jurisdictions, each with some degree of independent authority to allocate the harvest of that fish. These include three international treaties that contain provisions on the harvest of Pacific salmon of North American origin, in addition to the authorities of one foreign nation (Canada), four state fish and wildlife agencies (Idaho, Washington, Oregon, and Alaska), one interstate compact, two regional fishing councils established by the 1976 Magnuson Act (which extended U.S. dominion over fisheries two hundred miles out), two federal agencies, and four Indian tribes. So a migrating Lochsa River salmon must survive not only hooks, nets, predators and dams, but also a host of bureaucrats, interest groups, lawyers and federal court judges.

The major laws necessary for the full protection of the Pacific Northwest's salmon resource are now in place. They include the Pacific Salmon Treaty between the United States and Canada, ratified last year, and the Northwest Power Planning Act of 1980, which for the first time mandates that the health of the Columbia River salmon fishery be given equal status with power generation.

ut protection is not restoration, and full restoration requires enhancement of laws as well as of habitat. Legal reforms of the past 12 years have themselves played a conspicuous role in multiplying management problems beyond the point of intelligibility. The very institutions designed to protect the resource have now, by virtue of their numbers and unwieldiness, become an additional threat. Like the sorceror's apprentice of Goethe's fable, today's salmon managers are perhaps more in peril of being overwhelmed by the "solution" than by the original problem.

The chief obstacles to effective restoration are institutional in nature and international in scope. Any permanent solution must go to the heart both of our federalist system of shared power and of the intricate network of national sovereignties on which our world order is based. When an overexploited living resource respects no boundaries, the boundaries themselves must be treated in a way that respects the realities of nature



Fisherman at Celilo Falls, 1941, before it was inundated behind The Dalles Dam

At a minimum, full restoration of the Pacific salmon runs requires that the law be applied over the fish's entire migratory range, and that it be applied with consistency over the entire network of responsible management bodies. Otherwise, these magnificent wild salmon runs will remain caught in a trap the law itself has set -- the creation of so many autonomous authorities that none by itself has sufficient incentive to conserve for fear that the fish will only be harvested elsewhere. It is the same "tragedy of the commons" that played itself out on public-domain grazing lands.

any questions regarding the future of the Columbia A salmon runs remain to be asked, and all will require answers before the turn of the century. Is it possible to restore riparian habitats in the Columbia basin to the point where the fish runs can regain the abundance of those legendary days when the resource perpetually renewed itself without the encumbrances of management plans, seasons, gear restrictions, quotas, and the politics of allocation? Do we possess the will to care for the watershed lands that nurture the rivers? Are we willing to harness diversions that suck water from the streams? Do we have the resolve to curb our appetite for still more dams? Or will wild salmon go the way of the buffalo, a curiosity protected on special preserves for sightseers, with the commercial market for salmon being met entirely by hatchery-raised fish -- the equivalent, perhaps, of domestic cattle in feed lots?

We have come far in our commitment to bring the Columbia basin salmon runs up to their historic levels. To lose them now by default would be a major defeat, not only to those who depend upon them for a livelihood, but also to those now privileged to dine upon the incomparable flesh of upriver wild chinook, to feel their pulse at the end of a line, or simply to marvel at them as they leap over mountain waterfalls. Without these splendid creatures to lend their grace and beauty to the streams and rivers of the Pacific Northwest, many of us will indeed suffer from the great loneliness of spirit that Chief Seattle foretold.

Bibliographic Note

This article is an abbreviated version of Wilkinson and Conner, "The Law of the Pacific Salmon

Fishery," in Kansas Law Review, vol. 32 (1983). A reprint is available free from Sea Grant Communications, Oregon State University, Corvallis, Oregon 97331. A general introduction to issues discussed in this article is Anthony Netboy's The Columbia River Salmon and Steelhead Trout: Their Fight for Survival (1980). A more popular work is Bruce Brown's Mountain in the Clouds: A Search for the Wild Salmon (1982). For a biological perspective, see the magnificently illustrated Pacific Salmon by R.J. Childerhose and Marj Trim (1979). For a detailed and highly readable history of the Columbia River salmon fishery from aboriginal times to the present see Courtland Smith's Salmon Fishers of the Columbia (1979).

On the dams vs. fish dilemma see Michael Blumm's article "Hydropower vs. Salmon," in Environmental Law, vol. 11 (1981), also available free from the Sea Grant office listed above. On Indian fishing rights decisions see Jack Landau's article "Empty Victories" in Environmental Law, vol. 10 (1980). On the Magnuson Act, see Federal Fisheries Management (1985) by Jacobson, Conner and Tozer, available for \$5.00 from Ocean & Coastal Law Center, University of Oregon, Eugene, Oregon 97403. For a detailed analysis of the Northwest Power Act see "Promising a Process for Parity" by Blumm and Johnson in Environmental Law, vol. 11 (1981).

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Hells Canyon and dam on the Snake River, Idaho-Oregon border

The dammed Columbia

Chuck Williams, whose forebears gave Lewis and Clark some trouble on their way down the Columbia, describes the natural history of the region, and then tells how the river has been reworked to provide kilowatts, acre-feet, a route for barges into Idaho and other goods of the modern age.

The White men were many, and we could not hold our own with them. We were like deer. They were like grizzly bears. We had a small country. Their country was large. We were contented to let things remain as the Great Spirit made them. They were not-and would change the rivers if they did not suit them.

--Chief Joseph (Hin-mah-too-yah-lat-keht), Nez Perce leader

There is no question that the Columbia River basin fishery was once one of the most productive in the world. There is no question, either, that, in only a century, the numbers of salmon and steelhead caught in the basin dropped precipitously. Fish cannery operations disappeared, tribal fisheries were reduced to barely enough to supply the salmon for Indian ceremonies, and angling seasons were cut to next to nothing.

--Northwest Power Planning Council

by Chuck Williams

he Columbia River is the lifeblood of the Pacific Northwest. It rises in the

Canadian Rockies and meanders around the basin between the Rockies and the Cascade Range for 1,243 miles, absorbing such tributaries as the Spokane and Snake rivers before finally breaking through the Cascades and entering the Pacific Ocean. (See map on pages 12-13.)

From its headwaters at Lake Columbia in British Columbia near the Alberta border, the Columbia flows north, 100 miles deeper into Canada, before making a 180-degree turn -- the Big Bend. After flowing south through evergreen forests, the river crosses the border and enters the Channeled Scablands of eastern Washington. This scoured landscape is the result of a series of floods that swept across the mid-Columbia region following the collapse of huge ice dams during the most recent Ice Age.

After flowing west through deep lava ravines, the main-stem Columbia, blocked by the Cascade Range, turns south, providing a narrow ribbon of fertile soil. The Columbia then turns eastward to merge with the Yakima and Snake rivers before looping west into a deep, narrow slot through the Cascades and to the Pacific.

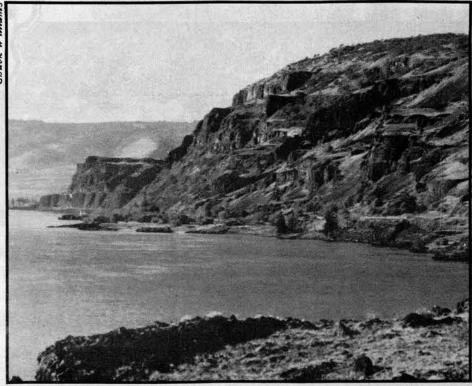
The Columbia's largest tributary, the 1,038-mile-long Snake River, also begins in the Rockies, flowing south out of Yellowstone and Grand Teton national parks. The Snake then makes a large westward arc through the lava

plateau of southern Idaho, eventually turning northward and entering mile-deep Hells Canyon where it meets the Salmon, the "River of No Return." Just north of the Washington-Oregon border, the Snake heads west for more than 100 miles, finally joining the Columbia just as the main stem makes its last turn toward the sea and breaks out of the inland basin.

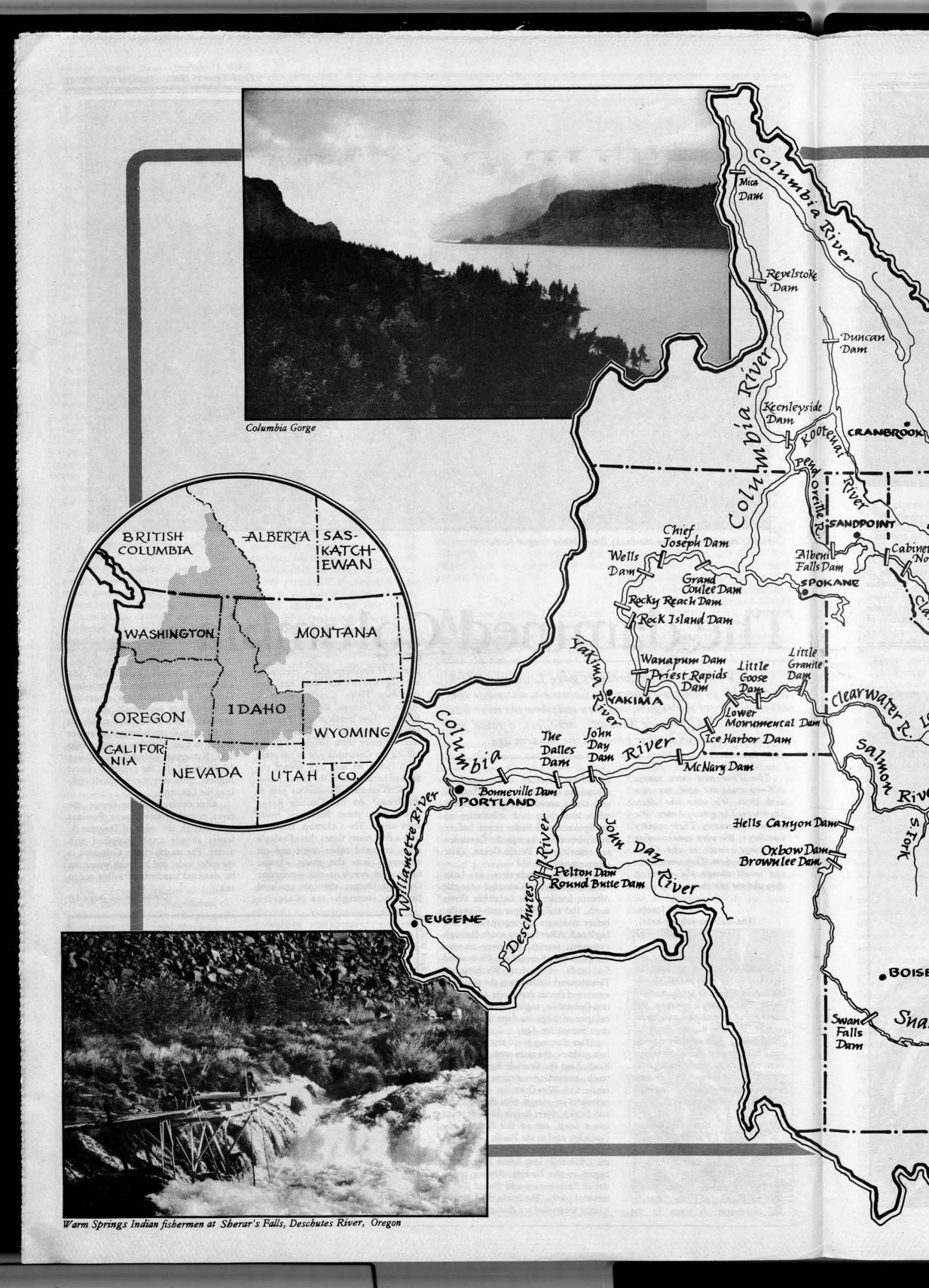
What created this curious path to the ocean? As the Cascade Range slowly rose, most Northwest rivers were cut off. The Columbia, however, with a flow many times that of today's river, captured other rivers and cut downward into the rising volcanic range. The result is the spectacular Columbia Gorge, the only sea-level passage through the Cascades between British Columbia and California. Within the 100-mile-long Gorge, the Columbia's shoreline changes from sagebrush desert to grasslands with oaks to lush rainforest as the annual precipitation increases from less than 10 inches to more than 100. Numerous waterfalls, including Multnomah Falls, the nation's second highest, drop over steep basalt cliffs into the Columbia.

After exiting from the Gorge, the river meanders slowly past Portland and through 100 miles of Douglas fir forest already amply supplied with water. The mouth of the Columbia is six miles wide, and its fresh water can be detected hundreds of miles out to

(Continued on page 14)



Columbia Gorge



Duncan Dam

Cabinet Gorge Dam Noxon Rapids Dam

BOISE

Swane Falls Dam

Snake Ri

IDAHO FALLS

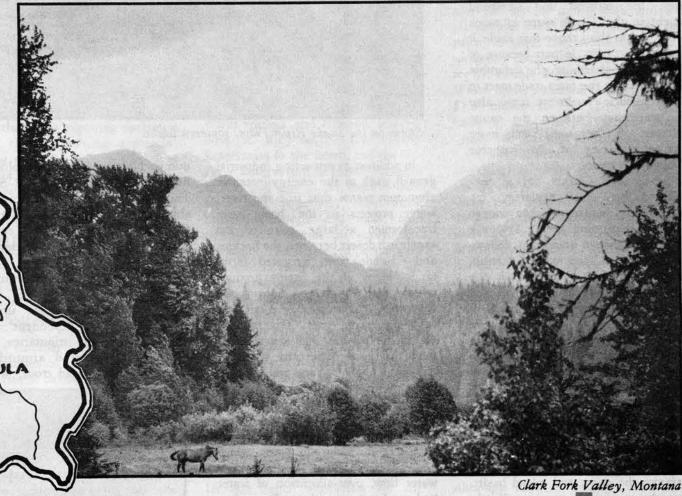
Dam

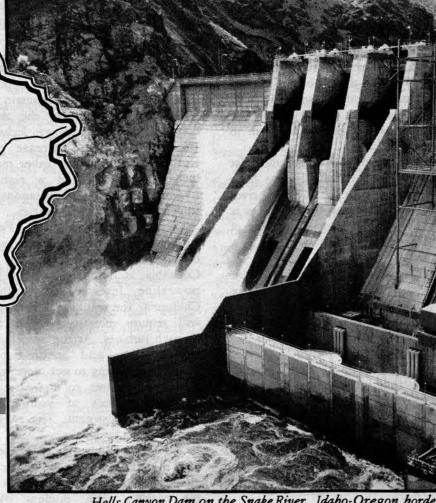
American Falls Dam

Palisades Dam

THE COLUMBIA RIVER BASIN

MAP COMPILED AND EDITED BY MARY MORAN RENDERED BY LESTER DORE'





Hells Canyon Dam on the Snake River, Idaho-Oregon border

Dammed...

(Continued from page 11)

This diverse, twisting river has supported two very different ways of life. Before Euro-Americans arrived and began remodeling the basin, the Columbia River's huge anadromous fish runs supported a large native population.

The salmon and steelhead trout, which live off and help recycle the nutrients the river washes off the land into the ocean, supported a string of villages along the great waterway. In addition, many other people would seasonally move to the river to fish.

The preferred spots along the river were the rapids and waterfalls in the Columbia Gorge. The fish were easiest to catch there. Also, being low on the river, the salmon and steelhead caught in the Gorge were in much better shape than those that made it farther upstream. In part because of the exceptional fishing, the Columbia Gorge became the main trade mart in the prehistoric Northwest. It was also the transition between the canoe cultures of the coast and more nomadic tribes of the interior Columbia Plateau.

Lewis and Clark's voyage was followed by other explorers, fur traders, missionaries and then pioneer settlers. Beginning in the 1840s, a flood of American immigrants followed the Oregon Trail to the Columbia Gorge, and then floated down the treacherous river to settle in the Willamette Valley. As a result of pressures generated by this influx, a series of treaties were forced on the Indian tribes in the 1850s that opened more of the Columbia basin to settlement.

The treaties gave control of the region to the settlers, but the river maintained its central position. As in prehistoric times, the Columbia was the main transportation corridor between the coast and inland basin. Steamboats plied it upriver to Kettle Falls, near the Canadian border, until the 1880s, when railroads made boat travel obsolete. Just as steamboats replaced Indian canoes, so did non-Indian commercial fishing and canneries -- beginning in earnest a century ago -- take over from the Indians the best fishing places.

But the economic dominance of the salmon and steelhead runs was not to last. Despite their obvious importance, other economic activities, such as clearcutting along spawning streams, have prevailed over fish in the political arena.

More seriously, during the past half-century, the Columbia has been transformed from a free-flowing river into a chain of reservoirs. The river is now the world's biggest producer of electricity and Lewiston, Idaho, is a seaport

These achievements have come at the expense of the fish. Above Bonneville Dam, located at the upper end of tidal action, only one stretch of the Columbia in the U.S., the Hanford Reach, remains free-flowing. Ironically, the efforts of the Corps of Engineers to inundate this last stretch behind the proposed Ben Franklin Dam have been thwarted in part due to opposition from the nuclear power industry. That industry dominates the economy of the area where the Columbia turns west in its last rush to the Pacific.



Storm on the Snake River Plain, southern Idaho

In addition to attracting industrial growth, such as the energy-intensive aluminum plants that line the river, water projects in the basin have transformed a large part of the sagebrush desert between the Rockies and Cascades into irrigated farmlands. Many of the farms produce wheat that is barged down the Columbia. Irrigation uses water that could generate vast amounts of electricity. Irrigation has also wreaked havoc on such important spawning tributaries as the Yakima and Umatilla rivers. Withdrawals from such rivers as the Snake also hurt fisheries by raising the temperature of the remaining water.

Unlike the Colorado River, which has less than a tenth of the Columbia's water flow, over-allocation of water had not been a problem. But today, even the Columbia, the nation's second largest river system, can no longer meet all the demands on it.

Hals, such as the Columbia Basin Project in eastern Washington, have strong support in Congress. Railroads and recent presidential administrations have opposed the large subsidies that maintain this waterway; nevertheless, the Army Corps is beginning large locks at Bonneville Dam to increase river traffic. Upriver, tax and other recent laws have encouraged a rash of hydroelectric power applications on important spawning tributaries.

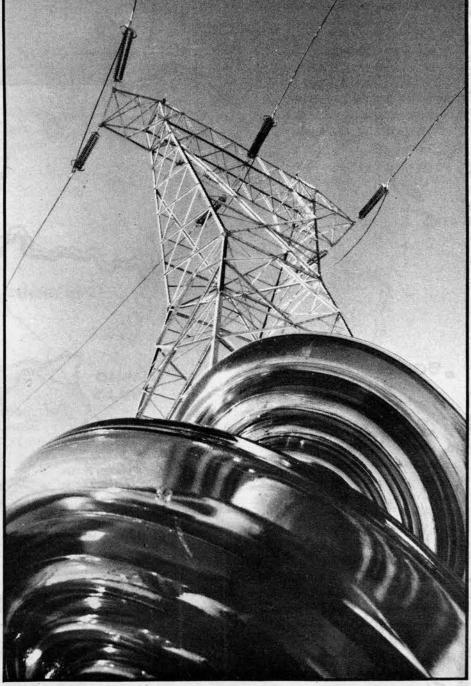
The federal Bonneville Power Administration (BPA), which distributes electricity generated by the Columbia, is trying to build a new powerline, Intertie, to southern California. The resulting power sales will require more water to flow through turbines. At the same time, Indian tribes and other fishing interests are trying to get more water spilled over dams to increase the survival chances of young fish migrating downstream. The rallying cry is: Smolts over volts!

Another conflict on the river comes from the fedral government's choice of Hanford as one of three finalists for the nation's main nuclear waste dump. Hanford is on the Columbia, near its confluence with the Snake. The same federal government is simultaneously making a substantial financial commitment to restore anadromous fish to the depleted Yakima River.

Electric power and its industrial users, irrigated agriculture, barge traffic and logging make up one economic grouping dependent on the Columbia and its tributaries. The economies clustered around the salmon and steelhead trout, wilder-

ness areas, wild and scenic streams and national parks make up another.

The fight over wilderness is done for the moment, but the national parks issue is hot, with the major debate in Congress centered on the Columbia Gorge and Hells Canyon -- the 'Grand Canyons' of the Columbia and Snake rivers, respectively. The resolution of these conflicts will be another indicator of the direction the basin is heading.



B.P.A. transmission tower

Salmon: Continuity for a culture

Although history has driven a wedge between the people of Washington's Warm Springs Reservation and their ancestral home, the Columbia River still flows through their lives in significant ways. That link with the past has enabled the people of the Warm Springs Reservation to successfully adapt to modern America.

by Cynthia D. Stowell

Salmon! Venison! Roots!

Berries! The old man rings a hand bell and calls out the Indian name for each food. The people, seated at tule mats on the floor of the longhouse, sample tiny portions of the sacred foods from their plates. When the old man calls "choosh!" everyone drinks a swallow of water and reaches family-style for the many platters of native and modern food. The feast ends with a prayer and another "choosh."

Every ceremonial feast on the Warm Springs Reservation begins with salmon and ends with water. For the people, and for their ancestors along the Columbia River, salmon has long been the most treasured of foods, and water the purest. Together, they represent the constancy and the bounty of N'chi Wana, the great river that shaped the culture of the Columbia Plateau people. (See map on pages 12-13).

The Warm Springs people now have to travel 100 miles to celebrate the arrival of the salmon at their traditional fishing grounds. But salmon is still at the heart of reservation rituals, from feasts honoring the roots, huckleberries and wild celery, to funerals, weddings, name-givings, memorial dinners and important political meetings. And while history has driven a wedge between the river people and their ancestral home, the river still flows through their lives in significant ways.

For about 11,000 years before Lewis and Clark paddled down the Columbia River in 1805, native peoples lived continuously along its banks. Around the time of contact, the people of the middle Columbia --Sahaptin-speakers above the present city of The Dalles and the Chinookan-speaking Wascos and Wishrams downriver -- lived in small villages of five to 10 families. (See map on pages 12-13). The Sahaptins and Wasco/Wishrams, though different in language and cultural emphasis, were bound together by their "Plateau" lifestyle, dictated by the rushing river and the emi-arid land around it. They lived relative peace and prosperity.

Each spring, the lives of both

peoples centered on the chinook salmon that were migrating upstream toward their spawning grounds. Standing on rocks over narrow river channels, fishermen aimed their spears, set traps or swept the current with long-poled nets, capturing scores of the silvery fish with the valued pink meat. On shore, the women butchered and filleted the fish, barbecuing some of it right away but hanging most of it to dry in the warm breezes. Sheaves of dried salmon were bundled up and stored away for winter use or for trade.

In the summer it was steelhead or other varieties of salmon, in the fall another run of chinook. The river also supplied plenty of sturgeon, lampreys, suckers and smelt, as well as some shellfish. For six months out of the year, the Columbia demanded ceaseless toil from the people it fed, but the river people were paid over and over for their efforts. As long as the fishermen demonstrated the proper respect for the spirits of the river and of the salmon, they believed there would always be enough to eat.

The Sahaptins and Wasco/Wishrams did not just subsist on the river harvest. Salmon was their material wealth and they were skilled at marketing it. In fact, the mid-Columbia was the center of a vast trade network stretching from the Pacific coast to the Rocky Mountains. During huge summer gatherings, the fishermen traded their salmon for such desirables as animal skins, dried meat and vegetables, basketry, bows and arrows, decorative shells, and even slaves. Because of the steady stream of visitors, the people of the Columbia tended to be cosmopolitan, accustomed to change and new ideas.

he white newcomers proved to be more change than the people could accommodate. Settlers, too, knew the importance of the Columbia, and in a mere 50 years had cleared the riverbanks of virtually all native inhabitants. The river people to some extent weathered the Christianizing and civilizing pressures from white settlements at The Dalles and Walla Walla, the installation of "fish wheels" at their ancient sites and the introduction of disease and



A root feast on the Warm Springs Reservation

alcohol. But when officials came to them in 1855 with pieces of paper that described new homes away from the Columbia, they recognized that life as they had known it for centures was ending.

The four treaties made with the plateau tribes in June of 1855 contained much the same wording and intent. They ceded ancestral lands and reserved land far from the river at the Warm Springs and Umatilla reservations to the south, the Yakima Reservation to the north, and the Nez Perce Reservation in Idaho. Payment for the land was in the form of farm tools and supplies, reservation blacksmith shops and mills, food rations and salaries for government personnel. The displaced people were supposed to take up an agrarian life and stay out of the white settlers' hair.

Partly as a selling point, the treaties also included a few simple words reserving a right that the tribes exercise today -- much to the chagrin of many a non-Indian: "The right of taking fish at all usual and accustomed stations, in common with citizens of the United States."

In the early years of the reservations, many families lived dual lives, camping and fishing on the Columbia in the summer when school let out, and wintering on the reservations. This practice was continually discouraged by federal government personnel, who insisted that the future of the tribes lay in education, entrepreneurism, private land ownership and a new diet. But the superintendents could not guarantee that crops would survive the short growing season and marginal soil, or that tools and rations would arrive from the East on schedule. The people often went hungry awaiting the benefits of civilization.

Halfway into the twentieth century, the Columbia was still an important source of food for the reservations, despite inroads into the supply of salmon and the changing pattern of life on the reservations. An overly enthusiastic non-Indian commercial fishery, particularly in the ocean, and the construction of dams on the main stem, were hastening a day the river people thought would never come, when the salmon would swim less plentifully into their nets. Still, the fishery at Celilo Falls endured in a manner little changed over the centuries.

Then, abruptly, it ended. In 1956, The Dalles Dam halted the cascading water, and the ancient fishing and camping sites were covered by still water. The people held what they thought would be their last salmon feast.

Arguing with the Army Corps of Engineers had been futile. The citizens of the Northwest wanted electricity, irrigation and flood control, and the loss of a few fish and a picturesque Indian fishery was a small price to pay. The tribes took the monetary compensation (\$15 million for the Yakima, \$4 million each for the Warm Springs and the Umatilla, and \$2.8 million for the Nez Perce), knowing full well that their loss couldn't be translated into cash.

It was a difficult time for the tribal councils, which were accused by their fishermen constituents of selling them out. Three tribes decided to distribute the cash settlements to individual tribal members. But the Warm Springs council decided to keep the sum intact for future reservation development. It proved a wise decision.

The loss of the Celilo fishery had a note of finality about it, perhaps even more than the treaty-signing 100 years before. A door slammed on the past and the tribes were forced to consider a whole new future. By the '50s, they were somewhat better equipped to face new options. The Indian Reorganization Act of 1934 had returned some political power and autonomy to Indian tribes nationwide, although days of readily available federal loans and grants for economic development were still 20 years away.

Those fishermen who saw no future on the reservations put aside their dipnets, bought gillnets and motorboats, and became commercial fishermen like the lower river non-Indians. They launched their boats into the main-stem Columbia from various "in-lieu sites" that had been reserved by the government as dams gobbled up their fishing grounds. A number of families, particularly from among the Yakima tribe, made a modest-to-profitable living from the river.

A handful of Warm Springs fishermen chose this path, but their tribal council went in a very different direction. Depositing the Celilo settlement in the bank, they thought long and hard about what their reservation land and resources had to offer. Taking \$100,000 from their savings, they hired a group at Oregon State College (now Oregon State University) to advise them on the reservation's natural potentials. The five-volume results of the 1960 OSU study, which are still used in planning today, pointed to the reservation's 300,000 acres of merchantable timber and the natural beauty of the land as possible sources of income.

(Continued on page 16)

Continuity ...

(Continued from page 15)

Taking another \$165,000 from their bank account, the tribal council bought back a piece of prime real estate along the Warm Springs River, where a non-Indian doctor had developed a spa featuring the hot mineral waters that bubbled out of the ground. That was the beginning of Kah-Nee-Ta Vacation Resort, a tribal enterprise that now includes a 144-room hotel, golf course, tennis courts, tipi village, cottages and Olympic-size pool.

The people of Warm Springs, always a hospitable sort, nevertheless have felt ambivalent about encouraging tourism on their reservation. Without the full support of the community, Kah-Nee-Ta has not lived up to its profit-making potential, but continues to be a kind of showpiece to the non-Indian world. Instead of tourism, the real energy of the Warm Springs Confederated Tribes has gone into their wood-products business.

It began in 1967, when the tribes took out a loan to purchase the sawmill built at Warm Springs by non-Indians years before. As owner of both the raw material and the processing plant, the tribes could begin to map out a future that would guarantee jobs and a dependable supply of timber. Besides the 300 mill employees, the timber industry has created dozens of entrepreneurial opportunities in the reservation forest. In fact, many of those who might have been fishermen 35 years ago now find challenge and

satisfaction working in the tall stands of ponderosa pine and Douglas fir.

Warm Springs has also capitalized on the rivers within and along its boundaries. Contracts negotiated with Portland General Electric in the 1950s and 1960s have resulted in substantial rental income for two dams on the Deschutes River. Quietly inserted into the Pelton Dam contract was a clause enabling the tribes to one day develop a hydroelectric plant at the Pelton re-regulating dam. Today, Warm Springs Power Enterprises produces electricity that it sells to private utilities at a profit.

one are the days when the people shuttled back and forth between the seasonal bounty of the Columbia River and a questionable existence on the reservation. But as the standard of living at Warm Springs has improved, the people and their leaders have not forgotten the sacrifice that made it possible. Neither has Warm Springs put the Columbia River behind it as so much history and sentiment.

Warm Springs and the other treaty tribes still speak of the importance of the Columbia River to their survival. And they continue to negotiate doggedly for their place on the river, for rights that at times have seemed meaningless in the face of dwindling salmon runs.

In fact, Warm Springs has been a leader in resolving conflict on the Columbia among Indian, non-Indian, sports and commercial fisheries. Excellent legal representation by Warm Springs attorneys helped bring about the landmark decision by U.S.

District Court Judge Robert Belloni in U.S. v. Oregon. Belloni ruled in 1969 that the treaty tribes were "entitled to a fair share of the fish produced by the Columbia River system" and that the state could only regulate the Indian fishery for conservation purposes. The Belloni decision provided the foundation for a second landmark decision in U.S. v. Washington in 1974, when federal Judge George Boldt ruled that the treaties' "fishing in common" language should be interpreted as the right of Indians to catch up to 50 percent of the state's off-reservation catch.

While these decisions did much to cool the angry confrontations -- both on the river and in the courtrooms -that characterized the 1960s and 1970s, the treaty tribes still find themselves on the defensive. They are not a voting part of the Columbia River Compact, which sets commercial fishing seasons for Oregon and Washington. As a result, the Columbia River Inter-tribal Fish Commission, or CRITFC, established in 1977 to represent the treaty tribes, often challenges the Compact's decisions in court. At the same time, some fishermen with little patience for the slow workings of the judicial system continue to fight their battles right on the river.

In 1982, 19 Indian fishermen were charged with selling fish out of season to undercover federal and state agents. In the course of "salmon scam," nine fishermen were convicted in U.S. District Court and sentenced up to five years in federal prison. Warm Springs quietly let its one convicted member report to prison this summer, but on the day the sentences

were to begin, the Yakima tribe challenged the federal convictions by pressing its own charges against five of its fishermen and keeping three of them in tribal custody for a time. Tribal charges were eventually dropped but Yakima support for its fishermen was clear.

The two tribes have different ways of asserting their treaty rights. Warm Springs likes to negotiate and forge compromises; Yakima is driven by moral arguments that often supercede legalities. The tribes are united, however, in their insistence that the Columbia River is essential to their and the region's -- well-being. The fishing tribes on the Columbia say they are not just user-groups out to get what they can from the river.

As aboriginal stewards of the salmon and the water of the Columbia, the treaty tribes say they have a privilege and a responsibility to see that these resources are used properly. They want to participate fully in planning and development along the Columbia, not just to assert treaty rights or to exercise their sovereign powers alongside the states, but also to ensure that the salmon survives.

"Salmon Scam" aside, there has been an unprecedented degree of cooperation among various riverusers. Record low salmon and steelhead returns forced the parties to bring about regional solutions, such as the U.S.-Canada Pacific Salmon Intervention Treaty (1985) and mitigation efforts under the Northwest Regional Power Planning Act. This spirit of cooperation has been rewarded with record high returns of steelhead and salmon.

The white man wanted bright lights, the Indian money

he grew up along the Columbia River, where her family had dozens of scaffolds at the Celilo fishing grounds. When she wasn't attending Catholic boarding school in The Dalles, young Ellen was with her people among the rocks and the rapids, learning from the men how to handle the huge nets and watching the women deftly butchering the catch.

"It was unusual for girls to fish," she said, "but I learned to dip the minute I was strong enough to hold the dip net." Butchering was definitely off-limits to children. "They didn't want our childish hands on the fish. We could practice on jacks and steelhead; but we couldn't hang them up with the women's salmon."

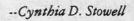
From her elders, Ellen learned the rhythms of the river and her culture. There were times to fish and times to leave the nets idle, times to offer prayers and times to be silent, times to work hard and times to celebrate. From her mother, Ellen also learned the commercial end of fishing. While her father dreamed of finding gold and getting rich, her mother teamed up with a white man to operate a fish wheel, which scoops fish from the river into a chute. Taking the money she earned, she traveled by steamboat to Portland to buy enough supplies for a year. But the family's caches of dried salmon were their real wealth; they ate from their supplies through the winter or traded them to Indians from as far away as Montana for buckskin and meat.

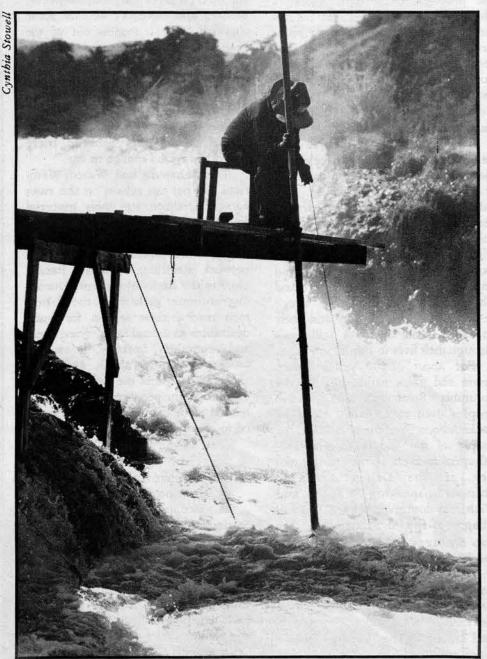
Ellen was prepared to live out her

adult life following the salmon runs of the Columbia, until history took a different turn.

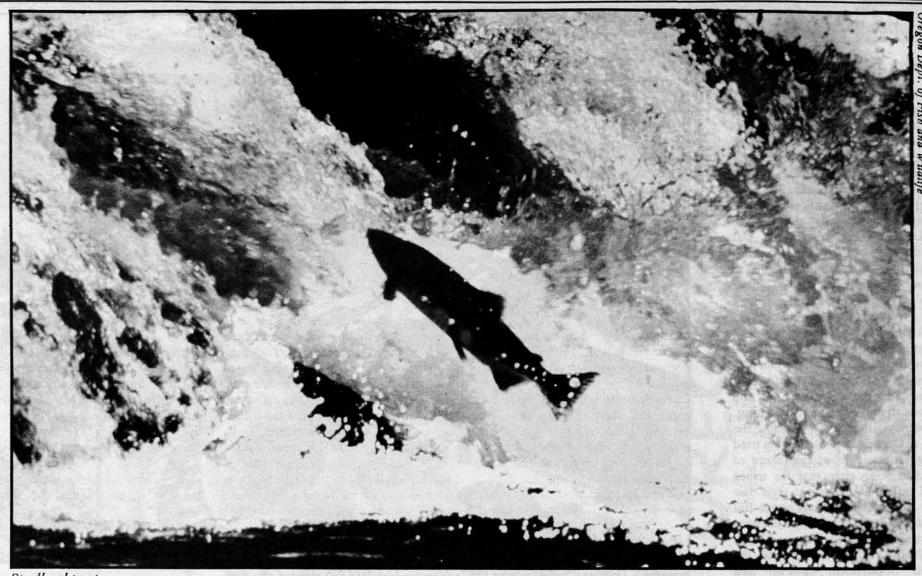
The Dalles Dam eliminated the Celilo fishery as Ellen had known it. "The white man wanted brighter lights in his home and the Indians wanted money," she says. "That's the only reason that dam is there." Fortunately, her family had also fished actively along one of the Columbia River tributaries, at Sherar's Falls on the Deschutes River. It is there that Ellen has gone to fish for the last 30 years. The site is described in a petroglyph on a nearby rock wall.

From their scaffolds at Sherar's Ellen and her husband Walter routinely pulled 60-pound salmon out of the eddies while sports fishermen downstream looked on enviously. Ellen canned and dried some of the catch for her family, traded some and occasionally sold a fish for cash. Until Walter died in the 1970s, fishing was just a supplement to the income he made as a heavy equipment operator. After his death, Ellen came to depend increasingly on her catch, along with stipends from tribal committee work. Then, in 1984, Ellen had a massive stroke and had to put her net aside. What keeps her alive today are tribal pension and per capita payments that exist in large part because the Confederated Tribes banked their portion of the Army Corps of Engineers settlement for Celilo. So the Columbia River is still supporting Ellen Heath.





Ellen Heath fishing at Sherar's Falls on the Deschutes River



A working relationship

A few years ago, the Fish Wars were raging between the Indian fishing tribes and the states of Oregon and Washington, with the salmon taking most of the casualties. Today, the spirit of war has been replaced by a working relationship, and the salmon are doing (relatively) well.

by Chuck Williams

he infamous Pacific Northwest Fish Wars, pitting non-Indian fishermen against Indians and the United States against Canada, are fortunately waning. The Fish Wars came to a head in the late 1960s, when Northwest tribes that had reserved fishing rights in their treaties began to successfully exert those rights and when ocean fleets began to catch more and more Columbia River salmon. Many of the animosities remain, but cooperation is coming fast. As a result, fish runs for the most part are rapidly coming back.

In a series of treaties signed in 1855, many Northwest tribes gave up title to the vast majority of their lands. (See map on page 22). In exchange, they reserved the right to fish, hunt, gather roots and berries and continue other such traditional practices within the lands they gave up to the United States government. The states, however, continually tried to prevent tribal members from exercising those rights. Violence broke out repeatedly, especially in the Puget Sound area, between Indians trying to fish and non-Indians opposed to their fishing.

Finally, in cases generally referred to as the "Boldt" (U.S. v. Washington for western Washington) and "Belloni" (U.S. v. Oregon for the Columbia) decisions, the courts ruled that those tribes with reserved fishing rights are entitled to up to half of the fish returning to the tribes' "usual and accustomed" fishing sites -- and that there was also a right to protection of fish habitat (i.e., half of nothing doesn't fulfill treaty rights).

In addition to the commercial fishing interests opposed to reallocations, fighting Indian fishing rights became a major cause for some conservation organizations such as the state affiliates of the National Wildlife Federation, which is composed primarily of hunters and fishermen. Meanwhile, fish runs were collapsing. As numerous observers noted, the various fishing interests seemed determined to fight to see who got the last fish

The collapse of the Columbia once-bountiful salmon and steelhead runs had many causes. Dams blocked downstream passage of smolts trying to reach the sea, as well as adults fighting their way upstream to spawn. Clearcutting along streams caused erosion that destroyed spawning grounds. Poor agricultural practices also hurt spawning streams, and irrigation withdrawals took water needed by fish. Over-harvesting by non-Indians, first in the rivers and later in the sea, was already hurting runs by the turn of the century, but the decline was not obvious because fishermen just moved on to other species as the favored ones, especially summer chinook, were depleted.

In the late 1970s, the picture started to change. Having successfully reasserted their treaty rights, the tribes assumed an active role in fisheries' management and began to realize the importance of alliances with conservationists. Sport-fishing groups began to place far more emphasis on protecting fish runs and habitat than on who got to catch the remaining fish. Commercial river fishermen, such as Russ Bristow,

president of the lower-river gillnetters' union, began to understand that upriver Indian fishing was not the major threat to their livelihoods. And finally, realizing that a very important renewable resource, the anadromous fish, was about to disappear because of 'blind progress,' a consensus formed in the Pacific Northwest to try to restore fish runs.

n 1977, the four Columbia River tribes with established treaty I fishing rights -- the Warm Springs, Yakimas, Umatillas, and Nez Perce -- formed the Columbia River Inter-Tribal Fish Commission (CRITFC) to be the tribes' fish agency. CRITFC has formed good working relationships with most fish-related agencies and conservation groups, and its staff of biologists has become widely respected and effective advocates of increased fish runs. The formation of CRITFC and its Puget Sound/western Washington counterpart, the Northwest Indian Fisheries Commission, set the stage for serious cooperation between feuding fishing

One of the most important steps in restoring Columbia Basin fisheries was the passage of the Northwest Power Planning Act in 1980. Congress initially considered legislation to establish a Northwest power council to bail out Northwest power interests, which were suffering because of unwise decisions such as the WPPSS nuclear-plant fiasco. However, environmental groups and Indian tribes persuaded Congress to add important conservation measures, such as giving fish runs equal consideration with power generation in river-management decisions.

Among the successes of the Northwest Power Planning 'Act has been the Fish Passage Center (formerly called the Water Budget Center). It coordinates fish agency and tribal requests for increased flows when needed to help fish runs, such as

spilling more water over dams so as to minimize the number of smolts killed by going through the turbines. Fifteen percent of the young fish heading downriver are killed by each dam, with total mortalities up to 95 percent in low-water years. Northwest Power Planning Council has ordered dam operators to achieve at least a 90 percent survival rate at all dams, a figure fish agencies and tribes are trying to get increased.

Another success due to increased cooperation has been the beginning of restoration of upriver runs. Congress passed the 1938 Mitchell Act to fund hatcheries to mitigate for damage done to natural runs by the many dams. Most of those hatcheries, however, were built below Bonneville Dam, in large part -- as proven in documents obtained by CRITFC -- to prevent Indians, who don't fish below Bonneville, from getting the fish. The result was that the upriver sports fishery was decimated along with the tribal fishery. Mandating the restoration of upriver runs will be part of the (hopefully) forthcoming settlement of the long-running U.S. v. Oregon suit.

Most tribal and sports fishing organizations prefer wild and naturally spawning fish to hatchery fish, which are vulnerable to diseases and budget cuts. Since non-hatchery runs require good spawning habitat, habitat protection has become the focus of much cooperation. In 1984, for example, the tribes, the Oregon Natural Resources Council, Audubon, Oregon Trout, and other environmental groups helped establish the 121,000-acre North Fork John Day Wilderness, the spawning grounds for the largest wild spring chinook run left in Oregon.

Protecting spawning habitat, something that benefits all fishing interests, provided an easy opening for cooperation. In a radical turnabout from previous decades, Warm Springs

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A working ...

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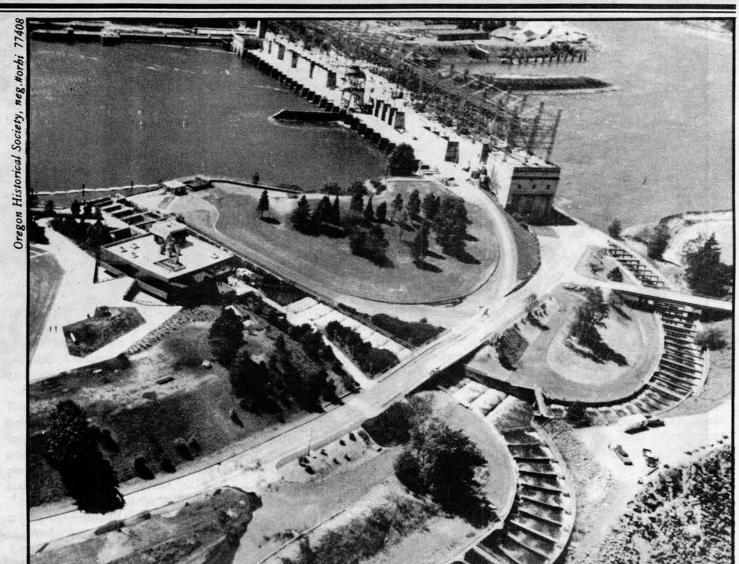
Indians now serve on the board of the Oregon Wildlife Federation, which also co-sponsors an annual conservation conference with the Warm Springs Tribe.

But a few groups still refuse to work with the tribes. In 1984, for example, the Washington State Sportsmen's Council, that state's Wildlife Federation affiliate, put considerable effort into passing Initiative 456 (a ballot measure to abrogate Indian treaty rights), all the while fighting Columbia Gorge protection and opposing wilderness legislation, even though both would protect spawning habitat.

The flip side of conservation/production is, of course, allocation of harvests. Here, too, much of the previous divisiveness is evaporating. Year after year until very recently, the states of Oregon and Washington tried to deny Indians their legal share of fish. And year after year the tribes would go to court to get their fair share. Now, thanks in large part to Bill Wilkerson, director of the Washington Department of Fisheries, and Jack Donaldson, retiring director of the Oregon Department of Fish and Wildlife, tribal seasons are set through negotiation, not litigation.

Only the Idaho attorney general and Department of Fish and Game still prefer to settle disputes in court -- and this year even Idaho didn't file suit against treaty fishing of fall chinook and salmon.

The crowning piece of cooperation came in 1985, with the signing of the long-sought U.S.-Canada Pacific Salmon Treaty. Columbia River fish interests were increasingly frustrated because their efforts to increase fish runs were undermined by huge Alaskan and Canadian harvests while



Bonneville Dam and semi-circular fish ladders, which lead fish around the dam

those fish were in the ocean. Meanwhile, U.S. fishermen were harvesting Canada's Fraser River stocks.

fter almost two decades of fruitless attempts, the treaty became a reality because of a cooperative effort that would have been inconceivable only a few years earlier. Led by such unlikely allies as Mark Cedergreen of the Washington State Charter Boat Association, Jerry Pavletich of Trout Unlimited, and Tim Wapato of the Columbia River Inter-Tribal Fish Commission, the

Pacific Salmon Treaty Coalition formed and convinced the interested parties to each give a little so that agreement could be reached. The Pacific Salmon Treaty -- controls on ocean harvests -- was the missing link needed to obtain "gravel to gravel," or life-cycle management of Columbia River salmon. Within a year, the Alaskan-Canadian catch of Columbia River fall chinook has dropped from 45 percent of the run to 35 percent -- and is expected to drop to 25 percent next year.

Now most major components needed to restore Columbia River salmon and steelhead runs are in place -- and, although much work remains to be done, the results of the cooperative efforts of recent years are already evident. The fall chinook and steelhead runs returning as you read this are the largest in many years.

Unfortunately, all is not yet calm in the Columbia River Basin. Some fishing interests, especially in Idaho, seem bent on reigniting the 'fish wars' by trying to keep treaty Indians from getting their share of the runs and from being co-managers of Columbia River fisheries.

An Indian leader puts his faith in the private sector

The Wascos were once the most influential people along the Columbia River. Skilled fishermen and traders, the Wascos knew wealth and power because of the chinook salmon that seasonally swam upstream into their nets and traps.

On the Warm Springs Reservation in Central Oregon, the Wascos who descend from these river entrepreneurs have taken leadership roles in tribal business and government. One leader is Kenneth Smith, who was the Confederated Tribes' general manager for 12 years and then took his expertise to Washington, D.C., as Assistant Secretary of the Interior for Indian Affairs from 1981 to 1985.

He was raised by his grandparents on a reservation ranch, far from the Columbia River. Although the family journeyed to the river each September to meet the migrating fall chinook, their livelihood depended on the cattle back home. Smith grew up knowing the meaning of a hard day's work but his grandparents also taught him more than that. Uneducated themselves, they believed that education was the key to their people's future, and they pressed Ken to continue his schooling.

Smith's degree in accounting landed him a job in tribal administration where he was soon being groomed for management. By the time he was appointed general manager in 1969, tribal business was

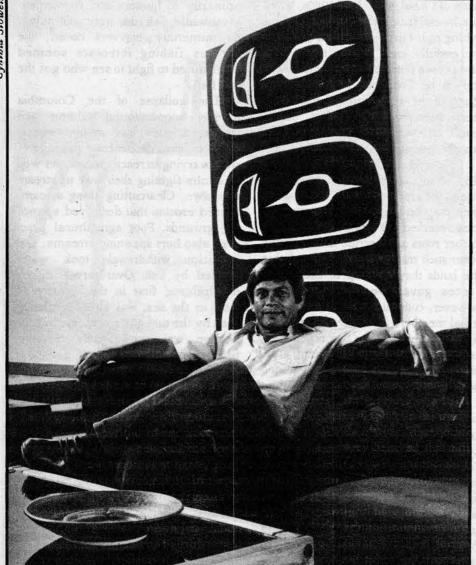
booming. Kah-Nee-Ta Resort had been launched, the sawmill was operating in the black, job opportunities had mushroomed and the reservation's standard of living was rising visibly. Smith guided the tribal corporation through the halcyon '70s.

By the time he was tapped by the Reagan administration, Smith was known for his commitment to tribal self-sufficiency through economic development. "To be really self-governing," he said while carrying out his D.C. duties, "tribes can't have their strings pulled by the federal government. I have to push and challenge them to realize that it's not the government's money they need. It's help in strengthening the capabilities of Indian governments."

Still, when Smith began trimming the Bureau of Indian Affairs budget, merging area offices and eliminating some Indian schools, even his supporters at Warm Springs were skeptical. "I think I had some of the councilmen scratching their heads a little bit when I was saying we had to rely more on the private sector for our financing," he said.

Smith has since joined the private sector himself, working as an economic-development consultant to Indian tribes, including his own.

-- Cynthia D. Stowell



Kenneth Smith



The view from the upper basin

It is in the nature of river basins to create enmity between upstream and downstream. The Columbia River is no exception. Idaho and the Sho-Ban tribe see the downstream interests as shutting them out of fishery decision-making. The downstream tribes see Idaho as having earlier cheerfully dammed the Snake River to within an inch of its life, and now interested only in flooding the river with that sportsman's delight -- hatchery reared steelheads -- to the detriment of a balanced and healthy fishery.

_by Pat Ford

daho salmon and steelhead are ocean-going fish. Born in mountain creeks and streams, they migrate up to 900 miles to the Pacific Ocean. They range widely in the ocean for one to four years, and then return -- in a long, ferocious migration upstream -- to their stream of birth to spawn. Most then die; each spring the cycle renews.

The Columbia River drainage historically supported the world's largest runs of chinook salmon and steelhead trout. Idaho's Salmon and Clearwater river drainages, high in the Columbia basin, are its largest intact nurseries for wild salmon and steelhead. (See map on pages 12-13.) Hundreds of thousands of adult

salmon and steelhead plunge into Idaho and up its streams, from spring through fall, each year.

For many thousands of years, these overlapping runs of protein-rich fish supported major Native American fisheries and cultures in and around the present state of Idaho. In 1805, Lewis and Clark descended Lolo Pass and bought dried salmon from some Nez Perce Indians. Within 75 years, non-Indians were in control of settlement and development; in 1890, Idaho was a state. From that time to the present, a series of great blows devastated Idaho salmon and steel-head and those dependent on them.

Non-Indians quickly built intensive subsistence and commercial fisheries, in river and ocean, on seemingly inexhaustible runs. Overfishing depleted the prized fish -- big spring and summer chinooks returning to Idaho -- and then shrank other runs as well. On the other hand, habitat was steadily lost as settlement, irrigation, logging, grazing and mining dewatered and dirtied streams.

Then came the greatest blows, the massive hydroelectric dam projects built on the Snake and Columbia rivers between 1938 and 1975. They inundated hundreds of miles of spawning habitat and migration corridors. Then in the 1960s, dams in Hells Canyon blocked all fish passage to the upper Snake River, entirely eliminating 50 percent of salmon and steelhead habitat in Idaho. (See map on page 22.)

The eight dams that are passable to fish, which form a gauntlet between Idaho and the ocean, claimed up to 15 percent of each run -- both returning adults and migrating juveniles -- at each dam year after year. Up to 90 percent of all Idaho migrating juveniles were killed in low-water years. Compensation in the form of artificial production in hatcheries and fish passage facilities either was not provided, did not work when built, or worked only slowly.

A collision was brewing. By the late 1950s, there were growing and apparently insatiable

Indian and non-Indian sport and commercial fisheries on salmon and steelhead produced in Idaho, although only a small part of those fisheries were in Idaho itself. Major hatchery and passage efforts did not keep pace with the loss of habitat and staggering loss of fish. It is estimated that nearly 44 million salmon and steelhead worth \$6.5 billion were lost to Northwest fisheries from 1960 to 1980.

The result of this widening gap between supply and demand was increasing conflict among fishermen competing for a dwindling resource, and the loss of major economies. Indians and non-Indians fought a destructive political struggle, which achieved national notoriety as the Columbia River Fish Wars. These wars diverted combatants and spectators alike from confronting the problems inexorably reducing the number of fish to be fought over.

In Idaho, non-Indian recreational suppliers were put out of business throughout central Idaho. Indian subsistence fishing was virtually stopped. Records aren't available earlier, but in 1975-1976, three central Idaho counties totalling 8,000 people lost 122 jobs as a result of declining runs. And this was after the greatest declines had already occurred.

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Upper basin...

(Continued from page 19)

Blows to the runs and resulting conflicts were basin-wide. Idaho's special frustration was legal and political inability to affect decisions spelling life or death for Idaho fish. Idaho salmon and steelhead, and related Idaho economies, were devastated largely by downstream dams and fisheries that Idaho does not control. Idaho salmon, for instance, are fished under 16 separate state, federal, tribal and foreign jurisdictions. Idaho controls one of those.

This legal morass led Congress to enact the Salmon and Steelhead Conservation and Enhancement Act of 1980 to establish coordinated management. But Idaho was not included in the new law. So in salmon and steelhead management in the Columbia basin, Idaho is at the end of the funnel.

ook at the Columbia River system through the eyes of the last fishermen -- the Shoshone-Bannock tribal members. Before white settlement, they fished the upper Salmon River and its tributaries, and parts of the Snake River now dammed to salmon and steelhead. The 1868 Fort Bridger Treaty, which put them on the Fort Hall Reservation in southeast Idaho, recognized their right to traditional hunting and fishing.

Today these Shoshone-Bannock fishermen offer contrast on several counts. As they fish upper Salmon streams, 900 miles from the mouth of the Columbia, they have been preceded by ocean, non-Indian commercial, Oregon and Washington sport, Indian commercial, Indian ceremonial and subsistence, and Idaho sport fishermen. The Sho-Bans use only the traditional spear pole; their downstream counterparts use drift nets, gill nets, rod and reel, hook and snag -- modern equipment they adopted after their traditional fishing spots were flooded or otherwise destroyed.

The bread and butter of each downstream fishery are hatchery fish; the Sho-Bans' aim is wild fish. The downstream fishermen take hundreds of thousands of fish. The Sho-Bans, painfully but purposely, now take just a handful each year. The downstream fishermen have some legal voice in management and allocation. Until very recently, the Sho-Bans had none.

After debating the right course for years, the Sho-Bans went to federal court in October 1985 to seek an equal voice in the Columbia basin salmon and steelhead fishery. Their motion was supported by Idaho and opposed by Washington and the Warm Springs, Yakima, Umatilla and Nez Perce tribes. The sides make clear that today's Columbia Basin fish conflicts are not exclusively between Indians and non-Indians. They are also between upstream and downstream.

In the Colorado and Missouri river basins, the upstream-downstream conflicts are mainly about water quantity. On the Columbia, they are about fish. But the conflicts are similar in the sense that positions are strongly held, are emotional, and at times the two sides seem to speak different languages. Words and agreements mean one thing downstream, another upstream. The courts are frequently



Wild salmon in a clear stream

consulted, and their major decisions run the rivers.

From the time in the 1800s when white fishermen began pushing Indians aside, there have been three related issues at the heart of Columbia River fish conflicts: representation, allocation, and management. All exist today.

Representation. There have been two modern phases of representation, or who makes the fishery decisions. The first, from the late 1800s to the 1970, had non-Indians in charge. From the 1930s on, those non-Indians were energy, irrigation and industrial interests rather than fishermen. The result was the devastation of the runs. Idaho's energy and irrigation interests were part of that ruling group. Idaho Indians, like the downstream tribes, were on the outside.

The second, current phase began when the Warm Springs, Yakima, Umatilla, and Nez Perce tribes forced judicial recognition of their treaty fishing rights. Non-Indians howled. and sought political redress; violent confrontations, fed by diminished fish runs, erupted. But the tribes' rights remained firm, and they began a slow climb toward co-management of the fisheries and river.

Recognition of those rights helped Idaho fishermen by breaking the stranglehold energy and irrigation interests had on the Columbia and Snake river management. But it did not bring Idaho fishermen to the table where management and allocation were being decided. One observer says that in the 1970s, "Everybody else did to Idaho what Idaho and others did to the tribes earlier -- shut them out."

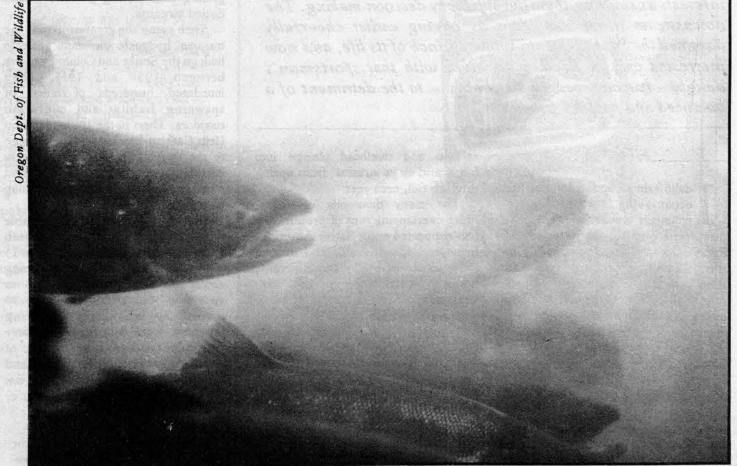
The lower basin tribes' lawsuit -its shorthand title is U.S. v. Oregon -is now an institution. For roughly a
decade most salmon and steelhead
allocation decisions have been made
under its umbrella. In 1983, when
presiding Judge Walter Craig told the
parties to begin negotiating a
long-range management plan, Idaho
sought entry to the case. Oregon,
Washington and the lower basin tribes

resisted. Judge Craig said no, but was reversed on appeal. Today, Idaho sits at the table with Oregon, Washington, the federal government and the four tribes.

In October 1985, the Sho-Bans followed Idaho's path and asked to become the ninth party to U.S. v. Oregon. "Our purpose is to get more fish in Idaho," says Larry Echohawk, then the Sho-Ban's attorney. "The number of wild fish returning to the Salmon River basin isn't large enough for our traditional fishery.

"It is painful that there are so few our elders cannot pass on the fishing tradition. We need a voice in downstream management decisions. We didn't want conflict with the downstream tribes, so we've tried since 1977 to join the Columbia River Inter-Tribal Fish Commission. But they rejected us."

CRITFC, often called Inter-Tribe, was formed by the four treaty tribes in 1977. Its attorneys, biologists and publicists have made it an influential advocate on every aspect of salmon and steelhead management.



Hatchery salmon

CRITFC's tribes opposed the Sho-Ban intervention in *U.S.* v. Oregon, claiming its treaty rights are not on a par with their own.

"We took a chance," Echohawk says. "The federal court could have weakened our treaty right. The downriver tribes have gone right to the point of saying we don't have a treaty right."

However, in late July of this year, Judge Edward Leavy, who replaced deceased Judge Craig, admitted the Sho-Bans as intervenors in the case. The decision is not appealable. The Sho-Bans, who have had observer status at the long-range management negotiations Judge Craig had instituted, are now a partner in them. Negotiating sessions have occurred irregularly for two and a half years. Progress has been slow, with both sides saying difficult issues remain.

In the interim, downriver fishing allocations and seasons are generally set a year at a time by Oregon and Washington, often based on agreement with the treaty tribes. Idaho says it is not always fully involved in these decisions; the other parties say Idaho is involved.

fish when, is the most visible and emotional conflict. "Not enough fish -- particularly wild fish -- are getting back to Idaho," says Idaho Fish and Game Director Jerry Conley. "Too many are caught downstream."

The Sho-Bans agree. But CRITFC's Doug Dompier says, "The (CRITFC) tribes take far less fish than they have a right to. And wild fish numbers into Idaho are increasing each year."

In 1984, Idaho Fish and Game predicted an excellent Salmon River steelhead run; fishermen and their suppliers got ready. When the run didn't meet expectations, Fish and Game led an attack on the downriver tribes. It charged that the tribes' commercial gill-net fishery on fall chinook had taken far too many Idaho steelhead. The two species are in the river at the same time, leading to so-called incidental catches. Fish and Game's charges were amplified by editorials, Idaho sportsmen and politicians calling for a law to make steelhead a national game fish, off-limits to commercial harvest.

The tribes replied that Fish and Game's own mistake caused the small steelhead run. They said Fish and Game had released diseased hatchery smolts two years earlier, causing the reduced run. They cited documents to support their counterattack.

Another cause of friction came in early 1985, when the tribes decided to increase their ceremonial and subsistence fishery on spring chinook from roughly 2,000 to 3,300. Idaho sought a conservation closure, contending the run was too small for such a take. The court denied the request, possibly because the tribes argued that the spring chinook run had almost doubled, from 50,000 to 90,000.

This year has been quieter. The CRITFC tribes' 1986 ceremonial spring chinook catch was 8,100. Fish and Game was unhappy, but didn't act. However, a draft 1986 fall chinook agreement made public this summer got things back into court. The Technical Advisory Committee (a broad-based group of biologists which provides information and best estimates to all parties) estimated the planned season could result in

incidental catches of 43 to 50 percent of the steelhead run into the Clearwater River. So Fish and Game filed a court motion seeking to be a signatory to the fall chinook agreement. It was denied.

Next year there will undoubtedly be another string of disputes over particular fish runs. They will continue until the stalled long-range management negotiations succeed.

There have been a few agreements. The Nez Perce are the only Idaho tribe to belong to CRITFC. While the broader disputes have flared, the tribe and Fish and Game agreed in 1985 and 1986 on small tribal and sport fisheries on spring chinook returning to Idaho's Rapid River hatchery. "We have, by and large, been able to work out our differences in state," Conley says. "Even so, we have a difficult time understanding each other."

anagement is where the arguments over wild fish and harvest reach the ground. Downstream fishermen and Idaho join together on water flow and fish passage issues to spar with the Corps of Engineers, the Bonneville Power Administration and utilities. There are, however, two areas of dispute: the mixed-stock fishery, and the production issue of wild and hatchery fish.

On the main-stem Columbia, different species and different stocks of those species are in the river together. In August and September, large numbers of hatchery and natural-spawning fall chinook are in the river bound for Idaho. These are heavily fished in the tribes' commercial fishery from Bonneville to McNary dams. But large numbers of hatchery and wild steelhead bound for Idaho are also there. They are close in size to the fall chinook, and many are taken in the nets.

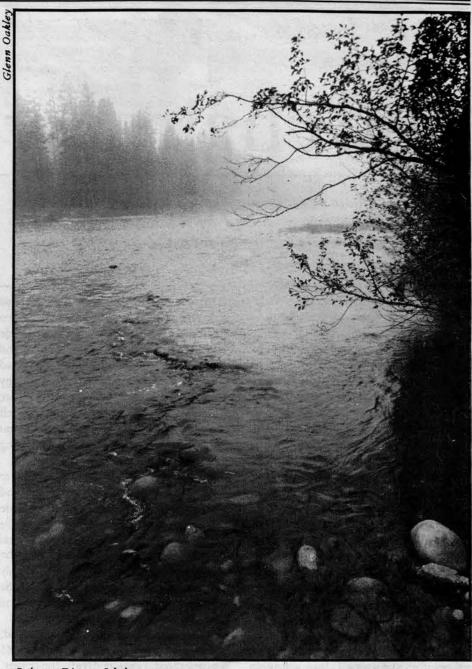
"The result is that wild steelhead are fished at the same intensity as hatchery chinook and steelhead," Fish and Game's Conley argues. "Biologically, it doesn't matter much on hatchery fish, but the wild ones can't take that level of fishing. We are not getting enough back to Idaho."

Conley says changes in the tribes' fishery -- more careful use of net sizes, better timing, moving some fishing above the Snake's juncture with the Columbia -- would reduce the impact on wild steelhead while allowing a sizeable tribal catch.

The Sho-Bans concur, in their case for spring and summer chinook. "Our view of fishing is primarily religious," Echohawk says. "The wild fish are special to us. They have survived. Not that we have no interest in hatchery fish, but our priority is wild fish. Strangely enough, we get little sympathy for that from the downriver tribes."

The downstream tribes have a different view. They say the state of Idaho, whose politics have a strong anti-conservation element, is only intent on rebuilding a sports fishery based on steelhead. They say Idaho is willing, and has even let, non-sports species and their habitats disappear, and let the Snake be dammed and blocked to fish. The tribes claim Idaho sheds crocodile tears over wild fish and genetic adaptaion, but that it cares only about sports species, whether wild or hatchery.

CRITFC's Dompier says, "Our numbers show wild steelhead escape-



Salmon River, Idaho

ment to Idaho is going up. We are not taking undue numbers. This last year we gave up 60,000 steelhead we could have caught so escapement would be high. The mixed-stock fishery is already efficiently managed to protect the various stocks. We know exactly what's happening, and we shape our gear and timing accordingly."

He continues, "Idaho cannot rely on the 'wild' runs to rebuild themselves. We believe they should be rebuilt" by placing the right hatchery stocks into the streams. "That way, naturally spawning stocks can be built in all the unused habitat Idaho has now. We've got to do that rather than just continue dumping increasing millions of hatchery smolts out."

Conley counters, "Our program

does call for rebuilding natural stocks in certain streams. We are moving slowly because it's difficult and risky. But there's no way we can outplant hatchery fish into the vast areas of the Clearwater and Salmon; it's physically and economically impractical, and biologically dangerous. Those wild stocks in the Middle Fork of the Salmon or the Selway are adapted through thousands of years to do that job for us. We are committed not to lose that genetic flexibility."

'Outplants' are hatchery smolts placed in unused habitat (and Idaho has enormous amounts of unused habitat thanks to dams and pollution) in the hope that they will return there to spawn after their ocean journeys. If

(Continued on page 22)



Jerry Conley



Larry Echohawk

The chainsaw massacre

High mountain streams don't have dams, but they do have loggers, and the mud spawned by roading and logging in Idaho can be as deadly to salmon reproduction as the highest concrete dam.

by Hadley Roberts

Por eons, the anadromous chinook salmon and steelhead trout have coexisted in the forested watersheds of the Northwest, which are important for the production of both timber and fish. Since the 1950s, however, when there was a large-scale increase in the demand for all resources, fish and tree production have clashed. In Idaho, for example, two rivers are being fought over, with loggers on one side and commercial and sport fishermen on the other.

The issue is the health of the fish habitat. Anadromous species reproduce in freshwater, and the juveniles spend time there before swimming toward the sea. To be productive, these spawning areas and nurseries must have cool, flowing water, clean gravel for spawning, clear water to allow sight feeding, invertebrate food organisms, lots of dissolved oxygen and access to the sea. The lack of any of these qualities harms or dooms habitat for salmon and steelhead.

Logging can harm fish habitat in several ways. The fine material released by disturbed soils is washed into streams, where it settles on gravel beds and smothers fresh eggs. Other damage comes from the logging of streamside trees or the skidding of

logs across streams. Both actions reduce stream stability and widen streams. The removal of streamside vegetation reduces fish cover and increases stream temperatures. Road building, an integral part of any logging operation, can be more devastating than the logging itself since roads contribute more sediment to streams than all other land-altering activities

Examples abound of damage to salmon habitat by roading and logging. An infamous example occurred on Idaho's South Fork of the Salmon River in the Payette National Forest. (See map on pages 12-13.) The forest, made up of steep, highly erosive granitic soils of the Idaho batholith, was heavily roaded and logged from 1950 to 1966.

Toward the end of this period, severe storms in 1962, 1964 and 1965 accelerated erosion from the roads, and portions of the South Fork had sediment loads 350 percent higher than the pre-1950 period. The coarse-textured sands buried the newly constructed chinook salmon nests called redds under a blanket of mud, and fish that managed to hatch found the pools that past generations had used for food and shelter filled with sand.

Surveys substantiated the damage visible to the eye. In the mid-1950s,

the South Fork attracted over 5,000 returning chinook salmon and accounted for about 20 percent of the chinook salmon redds in Idaho. But in the years following the storms, the number of returning adults dropped drastically.

The devastation caused the Forest Service to put a moratorium on logging above the chinook spawning area and to start a watershed rehabilitation program. The action took the pressure off the South Fork and it began to cleanse itself naturally. By 1974, the sediment load was reduced 84 percent from its high point a decade earlier. However, from 1974 to 1983, the load remained constant, and it is impossible to predict when, or if, the river will return to pre-logging sediment loads.

With the memory of these grisly events only a few years old, a new controversy arose in 1981, when the Nezperce National Forest proposed to log Meadow Creek, a chinook salmon spawning tributary of the Selway River. The agency's environmental assessment predicted a 20 percent decrease in the fishery due to the logging.

As a result, the Idaho State Department of Health and Welfare informed the Forest Service that its proposal was unacceptable. The agency said logging would injure a protected, beneficial use of the water -- chinook salmon spawning. State standards say that no injury to beneficial use may occur.

The Forest Service and timber

industry asked the state agency to relax its standards for water pollution from non-point sources, such as logging. The pair argued that enforcing the standard would eliminate many potential Idaho timber sales.

As a substitute for the state standard, the Forest Service and timber industry proposed the use of something called Best Management Practices. Under it, a sale could go forward, whatever the effects on water quality and fish, so long as the loggers used the best available technology.

After the Department of Health and Welfare rejected that proposal, industry turned to the Idaho Legislature in the last session. Its HB No. 711 sailed through both houses of the Legislature in 12 days despite objections from 11 sportsmen's groups.

But Gov. John Evans, reportedly under pressure from the federal Environmental Protection Agency, which warned that it would impose its own standards on Idaho's rivers, vetoed the bill. The governor said it "created more problems than it resolved."

That veto and the salmon it protected have become issues in the current Idaho election campaign for the U.S. Senate. Incumbent Sen. Steve Symms, who is being challenged by Evans, ran a large advertisement reading:

"John Evans is again stamping out timber jobs." In small letters was the message: "Senator Steve Symms working effectively for Idaho timber jobs."

Upper basin...

(Continued from page 21)

they do, a self-sustaining, naturally spawning population can establish itself. Presumably, at some point established natural spawners can be called wild. There is precedent for outplanting. The best example in Idaho is the Clearwater River's 'wild' salmon, which were outplanted there 30 years ago.

The lines between hatchery, naturally spawning and wild fish are vague, and their political use by all parties makes them more slippery. To Idaho Fish and Game, the Clearwater salmon are wild; to CRITFC, they are natural spawners. Both accuse the other of over-reliance on hatchery fish and selective rhetorical use of 'wild' and 'natural spawners.'

Overlaying, perhaps determining, these biological and political arguments is economics. Columbia basin salmon and steelhead are enormous economic resources. Multimillion dollar commercial and recreational fisheries depend on the runs. Their low ebb in the late 1970s contributed substantially to regional unemployment. Their current climb is sparking great economic expectations throughout central Idaho, as well as regionally.

Economics is a language our society understands well. For Idaho, when applied to salmon and steelhead, it is a powerful but double-edged sword. Fish can be compared directly, and favorably, with kilowatts and crops. As a result, political alliances among fishermen, businesspeople and elected officials have been forged in the name of economic development.

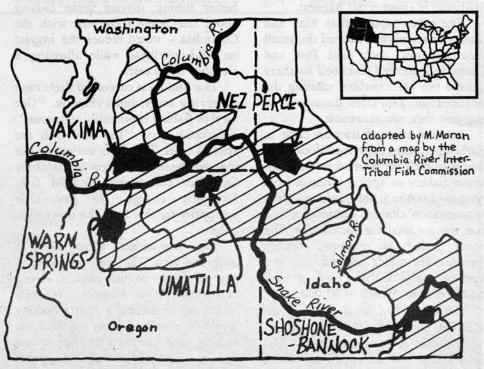
Economics is quantitative, and the hatchery system fits into it more easily than do wild fish. The hatchery system represents an investment paid for by the nation's taxpayers. CRITFC's desire to use those hatcheries to restock a vast, empty habitat is economically efficient. Wild and hatchery fish are equally valued on balance sheets. The Sho-Bans' religious and cultural arguments make little economic sense. And many Idaho fishermen and their suppliers just want fish; it doesn't much matter whether those fish are born in the clear gravels of Loon Creek or in a tank at the Sawtooth hatchery.

Because more Idaho hatcheries will come on line in the next five years, with total annual production approaching 20 million by 1990, the prospects for continued rebuilding of Idaho runs are good. But the nature of the rebuilding remains uncertain. Will it be hatchery based, with natural habitats left in deteriorated condition or with healthy habitats left empty?

Will hatchery fish be used to build naturally spawning stocks in now empty habitat? Will the wild stocks

rebuild themselves? There is no agreement on the answers.

INDIAN LANDS OF THE NORTHWEST



reservation lands

traditional Indian lands, ceded to the U.S. government

This map shows the reservation and ceded lands of southeastern Idaho's Shoshone-Bannock Tribe, and the individual reservations and combined ceded lands of the four Columbia

River Inter-Tribal Fish Commission tribes. Traditional fishing places of the five tribes extend throughout the Columbia River basin, both inside and outside the ceded lands.

Showing the West the way

The reaction to the intense development of the Columbia River basin led Congress to enact the Northwest Power Planning Act, and the four northwest states to create the Northwest Power Planning Council as a balance to the giant, pro-kilowatt Bonneville Power Administration. The council has already played a major role in the Northwest, and it may also serve as a model for the West in its search for a regional way to deal with resource questions now dominated by the federal government.

_by Verne Huser

Imost from the moment of their creation, the Western states began to search for a way to deal with federal control of so much of the West's land and natural resources. Approaches ranged from aggressive: the Sagebrush Rebellion and former Interior Secretary James Watt, to cooperative: massive proposed land trades, such as Utah's Project Bold, and various federal-state oil shale and coal advisory committees.

Varied as they might appear, the approaches had one thing in common -- they all failed. Now, however, a five-year-long experiment in Oregon, Washington, Idaho and Montana holds the possibility of success. If it works, this multistate guidance of the federal presence could provide a model for other areas and resources.

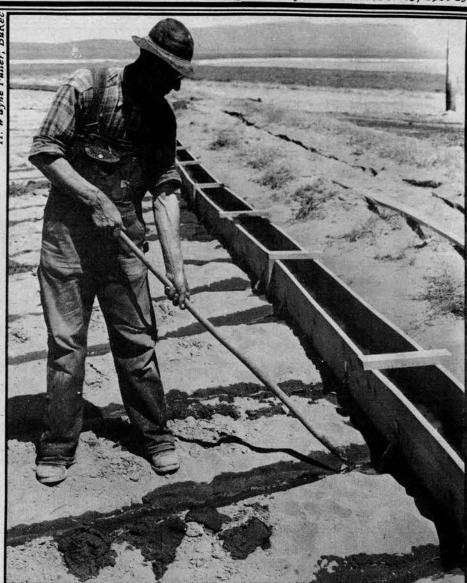
The Northwest experiment aims at turning back the clock on the Columbia River by recovering lost natural values. Although no one talks of tearing down dams or of letting irrigated fields return to sagebrush, kilowatts are sacrificed to smolts, irrigation projects are modified to keep salmon out of apple orchards and wheatfields, and the region's energy policy is modified to minimize or eliminate new dams and power plants.

It is easy to take an elevated view of the experiment, and to wonder if it could help resolve wilderness fights in southern Utah or forest planning fights in Montana and Idaho. But to those in the Northwest, the experiment is not academic. At stake are the electric bills of nine million people, recovery of the Columbia River salmon fishery, and the ways in which the region earns its collective living.

The Northwest's present economy rests on cheap, plentiful hydroelectric power. The low electric rates attracted the electric-hungry aluminum smelters and encouraged a way of life based on "living better electrically." The drive for cheap and plentiful electricity helped lead to the pushing aside of the rights of Native Americans, to laking-up almost every major stretch of river, and to the nation's largest, most disastrous nuclear power plant project.

Tow, driven by higher electric rates, by conservation, by Native American victories in the Fish Wars and by a new mandate from Congress, the Northwest is under pressure to change. The changes are being implemented through a unique attempt to give the Northwest states more power over the federal presence in the region.

Although the result of this effort to change the direction of the Columbia River basin will be determined by millions of residents scattered over four states and 260,000 square miles, at its center are two agencies: one



Irrigation comes for the first time to F.W. Barlow's farm in the Yakima

federal and one composed of the four

Northwest states. The federal agency is the Bonneville Power Administration, or BPA, a \$3 billion per year part of the Department of Energy. Its transmission lines collect 20,000 megawatts of power at federal dams for distribution to 54 electric co-ops, 37 towns and cities, 27 public utility districts, 17 industrial firms, nine investor-owned utilities, six federal agencies, and 14 customers outside the Northwest. It distributes roughly half the power generated in the region and provides nearly 80 percent of the region's transmission capacity. When the Reagan administration recently proposed selling BPA, it priced it at \$9 billion.

The marketing of electricity sounds benign, but there is potential for controversy. BPA once planned a transmission line through a national wildlife refuge, only to meet considerable opposition. So it simply built the line up to the preserve boundaries, presenting opponents with a fait accompli. The effects of its energy policy are more far-reaching. BPA's decision in the 1970s that the Northwest's future depended on new power plants, rather than on conservation, led to WPPSS -- the disastrous attempt to build five nuclear power plants.

BPA's policies in the environmentally aware Northwest created pressure for reform. At the same time, BPA itself wanted new powers that could only be granted by Congress. These forces came together in Congress to produce the 1980 Pacific Northwest Electric Power Planning and Conservation Act. The Act satisfied the various interests enough to gain a majority, but some say it achieved consensus not just through compromise, but also through vagueness.

The heart of the Power Planning Act is authorization for Washington, Oregon, Idaho and Montana to create the eight-person Pacific Northwest Electric Power and Conservation Council. With BPA, it is a key element

Valley, April, 1945

in the Northwest's experiment in state-federal cooperation.

The Act broadened BPA policies in two ways. First, it encouraged conservation and efficiency, rather than power plant and dam construction. Second, through the Council, it gave consumers, state, tribal and local government, and fish and wildlife agencies a strong voice in the use of existing energy sources and the development of new ones. The Act called for the protection of fish and wildlife, including improvement of Columbia River basin spawning grounds and habitat, and required that electric power revenues be used to restore fish and wildlife values the hydroelectric projects had destroyed.

The Council has initiated a number of programs for implementation by the BPA. They include model conservation standards in home and office construction; the Water Budget to flush young salmon through reservoirs; and the \$46 million Yakima Basin Enhancement Program, to bring salmon back to the Yakima Basin. (See map on pages 12-13.) Major salmon runs had been destroyed by diversion of Yakima River water to irrigation, stranding smolt heading for the ocean and dewatering the river when adult salmon were running upstream to spawn.

The Yakima program is being done in cooperation with the Bureau of Reclamation, and if successful will develop more water for both agriculture and fish. Yakima tribal fisheries official Bill Yallup says the number of redds, or nests, has increased thirty-fold in the past decade.

The financing of energy conservation and of salmon and wildlife recovery programs comes directly or indirectly from electric energy users through the BPA. The Water Budget, for example, indirectly costs Northwest consumers

(Continued on page 24)

Showing ...

(Continued on page 23)

between \$54 and \$74 million in electricity not generated because the water is released to move the fish through the reservoirs. The BPA is also committed to spend \$200 million (\$10 to \$20 million a year) from its revenues to improve fish-passage facilities such as screens and spillways at main-stem dams.

The Council has also undertaken a broader attempt to influence BPA. It developed a 20-year energy plan in 1983 to guide BPA over the long term. BPA agreed with 84 of the 96 specific conservation suggestions, but said the remaining dozen "faced serious impediment to implementation."

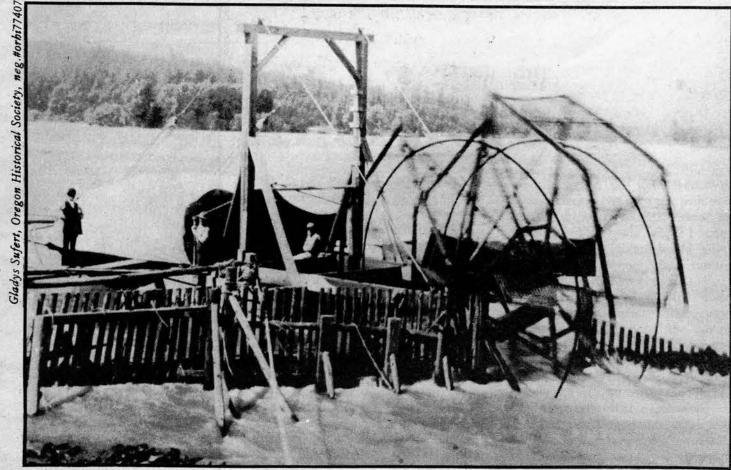
Those few words of jargon are part of a struggle that has been going on since the Council was formed. Giant BPA, with its 3,000 employees, recognized that the 1980 Act was a mandate for change. BPA also recognized that the eight-person Council and its 42-person staff were instruments of the change. But BPA didn't conclude that it had to take orders from the tiny, youthful upstart. Instead, it saw the Council as running a public involvement process that would provide BPA with advice.

For its part, the Council recognized that issuing orders to BPA would lead to pitched battles and years of litigation. The result has been a complex dance, made up of both feuding and cooperation. Dulcy Mahar, the Council's information director, says:

"The rhetoric doesn't indicate the close day-to-day working relationship between BPA and the Council." In public, she says, the "creative tension" often results in friction. But privately, the two staffs cooperate.

Former Oregon Council member Roy Hemmingway has another view. "On the whole, BPA has protected itself as an institution more than it has furthered the regional interest." Mahar suggests that while BPA doesn't move fast enough for the Council, it moves a lot faster than it did before the Council was created.

The differences have spilled into court. The Seattle Master Builders sued in 1983, challenging the constitutionality of the Council, and BPA joined the suit. The Builders



Fish wheel, which scoops up fish, in the Columbia River

were provoked by the Council's attempt to impose an energy conservation code on BPA customers. Among the Master Builders' several allegations was a claim that the Council was unconstitutional because a state group was giving orders to a federal agency.

BPA, avoiding an open attempt to gut the Council, intervened in an interesting way. It said that, as it read the 1980 Act, the Council could not direct the BPA, but only make suggestions. The BPA said that since the Act didn't tell BPA to take orders from the Council, there was no constitutional question. For their part, the Council and its tribal and environmental supporters argued that the Council could indeed give orders to the BPA, and that there was nothing unconstitutional about it.

On April 10, 1986, the Ninth Circuit Court of Appeals ruled that the Council was constitutional, and that there is no bar to a state-created regional body like the Council giving direction to a federal agency.

The BPA had threatened in the Master Builders' suit that the assumption of such powers by the Council would destroy the working relationship between the two bodies. But Kai Lee, a Washington member of the Council and a professor of political science at the University of Washington, disagreed.

Lee said Congress gave BPA strong powers in the Act, letting it acquire new sources of electric power, in addition to its long-standing right to market power from federal dams. BPA's ability to acquire new sources of power, Lee said, meant that the states gave up much of their traditional role in power planning.

In return, according to Lee, the Northwest got the four-state Council, and the Council got the authority to develop guidelines, checks and balances. According to Lee, BPA, in the Master Builders' suit, appeared to be trying to back away from that delicate balance between federal and state power hammered out in the Act.

If the Master Builders' suit was an attempt to shackle the Council, a suit filed by the National Wildlife Federation against the Federal Energy Regulatory Commission attempts to interpret the Council's powers more broadly. The NWF says the Council was created to do more than just oversee the BPA; it is asking the court to order FERC to also comply with the

Council's fish and wildlife program.

The Council has joined the suit on the side of the NWF. If the NWF and Council position wins, the Council's fish and wildlife program for BPA would presumably also apply to the Corps and Bureau of Reclamation.

Por the Northwest, these matters are all important. For the West in general, the most interesting question is: Has the Northwest approach worked well enough to consider spreading it far and wide? Bob Saxvik of Idaho, the new chairman of the Council, believes that the Act and the Council have "been a good national model for other regions to take a look at, whether" those regions are concerned with energy, or "other shared resources."

Timothy Wapato, head of the Columbia River Inter-Tribal Fish Commission, says, thanks to the Act and Council, "the whole climate has changed dramatically." Chip Greening, a Portland attorney and public interest lobbyist, said in 1985 that, thanks to the Act: "Utilities could no longer ride roughshod over the public interest."

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