

Boise's hot water...6 Palouse farming...8 Idaho dams...12

High Country

**IDAHO
SPECIAL
ISSUE**

news

Friday, September 3, 1982

Vol. 14, No. 17

\$1.00

Latter-day homesteading

Idaho's \$10 an acre "dream land"

by Glenn Oakley

Turning the desert green is a dream no less virtuous in Idaho than motherhood and potato pie. Every man and woman in the arid West has the opportunity to homestead 160 or 320 acres of desert and claim it as their own — if the sagebrush is replaced with spuds, sugar beets or other crops.

The Bureau of Land Management in Idaho and Nevada is beginning to process homestead applications that have been dormant for years because of separate moratoriums on agricultural development of the public lands. The Desert Land Act (DLA) and the Carey Act were the only two of the early homestead acts to survive the reordering of the BLM under its 1976 "Organic Act." Yet questions over the social, economic and environmental impacts of these acts resulted in a ten year moratorium on DLA and Carey Act entries in Nevada (which ended in 1979), and a similar, but shorter moratorium in Idaho, imposed in 1976. This fall, BLM's Idaho office will begin processing the first DLA applications since that 1976 moratorium.

The 1877 Desert Land Act offers 320 acres of desert land for \$1.25 an acre to anyone who has the money and resources to convert it to irrigated farmland. The 1894 Carey Act offers 160 acres under similar conditions, except the state acts as an intermediary between the "settler" and the BLM. The settler must build a house and live on the land. The cost is \$10 an acre.

Despite the number of people waiting to take advantage of the practically free land, the future of the acts is questionable. "I think we're trying to find out now whether the Carey Act and Desert Land Act are viable in the 80s," said Guy Baier, chief of resources at the Idaho BLM office. "With the costs going up and the water table going down it's going to be tough," he said.

Not only will "reclaiming" the desert for agricultural production be tough for the prospective settlers, but the effects will have impact on future energy development in the Northwest, the electric bills of everyone in the region, the groundwater levels and river flows, the fish and wildlife populations, the amount of rangeland available for grazing and the market prices of crops.

Idaho has historically, and to this day, been the state most active in DLA and Carey Act development. Between the passage of the acts and the 1976 moratorium, some 1.5 million acres of public land were transferred to southern Idaho



High lift pipeline conveys irrigation water from Snake River canyon

settlers under DLA, and some 600,000 acres under the Carey Act. The Snake River, which runs the length of southern Idaho, provided easy water for the homesteaders — until the 1930s when all the easily irrigated land was taken. The acts went largely ignored until the late 1940s when the first deep irrigation well was drilled, followed by the development of the high lift pump in the 1960s. The high lift pump sucks water as much as 800 vertical feet out of the Snake River canyon and onto the plateaus above. With these two developments the high and dry desert could be irrigated.

High lift irrigation is analogous to a snake swallowing its own tail. The pumps require tremendous amounts of electricity, but the very act of pumping removes the source of electrical production: the water to turn the turbines at the downstream dams. An Idaho Supreme Court decision is pending on whether Idaho Power Company can reject applications for high lift pumping in order to protect its hydroelectric power supply. The development-oriented Idaho Department of Water Resources (IDWR) has argued that IPC lost its water rights for power production when Hells Canyon Dam was built.

The State Water Plan — prepared by the IDWR and adopted by the Idaho legislature — calls for the irrigation of an additional 850,000 acres, both DLA, Carey and private lands, by the year 2020.

This development would require 2,000 megawatts of new generating power to make up for the lost hydro-power and provide additional electricity for the new deep wells and high lift pumps.

Demand for water from the Snake River is already critical. At the Milner diversion dam in south-central Idaho, the Snake River is entirely diverted for irrigation every summer, leaving essentially a dry river bed. Fortunately, the famous Thousand Springs, which cascade from the basalt canyon walls above the river, recharge the Snake River within a mile below Milner Dam. The recharge is accompanied by a simultaneous renewal of irrigation withdrawal. The state water plan requires a minimum flow of 3,300 cubic feet per second near Murphy, south of Boise. The minimum flow is designed to prevent the second draining of the Snake River; however, it is 2,200 cfs less than that requested by the Idaho Department of Fish and Game.

Despite the fact that irrigation withdrawal frequently reduces the Snake River to its minimum flow of 3,300 cfs the IDWR continues to issue water permits for the river. "It's simply the full use of the water supply," explained IDWR Administrator Norman Young. "You don't design your water use for the low flow periods." Young said the department has enough water applications "to dry the Snake River up at Murphy." But there are no Thousand Springs downstream of Murphy, and Young said, "Obviously they won't be able to do it that way." He said the construction of off-river reservoirs for irrigation is likely.

Still, the IDWR is facing years when irrigation demand will exceed the water supply. To maintain the legally mandated minimum flow, the IDWR will have to shut water off to some farms during dry years. The department is now adjudicating water rights to determine who will be the first to be cut off. But the general rule is "first in time, first in right," and thus the latest DLA and Carey Act farms would be the first to wither in the sun.

To remedy this inconvenient limitation, several developers and the U.S. Bureau of Reclamation have proposed tapping the Snake River aquifer — the

(continued on page 10)

WESTERN ROUNDUP



High Country News

Published biweekly by the High Country Foundation, 331 Main, Lander, Wyoming 82520. Telephone (307) 332-6970. Printed by the *Jackson Hole News*, Jackson, Wyoming. Second class postage paid at Lander (USPS No. 087480). All rights to publication of articles herein are reserved.

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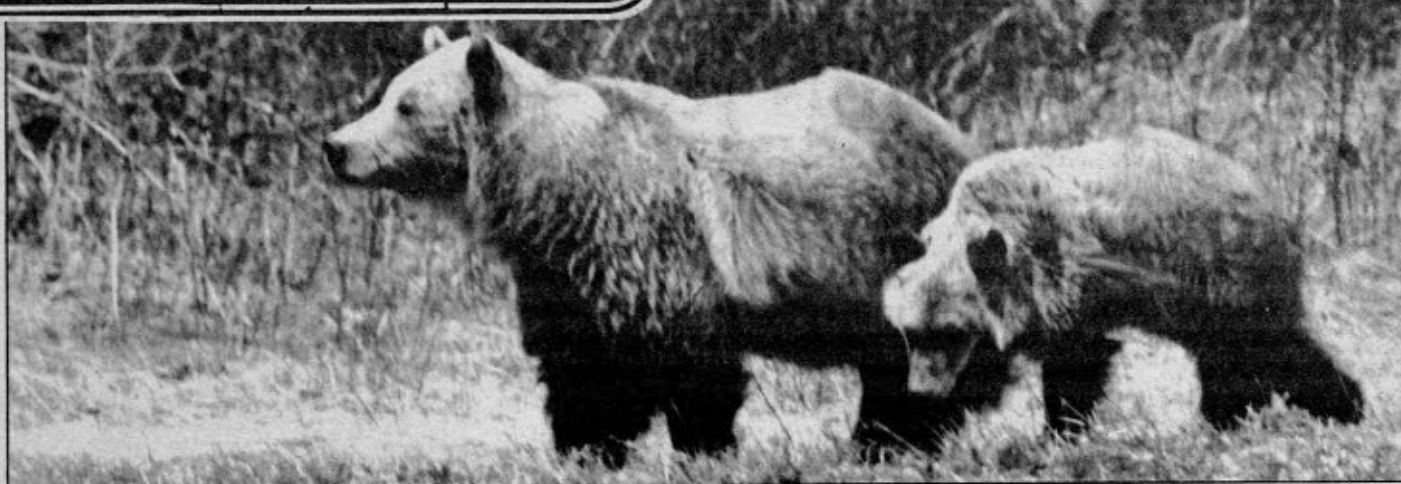
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Subscriptions are \$15 per year for individuals, \$25 per year for institutions. Single copies \$1.00 plus \$1.25 postage and handling.



Betsy Gault

Yellowstone's grizzlies face extinction

A U.S. Park Service memorandum recently disclosed that the number of grizzly bears in Yellowstone National Park is so low that the bears may soon become extinct in the park. Other grizzly experts say, however, that this is old news that could have been revealed years ago.

According to a United Press International story, the Interagency Grizzly Bear Study Team, composed of state and federal agencies, estimated there are as few as 30 female and 157 male grizzlies left in the park. But other grizzly experts question the study team's ability to count the actual number of grizzlies. The four people involved with the study team that *High Country News* tried to contact were away on vacation, as well as the man who issued the memo, Roland Wauer, director of natural resource management for the Park Service.

Joan Anzelmo, public information officer for Yellowstone Park, said the memo was the result of a routine steer-

ing committee meeting for the team. The team consists of representatives from the Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, and the game and fish departments of Montana, Idaho and Wyoming. Anzelmo said the team's research is continuing and the group has always been concerned about the declining number of grizzlies.

She said the bear's decline could be attributed to illegal hunting and habitat encroachment. She said the team will continue its research and the park will try to eliminate the factors prompting the decline.

However, Frank Craighead, who did independent research on the Yellowstone grizzlies from 1959 to 1969, said the park's reasons for the bear's decline are wrong. He blames the decline on the park's mismanagement of the bear and the destruction of a large number of grizzlies considered "problem bears" in the late 1960s and early 1970s.

"They didn't understand the bear's biology — its low reproduction viabil-

ity," Craighead said. He said the study team, which took over grizzly research in Yellowstone in 1974, duplicated his past studies. He said the information about low numbers is not new, but he is glad that it is finally out.

Charles Jonkel, director of the Border Grizzly Project in Montana, said the Yellowstone team does not have the data to determine the number of bears in the park. He said more research is still needed.

Jonkel said the team is trying to concentrate on population studies while neglecting habitat studies, which he feels reveal more viable data. He said the Craighead study was the best population study to date because during the years of the study the dumps in Yellowstone were open and bears constantly fed on them. Counting bears was easy under those circumstances. But now, since the dumps have been closed, counting bears is very difficult and takes many years before an accurate estimate can be made.

Dear friends,

On the back page of this issue of *High Country News* you'll find an experiment: a sealed-bid auction of five beautiful Zapotec Indian rugs. We're optimistically calling this event the first HCN auction in hopes that reader interest (both in bidding and in auction item donations) will demand a repeat performance.

The basic information on the rugs and the rules for the auction are spelled out on the back page, so there's no sense repeating them here. However, we did want to tell you a little about the donors and their current project, the Malachite Small Farm School.

They are Stuart and Isabel Mace, a fascinating couple who, at various times, have run sled dog expeditions, mountain trips, a ghost town, a gallery, a woodworking studio and now, Malachite, an experiment in learning-living-teaching the connectedness of things.

Specifically, the Malachite Small Farm School is a multi-faceted enterprise devoted to the teaching and practice of "sustainable, innovative family agriculture with the use of horses." Founded in 1978, the farm school is located on 400 acres on the eastern skirt of the Sangre de Cristo mountains in southern Colorado. It now includes a garden, a fledgling orchard, a restored 100-year-old adobe house used as the Malachite Center, a new 3,000-foot passive solar shop and an experimental stone greenhouse. The farm grows most of its own food and does its own food preparation, including wheat grinding and cheese making. Farm residents help support the operation by crafting fine hardwood products, which are marketed through the Maces' Toklat Gallery located just outside Aspen, Colorado.

If you'd like more information, you can write the Maces, c/o Malachite Small Farm School, A.S.R. Box 21, Gardner, Colorado 81040.

Those of you who really do read *High Country News* from cover to cover will notice a change in the subscription prices quoted in the last paragraph of the column on the far left of this page. To wit, we've added a new category for institutional subscribers, raising that rate to \$25 per year, while keeping individual subscriptions at \$15.

There are a number of reasons for making this change: our perennial need for additional revenue, a desire to avoid raising individual subscription rates, a belief that *High Country News* is worth \$25 to its institutional subscribers and a feeling that there's some justice in asking a slightly higher price from institutions where we know many individuals will read a single subscription copy.

The biggest reason, however, has to do with the amount of additional support — in Research Fund, Publishers Fund and miscellaneous donations — we receive from individual subscribers. All told, those donations will total nearly \$40,000 this year — an average of roughly \$10 per person over and above the cost of an HCN subscription. Since virtually all of those donations come from individuals, we felt it was only fair to ask institutions to make a similar contribution through the increased subscription cost.

We had a note of complaint from a long-lost friend the other day. Pat Hall, the very first editor of *High Country News* — when it was still known as *Camping News Weekly*, way back in 1969 — wrote to us about a missing credit from a photo we used. Hall had taken the picture and was understandably upset because there was no "Pat Hall" running down the side of the picture. At the time, there was no credit listed on the back of the photo, so we

figured the photographer had been some previous anonymous staff member. However, to do our best to correct the problem, those of you still in possession of the HCN issue dated March 19, 1982 should turn to page 16 and pencil in Pat's name next to the photo. Pat is now executive director of the Wyoming Wildlife Federation and we hope the new job goes very well.

We're officially wrapping up our Publishers Fund campaign with this issue. During the last two weeks, we've received \$680, bring our total to \$17,606. Although we're still \$2,394 short of our \$20,000 goal (and we'd sure like to find the balance), we'll stop haranguing you about the drive and simply give you the good news — new donors — from now on.

We hope to make up the balance from the rug auction and the Research Fund drive later this year.

To all of you who have supported the Publishers Fund, we'd like to say thanks again. You helped us through a very scary time and gave us the good hope that keeps us going now.

— the staff

The staff of *High Country News* extends thanks to the following supporters of the HCN Publishers Fund.

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Clean Air revisions not likely this year

The chance of getting a revised Clean Air Act out of Congress this year are currently less than 50-50 and fading, according to congressional observers. The Senate Environment and Public Works Committee has reported out a strong piece of legislation, but bitter fighting in the House Energy and Commerce Committee is making agreement there unlikely this year.

The Senate committee bill, which will probably pass the full Senate without substantial changes, has a number of provisions favored by environmental groups, including regulation of acid rain, retention of the "percentage reduction" requirements and increased jurisdiction over hazardous and toxic pollutants. From the point of view of westerners, there is some disappointment over the handling of smelter emissions, but overall, the legislation is considered strong.

Copper smelters, which are believed to be the primary source of acid rain in Colorado, were given a five-year, across-the-board extension of their compliance dates with standards for sulfur dioxide (SO₂) emissions. Copper companies now have until 1993 — instead of 1987 — to meet emissions standards. Dave Albersworth, who lobbies for the Western Organization of Resource Councils, a coalition of western rancher-conservation groups, said, "We're disappointed in the smelter provisions. We would at least like to have seen some interim standards they would have to meet prior to 1993, but there aren't any requirements." The states most affected by this are Utah, New Mexico and Arizona, which have substantial copper industries, and Colorado as a pollution-receiving state.

Also affecting primarily Rocky Mountain states is the agreement reached on high-altitude emission standards for automobiles. Under current law, by 1984 all automobiles sold in the United States would have to meet high altitude

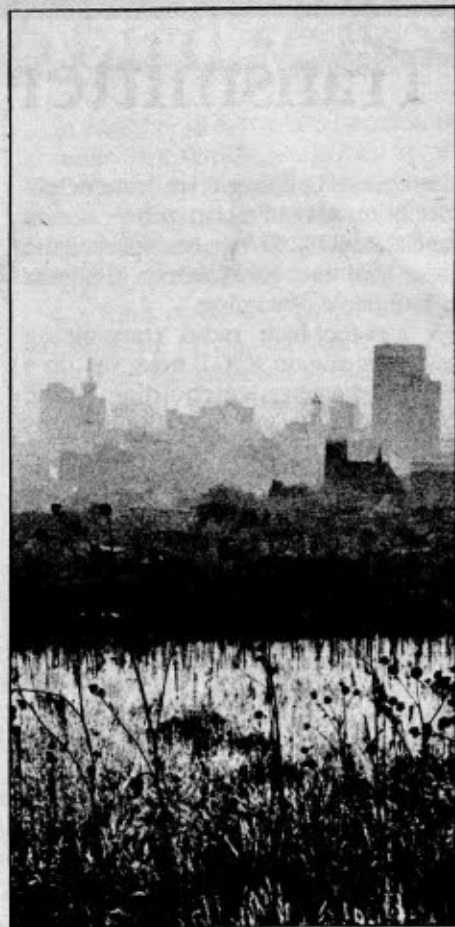
standards. Autos emit more pollutants at high altitudes. The cost of making all U.S. cars meet the standards would have been between \$4.1 billion and \$4.7 billion, a substantial impact on an already-damaged domestic auto industry. According to Sen. Gary Hart's (D-Colo.) office, the new legislation would require that only cars actually intended for sale in high altitude, non-compliance regions would be required to meet these standards. This would mean a reduction in cost of \$22 million to \$25 million. The states covered are Nevada, Colorado, New Mexico and Utah.

The Senate maintained the percentage reduction requirement, which requires that all power plants install stack gas scrubbers to remove SO₂, regardless of the sulfur content of the coal burned. Sen. Alan Simpson (R-Wyo.) had worked hard to have this provision removed, charging it favored eastern regional economic interests over western ones without addressing the basic environmental issues.

The Senate also rejected the Reagan administration and coal industry position on control of acid rain. The Senate bill requires a reduction of eight million tons in SO₂ emissions from eastern power plants within the next 12 years. Opponents had maintained that not enough was known about the causes and effects of acid rain to impose regulations, and had urged more study of the issue before covering it legislatively.

The passage of compatible legislation in the House is problematical, at best. Bitter committee fighting has been going on between those who favor weakening amendments, led by Energy and Commerce Committee chairman Rep. John Dingell (D-Mich.), and those wanting to hold the line or strengthen the existing bill, led by Rep. Henry Waxman (D-Calif.).

Dingell, whose constituents include a large number of auto workers affected



Salt Lake City

by that industry's current economic troubles, is pushing for eased auto emissions restrictions. The Senate has already rejected this approach.

Even if the House committee approves a bill, there appears to be more environmental support on the House floor than in the Dingell committee, so a long floor fight will probably ensue. Then, any legislative disagreements with the Senate bill would have to be worked out, ensuring more debate in the Senate. Consequently, passage of the bill by both houses this year is considered unlikely, particularly as the legislative session winds down toward recess and the elections.

If a revised Clean Air Act is not passed this year, the current one remains in force. Congressional aides said that the debate would be renewed next year, with the Senate probably quickly passing legislation similar to that approved this year and the House resuming debate on its version.

HOTLINE

PCB battle

The Environmental Protection Agency has announced its final regulations on control of polychlorinated biphenyls (PCB) in electrical equipment. PCBs, which are widely believed to cause cancer, reproductive problems and neurological problems, are used to cool and insulate electrical equipment such as transformers, electromagnets and capacitors. The new regulations prohibit the use after 1985 of PCBs in equipment that poses a risk of exposing food or animal feeds to the chemical. Its use is allowed in other areas or the remaining useful life of the equipment. Dr. Ellen Silbergeld of the Environmental Defense Fund said the new rules "do not come to grips with the major sources of the problems caused by PCBs... Clearly, the rules were drawn up to meet the wishes of the electrical industry and at the expense of public health." EPA said the rules will adequately deal with health concerns. In 1979, thousands of chickens and eggs in Western states had to be destroyed when a forklift poked a hole in a transformer in a feed plant in Billings, Montana, allowing PCBs to contaminate feed later given to the animals.

Governors hit land sales

Nine governors of Western states agreed on a resolution at a meeting in Boise, Idaho, last week criticizing the Reagan administration's plans to sell millions of acres of public lands to help balance the federal budget. The resolution demands that the federal government consult with state officials before selling lands within any state. Idaho Gov. John Evans (D) said that Interior Secretary James Watt "says he wants to work with us, but we're excluded from the decision-making process."

Superfund for clean-ups

Montana may qualify for clean-up money from the federal "superfund" for six hazardous waste sites in the state. Preliminary ratings, developed by the state with the help of the Environmental Protection Agency, determine the degree of pollution contamination of groundwater, surface water and air. Ratings also list fire and explosion potential and the area's accessibility to people. The ratings are calculated with an EPA model being used across the country to test nearly 400 hazardous waste sites. The areas in Montana cited for the seriousness of pollution are: the Anaconda Company reduction works at Anaconda; the Anaconda refinery in Great Falls; the Rocky Mountain Phosphate Company plant at Garrison; Libby area groundwater; Milltown-area groundwater; and Silver Bow Creek between Butte and Warm Springs. EPA said the sites that qualify for the funds will be announced in December.

Timber contracting

Timber companies and sawmills are hoping to have a bill passed that would allow companies to drop, extend or renegotiate timber-purchase contracts. The firms bid for the timber when the housing market was booming, but with the slump of today's economy, they are finding the agreed-upon price too high. Proponents of the bill said timber companies and sawmills would go bankrupt if they must cut the trees at the contract price and instead proposed more flexibility in reimbursing the government. The Reagan administration opposes this legislation stating that the free market is responsible for its actions. Assistant Agriculture Secretary John Crowell, Jr., said if the timber is not cut, then the contracts should be defaulted and the defaulters should pay any damage.

Costly Colo. water project surges ahead

Although inflation and safety improvements have doubled local costs for the Dolores water storage project in southwestern Colorado, local officials do not expect the controversial project to be shut down. They have until the end of 1983 to come up with additional funds for the project, which is also outfitted with hydroelectric turbines.

Eighty percent of the \$400 million water project is earmarked for agricultural and recreational uses by Cortez and Dolores area farmers and the Ute Mountain Ute tribe. Funding for that portion of the project is assured, according to John Porter, manager of the Southwest Water Conservancy District.

The district coordinated water sales to farmers that will provide supplemental irrigation water for 26,000 acres and new irrigation water for 27,300 acres now farmed as dry land, Porter said. At \$1.35 an acre-foot a year, plus operation and maintenance costs, the water users will pay for less than one percent of the project's cost over the next 50 years.

Under the federal Leavitt Act, the Utes may not have to pay at all for the irrigation water they will receive — enough to irrigate 7,500 acres, according to Sam Maynes, attorney for the water district.

"Free irrigation water will help make the reservation economically viable," Maynes said. But there is a legal question whether or not the act applies to the 1,000 acre-feet of domestic water the tribe has been allotted. "There's no way the tribe can come up with the \$250 an acre-foot the domestic water



Rafting on the Dolores River

will cost — that's \$250,000 a year," Maynes added.

On the Ute Mountain Reservation, the 2,200 Utes still haul their drinking water in on trucks. The pipeline bringing domestic water will be an important improvement, Maynes said. So the Utes may lobby to amend the Leavitt Act so it clearly extends federal payment to domestic water.

Or they can shoot for power revenues from the multi-dam Colorado River Storage Project. If those revenues ricochet back to the Dolores Project, municipal water users in Cortez can use the funds too, and make up the difference between their original share of \$20 million and the doubled current cost estimate of \$38 million, Maynes said.

The Dolores Project will dam the river just downstream from Cortez, above a stretch that has been studied

and recommended for wild and scenic river designation. Boating enthusiasts complain that once the dam is built, the river will be practically dry for five years while the reservoir fills. But project supporters say that once the reservoir is full, the Dolores will support boating and fishing much later in the season. Even in high water years, the river is dry by July.

Construction started last year, but already the project is haunted by three deaths and a spring flood that swept away a temporary dam, stopping work for three weeks. In August 1981, a motorist was crushed when a huge rock fell on his car from a truck enroute to the construction site. This summer, a project workman and a federal inspector perished in separate accidents at the site.

— Heather McGregor

HOTLINE

Acid rain study funded

The Environmental Protection Agency will fund a \$40,000 acid rain study with the U.S. Geological Survey to determine the effects of energy production on three lakes in the Flat Tops Wilderness Area in Colorado. Steve Durham, EPA regional administrator, told the *Roaring Fork Valley Journal* that the study shows the agency's commitment to learning more about acid rain. Durham said the study will monitor and analyze the daily, monthly and seasonal changes in the lakes' chemistry. The project will also study plant and animal populations and soil toxicity. The lakes are downwind of most major oil shale development in western Colorado.

Climax shutting down again

The Climax Mine near Leadville, Colorado, which reopened just one month ago after being closed for five weeks (*HCN*, 6/25/82) will again suspend operations beginning September 18 for a seven week period. James Ludwig, senior vice president and general manager of the mine, said the shutdown is necessary due to poor economic conditions and a surplus of molybdenum at a time of low demand. Crews will be on a three-week-on/one-week-off schedule when operations resume on November 8. AMAX, which operates the mine, will place 400 of the 1,500 employees on layoff status when the mine reopens.

Defense eyeing oil shale

Colorado's oil shale development may be given a boost if the U.S. Defense Department's request to the U.S. Synthetic Fuel Corporation for its help in development of about 41,000 acres of the Naval Oil Shale Reserves in the state is heeded. Deputy Defense Secretary Frank Carlucci told the *Denver Post* that the development would "bring this resource into a higher state of readiness to meet future national defense emergency energy requirements." The Pentagon has hopes for initial production of 10,000 to 20,000 barrels per day, costing between \$1 and \$2.5 billion. The Pentagon believes the SFC could be effective in gaining private industry support of the project.

Fickle Forest Service

The Forest Service has changed its mind about letting Nupec Resources, Inc., build a road to its drilling site in the Collegiate Peaks Wilderness in Colorado. Previously, the Forest Service gave Nupec helicopter-only access to the site because they were afraid the road would destroy the wilderness characteristics of the area (*HCN*, 5/28/82). Now, Regional Forester Craig Rupp says it's okay for Nupec to improve an old exploration trail and bring equipment in overland. In an Associated Press story, Rupp said helicopter access is chancy and he pointed out that the Forest Service never recommended the area for wilderness because of its high mineral potential.

Dam those dams

The Idaho Fish and Game Commission is trying to stop construction of two proposed dams on the Snake River. The commission claims that the proposed Eagle Rock hydroelectric dam near American Falls would destroy a trophy trout fishery. It also charges that the proposed earthen dam in the Birds of Prey Area south of Kuna would disturb the habitat of predatory birds as well as harm fisheries. Both dams are considered necessary for future electrical demand, according to electrical cooperatives involved in the projects.

Transmitter on Refuge sparks debate

A request for a long-term lease extension for an AM radio transmitter site on the National Elk Refuge has sparked the latest land use controversy in scenic Jackson Hole, Wyoming.

A 125-foot-high radio transmitting tower for station KSGT now sits on a 200-foot-diameter leaseholding on the National Elk Refuge near the highway approaching the town of Jackson from Grand Teton National Park. The present lease, which was extended in May on an automatic renewal option, is scheduled to run out in 1992. That date was established in 1972 when the U.S. Fish and Wildlife Service, which manages the Refuge, acquired an 80-acre parcel that included the leasehold on which the radio transmitter was located.

According to an internal FWS memo, the Service decided to tolerate the lease because development on the site was limited in size and would be eliminated completely at the conclusion of the lease.

This spring, however, when the FWS officially notified KSGT station owner Robert Campbell that his lease would not be extended beyond the 1992 expiration date, he decided to pursue a longer lease through the office of Congressman Richard Cheney (R-Wyo.). In June, Cheney wrote a letter to Ray

Arnett, Assistant Secretary of the Interior for Fish, Wildlife and Parks, asking him to consider issuing a 50-or 100-year lease to the station.

Campbell said he is seeking the long-term lease because he cannot find any other suitable site for the transmitter in the Jackson Hole valley. AM transmitters, unlike line-of-sight FM transmitters, need to be located on low, wet, boggy soil so that they can radiate their signals along the ground. Campbell said he had looked for alternate sites but "with all the scenic easement requests there is just no land left for a radio tower in this valley." The station owner said he also hoped to make \$4,000 to \$5,000 of needed improvements to the transmitter housing and felt he needed to amortize those improvements over a longer period than the 10 years remaining on his present lease.

The Jackson Hole Alliance for Responsible Planning believes that "there is simply no reason why the station cannot compete in the marketplace like other businesses for a site to relocate its tower." In a letter to Arnett opposing the lease extension, the Alliance said, "We do not, of course, wish to interfere with their ability to transmit their signals; however, surely other locations exist within the 75,000

acres of privately-owned land in Jackson Hole that could adequately serve their needs and permit a private landowner to benefit from the leasing revenue."

The Wyoming Game and Fish Department has also written a letter questioning the compatibility of the facility with purposes of the refuge. The letter said that the department has no objection to the radio tower and lease as they presently exist, but is opposed to expansion of the facilities. The letter said that the department had heard of plans for major improvements at the site and would be opposed to such improvements because of their potentially adverse effects on the elk, elk habitat and a nearby sandhill crane brooding area.

Campbell said he had no plans for major expansion at the site. Patty Howe, a spokeswoman for Congressman Cheney's office, said that an extended lease could include whatever stipulations the Fish and Wildlife Service felt were necessary to protect the refuge.

The regional office of the Fish and Wildlife Service is currently preparing a "compatibility statement" on the impacts and appropriateness of the lease extension. That document is expected to be completed soon, but there is no timetable for a final decision by Arnett.

Howling heard at wolf recovery hearing

There were three times as many people at the wolf recovery hearing in Boise as there are wolves in all of Idaho, Montana and Wyoming. Nevertheless, most who came to the July hearing warned of the economic and personal perils of wild wolves, and urged the hearing sponsor, Rep. Larry Craig, (R-Ida.) to seek an end to funding for the Wolf Recovery Team.

Helen Chenoweth, a lobbyist for the Central Idaho Mining Association protested that the recovery team's effort to re-establish the Northern Rocky Mountain gray wolf is "sheer folly when the fact is that wolves are very dangerous animals." National Cattlemen's Association spokesman Bill Swan charged the recovery team with "lurking around" and said an increase in wolves will jeopardize "our ability to feed the people." Developer and consultant Vern Ravenscroft charged, "The gray wolf is being used to discourage any economic development."

The furor over the endangered gray wolf and the recovery team's efforts to bolster its population erupted after a draft guideline plan for wolf management was distributed to the livestock industry. Joe Helle, an observer of the recovery team and chairman of the predator committee of the National Woolgrowers Association, was given the plan and asked for his comments. Instead, he copied the document and sent it out to his fellow ranchers.

"The recovery team had not even looked at it," U.S. Fish and Wildlife Ser-



vice biologist James Gore said later. The draft guideline plan was prepared by one member of the team and has since gone through several revisions, according to Gore, the endangered species team leader with the FWS for Idaho, Washington and Oregon.

Team leader Bart O'Gara, the FWS representative, said at the Boise hearing most complaints were not directed at that draft plan, but rather at the team itself and the very notion of wolf recovery.

The Wolf Recovery Team is directed to establish a plan for the management and re-establishment of the Northern Rocky Mountain gray wolf, which was

listed as an endangered species by the Department of Interior in 1973 (*HCN*, 9/18/81). Formed in 1975, the team is staffed by representatives from the FWS, Bureau of Land Management, National Park Service, Forest Service, Idaho Department of Fish and Game, Montana Department of Fish, Wildlife and Parks, and the Audubon Society. Helle, representing the livestock industry, had been at most recovery meetings. Gore noted that the team "cannot make any decisions; it's just an advisory board." The FWS decides whether to take action on the team's proposals, following public hearings, according to Gore.

The recovery team is recommending the establishment of a zone system for intensive wolf management in three areas: the Glacier Park-Bob Marshall Wilderness complex in northwest Montana; the central Idaho backcountry, including the 2.1 million acre River of No Return Wilderness; and the greater Yellowstone Park region, including the Teton, Washakie, North Absaroka and Absaroka-Beartooth wildernesses in Wyoming and southern Montana.

Although nobody knows for certain how many wolves live in the tri-state region, biologists estimate 20 to 30 wolves in Idaho, about 12 in Montana and perhaps no permanent wolf population in Wyoming. The estimates are based on sightings, wolf tracks and reports of wolf howls.

— Glenn Oakley

BARBED WIRE

No, but his sense of humor is. On a recent radio talk show, Interior Secretary James Watt was asked, "is your baldness caused by acid rain?" according to the *Missoulian*.

No surfing. A Tucson man-made lake may have to be drained and poisoned because of a possible infestation of killer piranhas, a flesh-eating tropical fish.

Well, you know how the Post Office is these days. During the Western Governors Conference last September, Interior Secretary James Watt, "impressed" by Wyoming Gov. Ed Herschler's position paper on federal/state relations as

they pertain to water resources in the West, promised that the Interior Department would correspond monthly with Herschler regarding the progress of his initiatives. In June, Herschler wrote to Assistant Interior Secretary Garrey Carruthers, whom Watt had placed in charge of the matter: "In the last nine months, I have received only one communication from you...on the issues I raised in September. It was a rather short, one-page reply."

"I would like you and the secretary to know that I am not bragging about your responsiveness, the quality of communication with the states on these issues, or about your follow-through."



The toxic pesticide endrin, discovered at high levels in waterfowl in Montana last year, has been discovered at hazardous levels again this year, in company with 17 other toxic pesticides.

In addition to finding levels of endrin as high as 10 times the Food and Drug Administration's "safe level" for domestic fowl of 0.3 parts per million, tests revealed extremely high levels of heptachlor, a toxic pesticide used to protect seed crops from wireworms, as well as high concentrations of PCBs, mirex, dieldrin, chlordane, lindane, DDT and others.

The chemical soup discovered in 31 ducks tested by Ral-Tech Labs of Madison, Wisconsin, prompted Tom Daubert of the Montana Environmental

Endrin fouls up bird season

Information Center to call the problem "a migratory Love Canal."

The high levels of heptachlor and the by-product heptachlor epoxide, which according to the Environmental Protection Agency are carcinogenic and can have chronic liver effects, convinced the Central Flyway Council to ask EPA administrator Ann Gorsuch to ban the pesticide immediately and acquire all existing supplies. The council is composed of representatives from state wildlife agencies from the 10 states and two provinces in the Central Flyway.

Heptachlor was banned by the EPA at the end of August, 1982, but existing supplies can be used for three years.

The number and amount of pesticides in the wildfowl have also prompted the council to conduct a study of birds in the flyway, to determine what pesticides are present and where they are coming from. The list of pesticides found in Montana puzzled state officials since all of the compounds, except endrin and heptachlor, have been banned for several years.

But the list of toxic substances and their possible synergistic effects — as well as a stern warning from the Montana Department of Health — did not prevent the Montana Fish and Game Commission from allowing waterfowl and upland gamebird seasons to open as scheduled.

In a replay of last year's decision the commission, which sets policy for the Department of Fish, Wildlife and Parks, issued a list of recommendations to hunters to mitigate the possible effects of eating pesticide-laden fowl.

Dr. John Anderson, of the Montana Department of Health, urged the Fish and Game Commission to take a survey of hunters to see if they are complying with recommendations. If they aren't, Anderson said, "I don't see how we can continue with the season knowing how serious the problem is."

The endrin debacle began last year when farmers in eastern Montana sprayed between 120,000 and 200,000 acres of winter wheat with endrin and toxaphene. No one knows for sure, but officials suspect this year's endrin outbreak is the result of last year's spraying, since endrin is extremely persistent. The pesticide may also have come from other states. Endrin is extremely toxic and has been shown to cause birth defects, chromosome damage and tumors.

The study by the Central Flyway Council will take in the states of Nebraska, Colorado, Kansas, Montana, North Dakota, South Dakota, New Mexico, Oklahoma, Texas and Wyoming, as well as Manitoba and Saskatchewan.

— Jim Robbins

HOTLINE

Arsenic on tap

Residents of Three Forks, Montana, 100 miles north of Yellowstone National Park, were warned recently by the state's health agency that their drinking water is contaminated by arsenic that probably originated from the natural geothermal system that feeds the Old Faithful geyser. Residents were told to limit their intake of water to one quart per day. The Montana Department of Health and Environmental Science will continue to monitor the water and will let residents know when arsenic levels drop to safer amounts.

Hazardous waste aid

Small businesses producing hazardous waste will receive special help from the Environmental Protection Agency to comply with new federal regulations regarding clean-up. It was determined that some small businesses could have hazardous waste control responsibilities that are more costly than an entire business is worth. "Financial assurance" rules and streamlining the process of acquiring environmental protection permits is being implemented by the EPA to offset the advantage large companies have with large legal, scientific and engineering staffs.

Leasing the Bitterroot

Despite an attempt to block oil and gas leases on the Bitterroot National Forest in Montana, the Bureau of Land Management issued 43 leases in accordance with Forest Service recommendations. These leases are for lands outside special management areas and most cover forest land in the Sapphire Mountains from south of Missoula to the East Fork of the Bitterroot River around Sula. Applications total 193 and cover about 352,000 acres. The National Wildlife Federation protested that a more thorough environmental impact statement is needed to accurately gauge potential impacts. The group also questioned the extent to which the restrictions could be enforced. No applications for drilling or exploration have been received, but these leases are considered the first step for companies to gain permission to conduct further work.



Fishy clean-up

A state-run program in Colorado aimed at destroying trash fish, especially suckers, resulted in killing thousands of trout in the Continental Reservoir and nearby streams east of Creede. The chemical rotenone, which paralyzes the respiratory system of fish, was placed in the waters to destroy the unwanted fish. The neutralizing chemical, potassium permanganate, was not injected into the waterway due to a stuck valve. The Colorado Division of Wildlife estimated the errant chemical affected about eight miles of the Rio Grande and seven miles of North Clear Creek. Crews will replenish the waters with 3,200 pounds of trout. In 1976, the Continental Reservoir underwent a similar project which also killed many fish.

Tribe creates development corporation

While financing remains a big hurdle, a coal-fired power plant on the Crow Reservation in Montana has moved one major step closer to reality.

The tribe sent letters to seven men prominent in government and business and asked them to serve as the first board of directors of the new Crow Development Corporation.

Because the corporation is quite autonomous from the turbulent Crow tribal politics, its creation brought the tribe "light years closer" to development of energy resources, according to one observer.

No tribal members were chosen for the first board to avoid alienating different tribal factions, according to Tom Fredericks, tribal attorney. The executive committee of the tribe will act as an advisory board to provide information on political, cultural and social issues the non-tribal members might not be familiar with. In the future, Fredericks said, tribal members with expertise in management and energy will probably be appointed to fill vacancies on the board.

Most of the nominees have said they would serve when the corporation is formally approved by the secretary of the Interior. Letters were sent to Cecil Andrus, a former secretary of Interior; Frank Zarb, former federal energy administrator; Kent Frizzel, a former solicitor and undersecretary of the Interior; Ross Forney, sales executive with Stearns-Roger, a Denver engineering firm; Andrew Anderson, executive director of the American Indian Science and Engineering Society; Courtlandt Dietler, president of Comar Oil Company in Denver; and Morgan Greenwood, president of Integrated Carbons Corporation, in Tulsa, Oklahoma.

The first job of the new board will be to find an operator for a 1,000 megawatt coal-fired power plant the Crow hope to build by 1991. The tribe is now contacting utilities about investing in the plant, which would be the first in the country to be partially owned by an Indian tribe.

A recently released feasibility study funded by the Department of Energy says the plant is feasible. However, the

tribe must find a utility interested in participating in a joint venture. While there are some tax and regulatory advantages to energy projects on Indian reservations, this plant would be more costly than those elsewhere because of the strict air pollution standards it must meet.

In fact, Bob Siek of the Council of Energy Resource Tribes staff questions whether existing technology can clean up sulfur sufficiently from any of the proposed sites for the plant. Siek, who conducted the environmental analysis for the DOE study, said 95 percent of the sulfur emissions would have to be removed. While pollution control equipment manufacturers say this is possible, Siek is skeptical.

The required equipment would cost as much as \$282 million in 1981 dollars or approximately 24 percent of the cost of the total facility.

So far environmentalists in the region have not taken a position on either the power plant or the synthetic fuels plant proposed for the Crow Reservation (HCN, 6/11/82).

— Marjane Ambler

Montana wilderness inholding for sale

Because the U.S. Forest Service and Burlington Northern Timberlands can't agree on a land swap, about 2,500 acres of BN land inside the Selway-Bitterroot Wilderness Area in Montana could be purchased by other private investors.

BN owns 2,941 acres inside the Lolo National Forest southwest of Missoula, with 2,500 of those acres within the Selway-Bitterroot Wilderness. BN and the Forest Service have been negotiating a land swap for at least two years, but talks broke down recently over a dispute on the value of the lands. BN did not consider the exchange land offered by the Forest Service — some 720 acres of timber land within the Flathead National Forest to be as valuable as the other acreage.

"Each party makes their own appraisals," said Don Nettleton, assistant vice president with BN Timberlands. "We found that the land in the Flathead Forest does not equal the value of the other land."

Ron Ashley, land adjustment forester

with the Lolo National Forest, said the agency offered to have the property reappraised in late June, but BN couldn't wait the six months the Forest Service needed to complete the appraisal.

Bill Cunningham, Northern Rockies regional representative of the Wilderness Society, said both sides seem to be jockeying for position. He said the Forest Service is afraid BN is trying to gouge the public with the higher value appraisal and that such action could adversely affect other land trades or sales. He said BN is trying to maximize profits.

Nettleton said BN prefers to deal with the Forest Service because it would like to see the area included in the wilderness. He said talks would continue with the agency. However, he added, the company will consider other offers, even though there are no serious deals in the making currently. BN will not consider keeping the property for any

length of time because the land offers the company no means of profit.

"If we could find a buyer willing to offer what we consider fair value, then it will be considered," Nettleton said.

Ashley said that until the Forest Service makes a new offer, the "file is closed on this land deal."

And even though Ashley agreed that BN has repeatedly said it would like the Forest Service to have the land, he said it was his "understanding that they (BN) have a buyer."

If the land is sold to a private investor, the wilderness qualities of the area could be jeopardized, depending upon the new owner's plans. The private holding would not be protected by wilderness designation. Access into the area would be a major concern. No motorized vehicles are allowed inside wilderness areas.

Ashley said the Forest Service would try to work out a deal with the new owner, should the sale occur.



Getting

"It's just hot water," said Idaho public works administrator Brian J. Chase as he conducted an underground tour of the state's new Capitol Mall geothermal heating system. Sweeping the wells, pipes and other heat exchangers aside with one arm, he sums up the easy simplicity of it all. Boise has hot springs. So the state is using the hot water to save on its heating bills.

In Idaho, it's that simple, and not that simple.

The potential is undisputed. Idaho ranks just behind California and Nevada in the number and quality of geothermal resources. Especially in the southern portion of the state, there are numerous identified sites where the water is hot and plentiful.

But development, so far, is limited. A handful of commercial buildings and perhaps 300 homes are heated with geothermal energy. Hot water heats several greenhouses, fish farms, and swimming pools. One electrical generation test plant has been built.

Future development is uncertain. Although a number of alternative energy projects are being considered, they will undoubtedly require a great deal of time and hard-to-find money.

The state's showpiece Capitol Mall geothermal space heating project is a good example of all that goes into a successful geothermal development. It took two forward-looking governors, approval by the Idaho legislature, \$2.3 million, and more than a decade to get the hot water out of the ground and into six state buildings.

Former Governor Cecil Andrus (D) started the process before he joined the Carter administration as secretary of the interior. His successor, current Governor John Evans (D) maintained interest in the project until there were facts and figures to show the Idaho Legislature.

Test wells showed the idea would work and save the state at least \$140,000 per year in utility bills. The original estimate for the entire project was \$2.8 million, said administrator Brian Chase. Although the state shouldered a lion's share of that cost, legislators still figured the buildings would be around long enough to warrant the investment.

The system ended up costing half a million less than anticipated, Chase reported. And with rising natural gas costs, the payback will now come in nine years instead of the original estimate of 20 years.

The wells and the pipes were installed this year. You can now walk through fluorescent-lit underground corridors connecting the office buildings, and see the insulated pipes hanging from the ceiling. Heat exchangers in each building will transfer the geothermal heat to a separate water system which will go through existing convection coils and forced air heating ducts. Custodians are enthusiastic. They are readily learning to use computerized monitoring systems to make all the fans and valves work as efficiently as possible. The state will turn on its geothermal heating system this winter.

Almost simultaneously, the city of Boise, along with a water district and private investors, is burying pipes for its own geothermal space heating system.

The Warm Springs system also has a long history. It began in 1890 when four entrepreneurs dug two wells on the east

end of the valley. They found an artesian flow of 172-degree water. A large indoor swimming pool was built, and pipes were laid to rows of the most lavish homes in the area.

In 1978, directors of the Warm Springs Water District joined with city, state, and federal officials to update and expand the geothermal system. Together with a group of private investors who financed the test drilling, they came up with the \$8.3 million needed to finance the project.

Although Boise's hot water was free of the corrosive salts and minerals which are often found in geothermal wells, it was still high in fluoride. Before the Boise geothermal project could discharge used hot water in the Boise River, experts had to prove that the fluoride could be diluted to acceptable drinking water levels. State officials also made certain the hot water would not harm fish in the river. The hot water, it turned out, will raise the river temperature by only one or two degrees. That difference should actually help fish under stress from the cold waters of winter.

The wells are now in. Crews are digging up Boise streets to lay distribution pipes. By the end of 1982, Boise Geothermal (the coordinating agency) expects to have a dozen customers hooked in. The city/county building will be one. The Hoff office building, the Owyhee Plaza Square and the Elks Rehabilitation Hospital are on the customer list.

Boise Geothermal is also making strong pitches to single family homes and apartment buildings about the system. The total cost for an average house to hook up to the geothermal pipeline and convert a heating system from natural gas to geothermal is about \$3,000, said Lee Post, Boise Geothermal coordinator. After tax advantages are figured in, the net cost of conversion is about \$1,500. Annual savings with the system are about \$260, allowing a payback on the system of less than three years.

It all makes economic sense, Post said. But it still might be difficult for a smaller city to put together a similar project. Boise Geothermal got more than half its funding from the federal government. And that kind of money no longer seems available from the feds. *

Idaho's Raft River geothermal project will no longer be receiving federal money. The experimental geothermal facility was scheduled to operate through 1985. But funding was withdrawn and the plant is now closing down. At the end of the year it is scheduled to be put up for sale along with the federal land on which it sits.

The Raft River facility is in a completely different world from the steel, glass and quarry stone buildings of downtown Boise, or from the stately lawns and flower gardens of Warm Springs Avenue.

It sits alone on the Snake River desert plain about 14 miles south of the very small town of Malta. The 560-acre site is stark, graded, graveled, asphalted. Pipes and valves are everywhere. Hot summer days are relieved only by the scent of sagebrush and short shadows at the side of maintenance and office buildings.

The project was funded by the U.S. Department of Energy as a test facility. Its primary goal was to experiment with the production of electricity, using relatively low temperature 300-degree F

into hot water

by Jeanette Germain

water and a binary cycle system. (In a binary system, the hot water heats a secondary liquid — such as isobutane — which is then turned to steam to power a turbine.)

Simultaneous goals at Raft River were to conduct agricultural and aquacultural tests with the geothermal water, to see if it might be used to grow crops, raise fish, or to produce biomass for the production of alcohol fuels.

Most of the experiments were successfully carried out before federal funding was withdrawn.

The five-megawatt plant was designed, built, and put into operation in October, 1981. It ran continuously from April 15 until June 15 of this year, while engineers and technicians conducted a busy schedule of tests. Although a few design deficiencies were found, the plant was still able to produce a steady 3.4 megawatts of electricity.

The geothermal crews had hoped to have three more years to test the plant and gain data on geothermal electrical generation. But as site manager Russ Lease pointed out, it would have cost \$3 million per year to run the facility. And 65-75 percent of the test data was gained in the first few months of operation. This way, the taxpayers saved \$9 million and still got three-quarters of the hoped-for data.

The entire project cost \$40 million — just a drop in the hot tub of the cost of a commercial geothermal plant. A commercial plant would cost \$400-\$700 million, Lease estimated. If Raft River data saves 10 percent of the cost of just one such plant, then the investment will be paid back, he said. And if several such plants are built, then the investment will be paid back several times over. "Then we've really saved the American public a bundle of money," Lease said.

At this point, however, no more plants are in the offing for Idaho.

"We are interested in geothermal energy," said Jim Turner, Research Director for Idaho Power Company. The company is keeping an eye out for leases of lands with geothermal potential, he said. But so far the company has no plans to build a geothermal electrical generating plant of its own. Neither does it have any contracts with private producers.

Even if a private developer did build a geothermal electrical generating plant, Idaho Power might be reluctant to buy power at rates set by the Idaho Public

It costs about \$1.25 per square foot per year to heat a greenhouse with conventional energy sources. With geothermal energy, it costs 17 cents per square foot.

Utilities Commission. Idaho Power has complained the rates are too high. The company has consequently dragged its feet on signing cogeneration contracts. Plus, it's hard to plan a geothermal project during a recession.

However, Idaho's most persistent geothermal entrepreneurs are still pursuing ideas.

Robert Erkins has been committed to geothermal development for more than 10 years. In 1971, he bought a hot spring near Bliss, Idaho. On the 280 surrounding acres, he built a geothermally heated lava stone house for his wife and 10 children. He built five geothermally heated greenhouses, a series of fish ponds, and swimming and soaking pools. The geothermal water was also used to irrigate reclaimed farmland. All this demonstrated the utility and economy of natural hot water.

Erkins is negotiating with Morrison-Knudsen (MK), the Boise-based international construction firm, to test and develop the resource.

Electrical generation might be possible at the site, but Erkins and MK are considering a full range of other possibilities. The hot water might be used to produce alcohol fuels, to raise vegetables or tropical fish, to cure concrete blocks, or create controlled conditions for production of milk or meat.

Erkins is hoping to attract public and private investors interested in one or more of those uses on a large scale. Other individuals are already using geothermal resources on a smaller scale.

Geothermal Fisheries, for example, grows about 12 species of ornamental (aquarium) fish in geothermal water near Marsing, Idaho. The 135-degree water also heats a 2,000-square-foot building.

Halfway across the state, in Buhl, Idaho, the Fish Breeders of Idaho grow catfish and talapia (a warm water, high protein fish from Africa) in geothermal. The fish are filleted and packaged for sale to retail and restaurant distributors.

Both the geothermal fish-growing companies confirm experiments conducted at the Raft River geothermal test site. The sterile hot water seems to keep the fish healthy. Mortality rates due to disease are almost zero. And the fish seem to spawn earlier in the constant temperature water.

Agricultural experiments have also been successful. At Raft River, scientists found that crops grew well when irrigated with geothermal water. They showed no dangerous concentrations of minerals found in the natural hot water.

Geothermal energy also seems to be an economically feasible way to heat greenhouses. Erkins reported that it costs about \$1.25 per square foot per year to heat a greenhouse with conventional energy sources. With geothermal energy, it costs about 17 cents per square foot.

For all its promise, however, there remain many unanswered questions about geothermal energy.

Nobody really understands, for example, where the hot water comes from, or how it gets hot. One popular

theory suggests that the water is heated by residual volcanic heat. But if that is the case, could large-scale geothermal development increase seismic activity in an area? Could extensive pumping cause subsidence of earth over a geothermal reservoir or depletion of that resource? Both the state of Idaho and the city of Boise plan to monitor those possibilities in future years.

Federal funding may also have hindered as much as helped geothermal development in the past. The feds have tended to favor large corporations and complex, costly projects over simpler, more effective and economic direct-use projects.

Fortunately, the hot water has so many potential uses that Russ Lease is confident the Raft River test facility will sell when it goes on the market at the end of this year. He believes the facility might be used not only as a power plant but as a dairy, food processing site, or fish farm. The sale may reveal a lot about the future of private enterprise geothermal development in the state.

It may reveal something about how much is generally understood about geothermal energy. As energy economist William Eastlake pointed out, "There is still a general lack of information about geothermal energy. People think it's good for soaking and nothing else."

Which is not say that soaking isn't a good use for geothermal water. Idaho boasts some of the finest hot springs resorts in the West.

Remote hot springs are not commercially feasible for space heating or commercial uses, Robert Erkins pointed out, because hot water is not easily transportable. It can't be hauled or piped across the state or country as coal, oil or gas can.

Most hideaway hot pools are also moderate enough in temperature to allow comfortable bathing. If the water is that cool, it's probably not hot enough for electrical generation.

In Idaho, simple hot water may eventually offer the best of both worlds in natural resources. It may provide recreation and energy for decades to come. We may actually be able to have our hot tubs and our electricity, too.

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Jeanette Germain is a hot springs aficionado and freelance writer in Boise, Idaho. This article was paid for by the HCN Research Fund.

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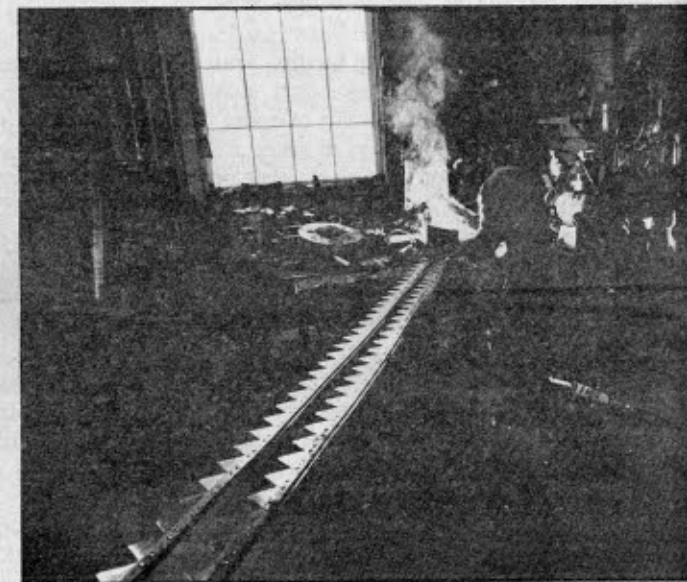
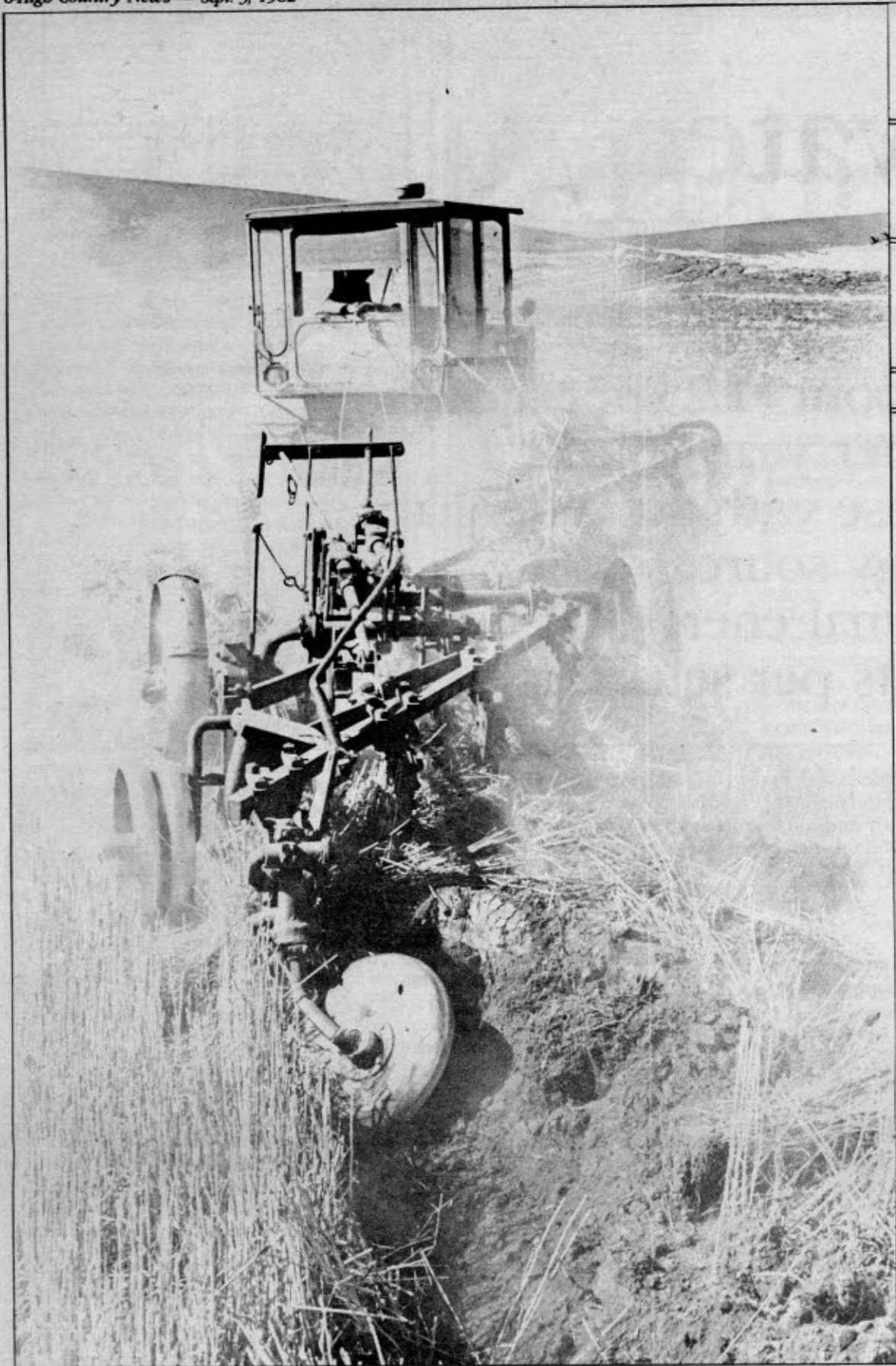
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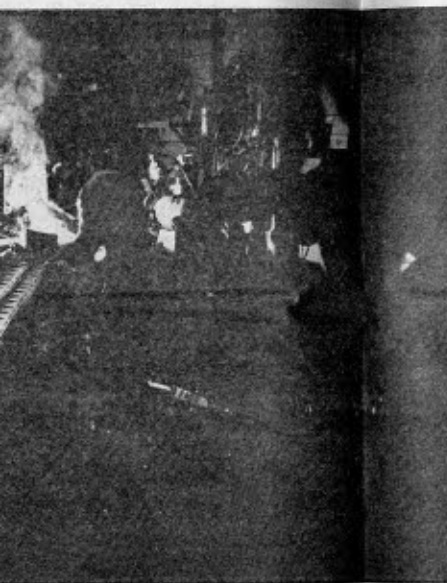
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PALOUSE HARVEST

Story and photos by Bill Woolston



Palouse wheat farmers, a people of strong German Catholic and Scandinavian stock arrived in the Northwest in the later part of the 1800s to homestead the grassy rolling hills of eastern Washington and northern Idaho. The hard physical labor of opening new farmland fostered among these early generations of wheat farmers a strong sense of community, family and church.

They found that the deep rich topsoil transported from the Columbia Basin by prevailing westerly winds was as productive as any in the country. The soil and mild climate was ideally suited for the production of cereal grains. The water stored in the ground during the wet period which lasts from October until April provides ideal growing conditions. The winters are mild and wet with only a short two-week period of sub-zero temperatures in early January. Summer months are hot but the temperature seldom rises above 100 degrees. Even in the hottest part of summer, farm families can enjoy cool nights.

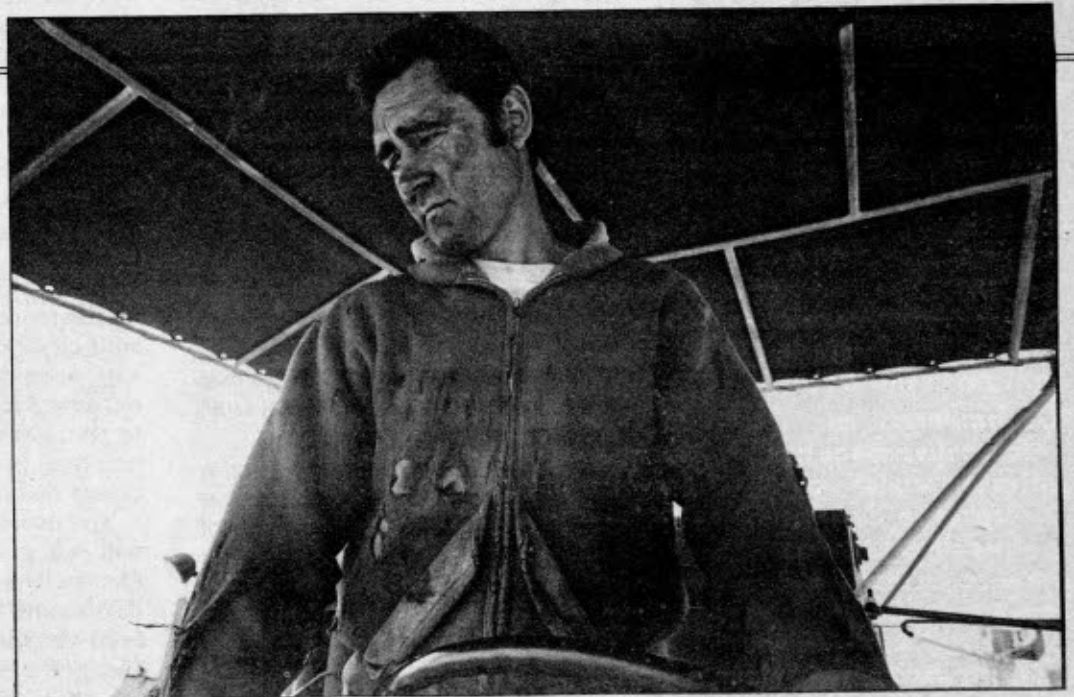
Recently the climate has been so stable that crop failure due to lack of moisture is unrecorded. The stability of this mild climate and very rich soil have contributed greatly to the security of the family farm in the Palouse.

To the unseasoned or the romantic, the harvest is a time of golden waves of grain. To those who work the fields and make their livelihood from such work, the story is different. The day begins at 6:30 or earlier with the preparation and repairing of machinery, tightening belts, greasing combines, and filling trucks with oil, water and gas. Sometimes during a late harvest the dew is so heavy in the morning that combines must wait until the sun dries the stalks and vines.

It is rare that anyone, even without a watch, misses lunch. A profound quiet descends on the land at noon. Then the cool lunch in the bunched-up shade of combines gives way to the blaze of the afternoon heat. The sun, sweat, dust and heat suspend time in the endless circling of the harvest combine.

The choreography of harvest is performed with maximum efficiency. The opening cut is most exacting. An experienced light touch and gauging eye guide the twenty-ton combine, cutting to within fractions of an inch of fences, trees, and steep road banks. The farmer opens each field while others follow at a distance circling the field until it is cut. As the circle tightens, the leader's combine and one truck leave to open the next acreage. The team moves across the landscape, each swath a smooth operation of the repetitive and rhythmical work.

By 8 p.m., a time when most people have finished watching the evening news, enjoyed dinner, and are sitting around with family and friends, the harvest grinds on. Finally, after the

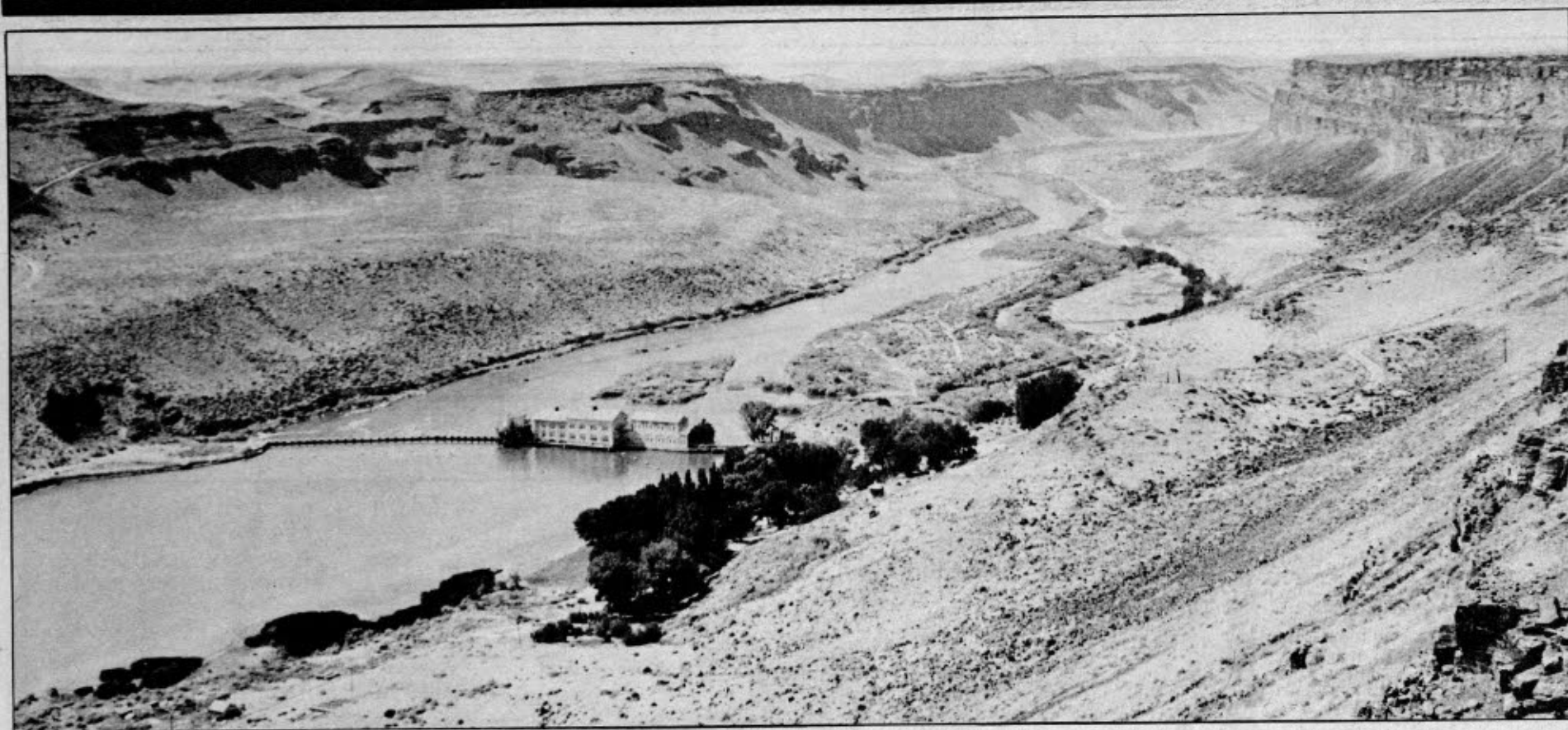


sun sets, as the elevator closes its scales and the last empty grain truck is filled, the combines head for the barn. All operations must terminate together so that the least amount of time, fuel and energy are wasted. Harvest is a time for serious work, and little else is possible except a few hours sleep.

While giving the flavor of daily life during harvest, this account falls far short of explaining the enormous logistical task of harvest. Success rests with the astute managerial abilities of the farmer. His dexterity in balancing decisions about both men and machines, while under the stress of intense daily concentration, will determine his prosperity.

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This is an excerpt from the forward of Bill Woolston's *Harvest*, to be published this fall. The book can be ordered from Thorn Creek Press, Rt. 2; Box 160, Genesee, Idaho 83832, for \$14.95 (pre-publication price) plus 75 cents postage (Idaho residents add three percent sales tax).



Glenn Oakley

Swan Falls Dam, Snake River canyon viewed from Birds of Prey Natural Area

DLA and Carey...

(continued from page 1)

largest groundwater system in the state — and pumping the groundwater directly into the Snake River. But, as Young noted, the idea has been "vigorously opposed by upper Snake River residents." These opponents have themselves already tapped into the aquifer to irrigate their farms, and they do not want to see their wells run dry.

The Snake River aquifer is suffering an annual decline because of these wells, and the decline shows up in the

The 1877 Desert Land Act offers 320 acres of desert land for \$1.25 an acre to anyone who has the money and resources to convert it to irrigated farmland.

form of reduced flows at the Thousand Springs. The Thousand Springs are the outlet of the Snake River aquifer.

Although the proposals to directly recharge the Snake River with groundwater have been so far nixed, irrigation wells continue to be drilled, and many DLA and Carey Act projects propose to irrigate with such wells. The IDWR has enough groundwater applications to reduce the annual natural recharge of the Snake River by one third, according to Young. Legally, his department cannot grant all those permits because groundwater mining — depleting the aquifer at a faster rate than it is naturally recharged — is prohibited by law.

Fear of groundwater mining was the reason the Nevada BLM office imposed a moratorium on DLA and Carey Act entries. The Nevada BLM director halted development of entries after the state began a study of groundwater levels in the closed, dry basins. Although the study showed that many basins are suffering groundwater level decreases, the BLM is allowing some DLA and Carey Act entries under pressure from the entrymen. But Nevada BLM Land Law Examiner Loyd Miller said the BLM will deny entry in basins suffering acute groundwater depletion.

Since the lifting of the moratorium in 1979, the Nevada BLM office has received 4,268 DLA applications, of which 2,103 have been withdrawn or rejected, according to Miller. Seven entries have been allowed, and five more have been recommended for approval.

The moratorium on DLA and Carey Act development in Idaho was precipitated by conservation groups who argued an environmental impact statement was necessary to determine the effects of continued agricultural development. The final EIS for the Boise District, where the majority of development is pending, was released in 1980. The BLM concluded that despite the adverse impacts on water supply, energy supply, wildlife, livestock grazing and existing farmers, 176,000 acres could be developed under the acts at a rate of 20,000 acres per year.

The BLM has been classifying potential DLA and Carey Act lands for their development suitability, and will run

the first DLA and Carey Act applications through a computer model this fall to determine whether the proposals are economically feasible.

Assuming the "settlers" have access to water, one of the main factors affecting economic feasibility will be electricity costs of pumping that water. The 2,000 MW shortfall projected by the state water plan will most likely be replaced by thermal generators or new dams.

Either alternative would increase electric costs dramatically. New dams on the Snake River would presumably be running at diminished capacity because of a lack of water, and other dam sites on other rivers and streams would be more expensive to construct than the earlier dams. The Pioneer I coal fired plant — proposed and rejected in the 1970s — would have increased electric bills by an estimated 150 percent. IPC's partnership in coal-fired plants in Wyoming, Nevada and Oregon has already resulted in an increase in electric bills. Continued dependence on the more expensive thermally generated electricity would not only jeopardize prospective farm projects, but existing farms as well. High lift pumping in the 1960s, and even the 1970s, was practical because of the abundance of cheap hydro-produced electricity.

The new DLA and Carey Act irrigators will not pay the cost of the coal-fired electricity necessary to allow their farm development. Rather, the new coal-fired electricity will be diluted with the cheaper existing hydropower, and all the ratepayers will be subsidizing the irrigation of what was once public land.

But even the subsidized electricity may force some farmers out of business. At Grindstone Butte, an already developed DLA project, electricity bills for pumping water 800 vertical feet run \$90 to \$100 an acre a year. Such high operating costs have presumably been the reason that many of the original entrymen at Grindstone Butte have sold out to such firms as Farm Development Corporation, which now farms 4,000 acres at Grindstone Butte and several thousand more acres at other DLA projects.

While the BLM and IDWR recognize the effect of irrigation on power prices, both agencies discount the results as

inevitable, regardless of farm development. Increased electricity demand is "a fact of life," said Young, adding, "Power is growing with or without irrigation." Echoing Young's statements, Dave Brunner, associate district manager of the Boise District of the BLM, said "Regardless of whether it was Hewlett-Packard (a Boise-based electronics firm) coming in, the electric prices were going to go up. We really didn't let it sway us a lot in our decision...Eventually they (IPC) were going to have to go to coal-fired anyway."

Idaho Public Utilities Commissioner Conley Ward sharply disagrees with the inevitability of power growth. If economics were the sole determining factor in power consumption, he said, there would probably be no more growth in power demand. The continually rising costs of new power would prohibit new energy intensive development. But, Ward said, there are too many incentives prompting energy consumption, and DLA and Carey Act are two prime offenders. "While we're sitting here trying to discourage electric consumption," Ward said, "the federal government has a set-up to encourage electric use."

Brunner said the BLM is not out to encourage electric consumption, or, for that matter, farming. "We're trying to maintain a neutral stand on it," he said. "We don't care if there's agricultural development or not. But it's a viable law (DLA) and we're trying to follow it." Brunner added that whenever there arises a resource conflict over potential DLA or Carey Act lands, the BLM will reject the applications in favor of other resource values, such as wildlife.

The proposed action of converting 176,000 acres of public land to private farmland will harm some wildlife. While the BLM is requiring projects to provide wildlife habitat, some animals, such as the long-billed curlew, will not survive on small strips of land. The curlew is a shore bird that, because of continued loss of habitat, is listed as a "sensitive" species. According to the agricultural development EIS, the proposed conversion of desert lands would result in the "complete loss of nesting habitat" with "perhaps the total non-use of this area by curlews."

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Glenn Oakley

Sugar beet field north of Snake River

Birds of prey — eagles, hawks, falcons and owls — would also suffer from farm development, losing hunting territory to sugar beets.

The area most critical for the raptors, an 80 mile, 483,000 acre stretch along the Snake River south of Boise, was declared off limits to farm development when then-Secretary of the Interior Cecil Andrus administratively expanded the Birds of Prey Natural Area in 1980. Sagebrush Rebellion, Inc., has sued the federal government to declare the Andrus expansion illegal. Since livestock grazing, hunting and even bombing practice by the National Guard is permitted within the Birds of Prey Natural Area, opposition to the bird refuge comes mainly from persons interested in developing the land under DLA and Carey Act. Some 300 applications have been at least temporarily shelved because of the expansions.

In addition to the displacement of sage grouse, bobcats and mourning doves, cattle would be kicked off the public range. Almost all of the BLM land considered for DLA and Carey Act entry is presently grazed and the livestock industry opposes the agricultural development.

Entrymen can be divided into three categories: those few who intend to build their home on their 320 acres and make a living from the homestead; existing farmers who want to take advantage of the public land to expand their farms; and business interests with the money to speculate in the public land giveaway.

The latter group accounts for the majority of the large DLA projects. The normal procedure is for several "settlers" to file on adjacent tracts of land, organize or hire a company to construct the irrigation system, and then hire farmers to cultivate the land. As soon as at least one-eighth of the land has been irrigated, the settlers can receive "patent" — legal title — to the land. After the title is obtained, the settlers can — and often do — sell the land to other farmers, a farming company or even develop the land into a housing subdivision.

Jack Streeter, a Mountain Home land broker and harsh critic of the Birds of Prey Natural Area ("I like birds, but I like people better") did just that, converting his DLA property into a subdivision south of Mountain Home.

Congress attempted to keep the DLA in the domain of the family farmer by prohibiting entries "to and for the benefit of any corporation or association." Nevertheless, corporations and associations often end up dominating DLA projects.

Just last spring the BLM won the last two of three fraud cases brought against the developers of DLA lands in southwestern Idaho. One of the projects, the 4,400 acre Black Mesa project, was

organized by Vanness Anderson and Golden Grigg, who then held controlling interests in Ore-Ida Foods Inc., a large potato processing company. The DLA land was used to grow potatoes which Anderson and Grigg then sold to themselves at Ore-Ida. The court ruled against the Black Mesa entrymen and returned the land to the BLM because the 14 entrymen — all relatives of Anderson or Grigg — were determined to have had a prior agreement to turn over their lands to Anderson and Grigg.

However, without proof of a previous agreement to turn over entries, the BLM would have no case. Many settlers have sold their tracts to such companies as Farm Development Corporation following patenting — and that is perfectly legal. "That's pretty normal," said Brunner. "Economics force that." Brunner and others noted that 320 acres is a marginal size for a farm.

But circumventing the 320 acre limitation is fairly simple. Boise attorney Bill Ringert, long active in DLA projects and himself a shareholder in Farm Development Corporation is fairly typical of the modern DLA family farmer — almost everyone in his family — wife, parents and a brother — acquired a 320 acre tract in the Grindstone Butte project. Ringert supplies the money to grow the crops and splits the profits with the farmer he hired to farm the land.

Given the enormous costs of farming desert land — "You can easily spend a quarter million dollars" developing a 320 tract, one BLM official noted — DLA and Carey lands may be out of reach for all but the wealthy and corporations. "The old days where every Tom, Dick and Harry with a fourth grade education can go out and make it on a farm are gone," said IDWR economist Jim Wrigley. "Agriculture is not the inexpensive enterprise it used to be," he said. "It's a major business...The family farm only lives on in the myth of the West. It doesn't exist."

Brunner noted that DLA "may have originally meant to foster family farming, but it certainly doesn't now."

In fact, many observers question whether anyone can develop a profitable farm on these lands. Compounding the escalating cost of electricity, prices

for crops, such as potatoes, are weakening because of overproduction, according to Nydal Rydall, director of commodities for the Idaho Farm Bureau. He said some farmers are having great difficulty finding buyers for their spuds.

Most farm developers count on growing spuds the first several years because the virgin soil produces bumper crops, and potatoes bring the most money per acre.

Noting that development of the lands is contingent on the entrymen proving beforehand that they can make a profit, Brunner said, "It may be that we pick the best projects, run them through and (find out) none of them are feasible. Some of them are so marginal, you say, 'how can they be making any money?' And maybe they aren't". Some projects, he suggested, may be used simply as tax write-offs.

Another possibility, posed by Idaho Citizen's Coalition, a consumer-conservation group, is that "vertically integrated" agricultural companies — those that control all phases of production, from fertilizer manufacture to packaging — can afford to lose money in the growing of the raw product. Since the crop is sold to the same corporation that grew it, the price paid is immaterial.

In addition to weakening prices for the independent farmers, the Idaho Citizen's Coalition study continued, "Processors find it easier to deal with one large unit than with many smaller ones and tend to award contracts to bigger producers, leaving the smaller farmer to scramble for a place to sell his crops."

If the projects which will be evaluated this fall prove to be uneconomical, then the BLM will reject them, according to Brunner. That could mark the natural death of these archaic acts. But the Reagan administration may well have unwittingly set the BLM up to keep the acts embroiled in controversy. All of the 176,000 acres proposed for DLA and Carey Act development have been included in the BLM's list of "surplus" lands which might be sold to help pay off the national debt and balance the budget. If the entries are denied and subsequently put on the open market, rebuffed entrymen would no doubt call foul play, and the BLM may find itself in court over issues that have little to do with the real effects of the latter day homestead acts.

Glenn Oakley is a freelance writer living in Boise, Idaho. This article was paid for by the HCN Research Fund.

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Jennifer Wulford photo

Rush to power:

by Glenn Oakley

"It is unfortunate that hydro is such a good source of electricity," said Idaho Power Company spokesman Larry Taylor. "I happen to be a fan of free-flowing water."

Nevertheless, if you pick any stretch of free-flowing water in Idaho, chances are that somebody has a proposal to dam it for the production of electricity. Whether any river will actually be dammed depends largely upon how rapidly, and for how long, the demand for electricity drops.

The annual increase in electricity demand — known as load growth — has been dropping over the past several years. However, utilities in Idaho are making new dam proposals and resurrecting old ones, despite the future uncertainties. There are nine major dam proposals for Idaho rivers currently in various stages of planning.

Because the fuel for hydroelectric generators falls from the sky every winter for free, dams are the first choice of utilities looking for new generating capacity. Coal-fired plants are the second choice on the economic ladder and IPC's Taylor said that, if the company's ambitious hydroelectric plans are foiled, the utility will begin planning for construction of a coal-fired plant "immediately."

However, because of the greater cost of coal-fired electricity and the accompanying air pollution, coal-fired plants are less acceptable than hydro in Idaho. Idaho Public Utilities Commissioner Conley Ward said, "To simply say no to hydro and we'll put up with the health

effects in Wyoming and Montana (where the coal would be mined and possibly burned) is foisting our problems on another state." Idaho has no known commercial coal fields.

Nuclear power, in light of the financially disastrous Washington Public Power Supply System nuclear plants, is not a serious choice any more. In fact, said Taylor, "You would have to be crazy to talk about a nuclear plant."

If, however, the load growth continues to decline in Idaho, some or all of the proposed major hydroelectric projects may become unnecessary.

The slowing of the load growth is a result of conservation, induced by the weakened economy, high electrical costs and some government programs designed to discourage electrical consumption. Utilities, such as IPC, decide what dams or thermal plants to build based on what they think the demand for power will be in the future. By studying and predicting the economy, population growth, conservation programs, fuel and electricity prices and so forth, a power load forecast is charted. Not surprisingly, load forecast figures vary depending on who is doing the forecasting.

IPC is now projecting a 2.7 percent annual increase in electricity demand over the next 20 years. In 1981, the utility was working on the assumption of a 3.6 percent annual increase.

The federally-owned Bonneville Power Administration forecast released in April 1982 projects a load growth for the Northwest to range from a high of 2.5 percent and a low of .8 percent. That is based on BPA's entire region, not just Idaho, however. BPA's region includes

Washington, Oregon, Idaho and part of Montana.

Although the PUC has not plotted its own load growth forecast, Ward thinks the IPC forecast is too high. "With the economic situation, it is too high in the short run at least," Ward said. "Maybe when we get to 1990 electric load growth is not a fact of life," he suggested, noting that some areas in the eastern United States are already experiencing level or negative load growth. If there is no load growth, there is no need to develop more energy. However, Ward noted, "We have to plan for what seems to be the most reasonable procedure."

Still, Taylor acknowledged, "All utilities in the Northwest are progressing more cautiously...because we have had a reduction in load growth and financing is difficult."

Because of the historical dominance of cheap hydroelectric power in the Northwest, the region has become heavily dependent on electricity. The region's per capita electric energy consumption is double the national average. But now Northwest electricity costs are rising. The introduction of costly coal-fired and nuclear-powered electricity into the system has raised utility bills, and the remaining dam sites will prove more costly to develop than their predecessors.

Until recently, IPC's power came totally from its 16 dams along the Snake River and its tributaries. But now that hydro power is mixed with the much more costly coal-fired electricity, IPC owns one-third of the Jim Bridger coal-fired plant in Rock Springs, Wyoming, one-tenth of the Boardman, Oregon,

coal plant, one-half of the Valmy, Nevada, coal plant, and by 1984 will own one-half of Valmy 2.

To discourage extravagant use of electricity, in 1982 the PUC instituted inverted rates and imposed a \$50 fee for anyone hooking up electricity for space heat in a home. Under inverted rates, the more electricity one uses, the more one pays for it — just the opposite of the previous rate structure which rewarded heavy use of electricity.

However, the 1982 Idaho Legislature struck down inverted rates, and the courts killed the \$50 hookup fee. Hostile legislators charged the PUC with "social engineering" and threatened to further cut the commission's powers. Flat rates are now in effect.

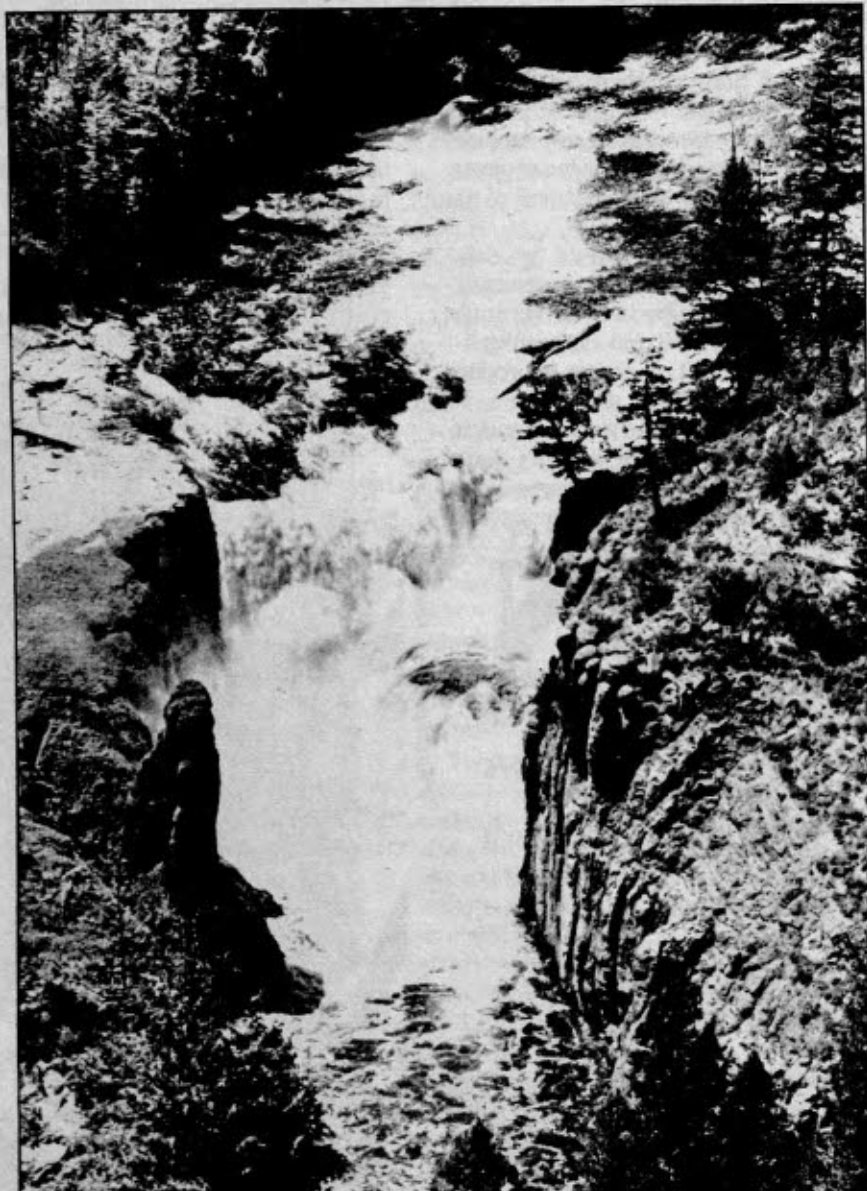
Ward said if electricity consumption was simply left to the indifferent powers of economics, there would be no more load growth. But he said, "While we're sitting here trying to discourage electrical consumption, the federal government has a whole set-up which encourages it."

The main culprits in Idaho are the Desert Land Entry Act and the Carey Act (See story on page one.) These latter-day homestead acts give away public land to anyone who can irrigate the land. Many farmers and speculators file for public lands along the Snake River, where the nearest water for irrigation is several hundred feet below at the bottom of the canyon.

The water is pumped out of the river and straight up the canyon walls in massive high-lift pipes. "The result," IPC noted in its Long-Range System Plan, "is a paradoxical situation in which more electric power is required for pumping

HYDRO-PHOBIA

Idaho's nine hottest water power sites



Idaho Dept. of Commerce and Development

Lower Mesa Falls, Henrys Fork

The fever to dam Idaho's rivers for electrical generation encompasses nearly all of the state's rivers. Some of the major dam proposals include:

A.J. Wiley project, Snake River

The Wiley Dam would be built 85 miles southeast of Boise near the town of Bliss. The 86 megawatt capacity project would create an eight mile long reservoir, flooding "the last significant whitewater reach of the Snake River in southern Idaho," according to the draft environmental impact statement, prepared by the Federal Energy Regulatory Commission.

FERC determines the ultimate fate of hydro projects, issuing preliminary permits to allow further study of proposed projects, and issuing licenses for proposals that meet its approval.

The Idaho Power Company proposal would eliminate what is now a rainbow trout fishery and inundate four homes, one small business, several trout ponds, a fuel alcohol plant and a gravel operation. The U.S. Fish and Wildlife Service has ranked the Dike-Wiley reach of the Snake River as the sixth most important wildlife habitat in Idaho, under the Unique Ecosystems Program.

The Idaho Department of Fish and Game has not opposed the Wiley Dam, according to Chief of the Bureau of Program Coordination Monte Richards, because "we have not been able to demonstrate that there is a major fishery in the Wiley reach."

However, Idaho Public Utilities Commissioner Conley Ward said, "Wiley seems to me to be the shakiest environmentally and because of engineering problems. The combination of those two could down Wiley."

The Public Utilities Commission is a state regulatory commission of three members which must issue a Certificate of Public Convenience and Necessity before a utility may proceed with a hydro project. The PUC has issued a preliminary certificate for Wiley, and IPC is now waiting for its FERC license to build the Wiley Dam.

Kanaka Rapids project, Snake River

Kanaka Rapids is the smallest hydro proposal by IPC. The Kanaka Rapids Dam would be built upstream of Wiley, and northwest of the city of Twin Falls. A preliminary permit has been issued by FERC to continue study on the 20 MW proposal.

Eagle Rock project, Snake River

Between the existing American Falls and Minidoka Dams on the Snake River in eastern Idaho, Raft River Electric Cooperative has applied to build a 40 foot high dam. Eagle Rock Dam would flood virtually all of the remaining free-flowing river between the towns of American Falls and Burley.

In addition, Eagle Rock Dam would divert the majority of the Snake River down a half-mile long canal before the water was run through the 47 MW turbines and back into the natural channel. The drastically de-watered half-mile stretch below the dam is the cause of most concern over Eagle Rock.

Although the agency has not come out in opposition to the dam, the Fish and Game Commission has decided to intervene in the dispute and is preparing a position paper on the project.

damming Idaho's rivers

at the same time that the amount of stream flow available for power generation is being reduced."

To protect the Snake River water for hydroelectric generation, the PUC has imposed a moratorium on new high lift pumping on a section of the river upstream from Swan Falls Dam in the Birds of Prey Natural Area. Taylor said there are 187 applications for high lift pumps currently blocked by the moratorium. If all the applications were approved, they would require an additional 28 megawatts to run their pumps.

The proposed American Freedom Dam, in the same area, would generate only 24 MW.

Independent dam builders, such as American Freedom Dam's hopeful A&J Construction Company are a recent phenomenon. The 1978 Public Utilities Regulatory Policy Act (PURPA) directed utilities to purchase all independently produced electricity, making the independent dam builders possible. Since PURPA, there has been a flurry of applications from individuals and companies to build dams and diversions. They bring a mixed blessing to the future of free-flowing water. The majority of the proposed projects are small stream diversions or irrigation canal diversions, where a canal company will harness the drop in its ditches. But applications are also being filed on streams important for trout and salmon spawning.

Small hydro projects could produce enough electricity to make the more massive dams unnecessary. But, as with load growth, predictions on the potential of small hydro vary.

In its load growth forecasts, IPC is



Glenn Oakley

"You would have to be crazy to talk about a nuclear plant."

— Idaho Power Company spokesman Larry Taylor

including 80 MW produced by small, independent hydro projects. Taylor called that "a hope, at best."

But Ward said, "I expect it to be quite a bit larger than that." He said, "All of those (streams) that don't have fisheries have potential." He said most projects

"won't have environmental problems because they are too steep to support fish."

JUB Engineering is one firm that helps individuals and companies develop small hydro projects, ranging from 175 kilowatts to 15 MW. JUB vice president

Mike Preston said his company is working on projects which could total 300 MW in the western states.

Preston acknowledged, "There is going to be some problem in the anadromous fish areas. (Anadromous fish

(continued on page 14)

The co-op has been suggesting a 500 cubic feet per second minimum flow below the dam for the sake of fish and wildlife. The normal summer flow is 10,000 to 12,000 cfs, according to IF&G biologist Herb Pollard. Pollard said the river threatened by Eagle Rock Dam produces trophy-sized rainbow trout—"You just don't see fish under 16 inches." He noted the Snake River already suffers from abnormally high water temperatures and low dissolved oxygen levels in the area because of American Falls Dam. Reservoirs allow water to warm in the summertime, and the stagnant water has no opportunity to aerate itself.

Raft River Electric has received a preliminary FERC permit for the project.

American Freedom Dam, Snake River

This patriotic sounding project proposed by the A&J Construction Company of Homedale, Idaho, faces more opposition than Custer at Little Bighorn. The American Freedom Dam would be built within the Birds of Prey National Conservation Area, which is reputed to have the densest nesting population of raptors in the world. The U.S. Fish and Wildlife Service and the state Fish and Game Department have already warned the dam could be the death of white sturgeon in the Snake River. The dam would also have adverse impacts on the raptors, the agencies said.

The American Freedom Dam site is 8.5 miles downstream from the proposed Guffey Dam. IPC and the Idaho Water Resources Department shelved their Guffey Dam proposal four years ago because its location in the Birds of Prey Area made it too controversial.

FERC has issued A&J Construction the preliminary permit to study the 24 MW project.

High Mountain Sheep Dam, Snake River

This Hells Canyon dam site proposal was resurrected in May by Republican gubernatorial candidate and Speaker of the House Ralph Olmstead. Olmstead, who went on to lose the May primary, called for construction of the High Mountain Sheep Dam which would be within the Hells Canyon National Recreation Area. Dam construction is prohibited in the NRA.

High Mountain Sheep was once a major proposal by IPC, but the utility shelved the proposal when Congress made the stretch part of the National Recreation Area.

North Fork project, North Fork Payette River

IPC's North Fork project received the necessary FERC license in July, allowing the utility to begin construction at anytime. However, because of the reduced load growth, IPC is not planning to send out the bulldozers immediately. As IPC spokesman Larry Taylor said, "All utilities in the Northwest are progressing more cautiously because we have had a reduction in load growth and financing is difficult."

In this unique project north of Boise, IPC intends to divert the majority of the North Fork through a seven-mile tunnel to an underground powerhouse. From the powerhouse, the water would be returned to the river and then diverted again through a four-mile tunnel to another underground powerhouse. The combined capacity of this facility would be 273 MW, making it the second most powerful generating project run by the utility.

The only significant opposition to the project has come from kayakers who prize the river for its challenging drops and turbulent rapids. The section of the North Fork to be diverted is experts-only whitewater. IPC has offered to release water two or three times a year to allow kayaking, said Taylor. The Idaho Whitewater Association is pushing for more releases.

Because the North Fork is a relatively poor fishery, the project has met no opposition from the IF&G, said Richards. The Idaho Conservation League, has remained neutral on the project, and the PUC's Ward said, "If that one is not acceptable, we're done building hydro, period."

The North Fork is "probably the most environmentally benign project we have proposed," according to Taylor.

Mesa Falls dams, Henrys Fork

Montana Power Company, Utah Power and Light and an Oakland, California attorney all filed with FERC to develop the scenic falls on Henrys Fork in eastern Idaho, west of Yellowstone Park. In February of 1982, FERC awarded the preliminary permit to California attorney Gregory Wilcox who intends to build two six-foot high diversion dams on upper and lower Mesa Falls.

The Idaho Department of Parks and Recreation is in the forefront fighting this project. The department is concerned about the aesthetic values of the falls being destroyed, since they would be essentially dried up, and the effects on the wintering population of trumpeter swans. Deputy Director of Parks and Recreation Bob Meinen said the department has requested a minimum flow below the falls. If granted, the minimum flow would accomplish two ends: keeping the river water from freezing over in the winter for the benefit of the swans; and essentially preventing the development of the project by making it uneconomical to produce power with the allowable diversion.

Teton Dam, Teton River

The Teton Dam, Idaho's most famous dam, has been fought over and built once already. While the reservoir behind the new dam was filling in June, 1976, the earthen structure burst, releasing a torrent of angry water that killed 11 people, 16,500 livestock, inundated 180 square miles and caused some \$500 million in damage.

Some area residents and irrigators are calling for the Bureau of Reclamation to rebuild the ill-fated dam. A 1981 Bureau of Reclamation study on the feasibility and needs of rebuilding the dam noted that "environmental and other interest groups may strongly oppose a potential new project...on both environmental and economic grounds."

The BuRec and Idaho's congressional delegation seem to be very cautious about making a strong stand in favor of Teton Dam. Idaho Conservation League Director Pat Ford noted, "Congress isn't in a mood to fund a western dam that has already collapsed."

Dike project, Snake River

In July, the sturgeon won a victory when IPC shelved its proposal to build the Dike Dam downstream of the Wiley site. The reason for the cancellation was shrinking load growth. The Idaho Department of Fish and Game said the dam would have devastated a major sturgeon population, a fish that is becoming increasingly scarce.

— Glenn Oakley

14-High Country News — Sept. 3, 1982

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CONSERVATION VOLUNTEERS

The Soil Conservation Service accepts volunteers for helping with soil and water conservation programs. Volunteers can work with field surveys, layout of conservation practices and education programs. The unpaid volunteers allow the SCS to be more responsive to land users. Application forms are available from the Personnel Office, SCS, P.O. Box 2007, Albuquerque, N.M. 87103.

PIPELINE EXPANSION

The Northwest Pipeline Corporation of Grand Junction, Colo. is proposing to construct 27.5 miles of pipeline to expand the existing Rocky Mountain Gas Supply Line. Lateral well-connecting lines to tie into 13 existing natural gas wells make up 10.5 miles of the proposed pipeline. These gas wells are located in the Paonia District of the Grand Mesa, Uncompahgre and Gunnison National Forests. Effects on the area, size and location of pipeline and conflicts on land use are some of issues being addressed in an environmental assessment. Public comments will be accepted until Sept. 20 by Dalton Ellis, District Ranger, Paonia Ranger District, Grand Mesa, Uncompahgre and Gunnison National Forests, North Rio Grande St., Paonia, Colo. 81428 or (303) 527-4131.

REDUCING OVERSELECTION

Overselection of Alaskan land by Alaska Native corporations was allowed in the 1970s to ensure receipt of the full acreage allotted to them. Proposed regulations to determine overselection and to devise a system for reducing it are being prepared. Comments will be accepted until Sept. 19. Contact the Director (140), BLM, Dept. of the Interior, Washington D.C. 20240.

UNITED TRIBES POW-WOW

The United Tribes Educational Technical Center will sponsor three days of the dancing and singing international championships on Sept. 10-12. Activities also will include softball and road races, with total prizes amounting to \$16,400 for all the championships. Food stands and arts and crafts stands will be allowed at the festivities. Admission is \$4 per person, free for those six and under. Admission is good for all three days. The center is located two miles south of Bismarck, N.D. Call (701) 255-3285 for information.

HOUSING CONFERENCE

The 1982 National Association of Housing Cooperatives annual conference is Oct. 7-10 in Baltimore. The conference will benefit members of cooperatives and cooperative housing professionals with workshops on financing, management and leadership skill-building. Registration costs vary for members and non-members and for portions of the conference program. For information contact NAHC, 2501 M St., NW, Suite 451, Washington, D.C. 20037 or (202) 887-0706.

Hydropower...

(continued from page 13)

those — like salmon — that spawn in fresh water but spend most of their lives in the oceans.) One power facility on one tributary of the Salmon River doesn't hurt much, but 30 facilities on the Salmon do hurt. We know there are limitations to what we can do," he noted.

Idaho Fish and Game Fisheries Bureau Chief Stacey Gebhards said, "Our basic concerns on (small hydro projects) have been for maintenance of minimum flows between outflows and the penstocks (where the water is returned)." Gebhards said, "The smaller the stream, the more critical it gets for the fishery." He said the IF&G "would most likely protest (small hydro projects) where we have known spawning of salmon and steelhead" because it is difficult to provide upstream passage for adult salmon spawners.

"Even in the best of conditions, there will be impacts on the fishery," Gebhards concluded.

Salmon and steelhead spawning is critical because the existing dams between Idaho's headwaters and the Pacific Ocean have devastated the once spectacular salmon fishery. How many more dams will impede the salmon's migration may rest on something as mundane as the monthly electric bill.

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Glenn Oakley is a freelance writer in Boise, Idaho. This article was paid for by the HCN Research Fund.

PRESERVING BILL OF RIGHTS

The American Civil Liberties Union is hosting a regional conference in Denver on Bill of Rights issues affected by recent and pending legislation. Immigration, separation of church and state and reproductive choice will be among the issues discussed. The conference is Sept. 11 and registration is \$15. To attend, contact ACLU of Colorado, 815 East 22nd Ave., Denver, Colo. 80205.

EXAMINING WATER RESOURCES

A coalition of major power, water and consumer groups will examine the intersecting policies controlling water, the West's vital resource, at the Western States Water and Power Consumers Conference regional meeting. The Sept. 20-21 conference in Grand Junction continues the group's 22-year history of promoting a unified water and power policy. Registration is \$30. For information, contact the Rocky Mountain Farmers Union, P.O. Box 39628, Denver, Colo. 80239 (303) 371-9090.

PROTECTING HORSES

The Adopt-A-Horse program is undergoing changes in regulations concerning transportation costs and establishing a permanent fee of \$200 per horse and \$75 per burro for adoption. The proposed fee has been tested as a pilot fee since Jan. Also proposed in the draft amendments of the Bureau of Land Management wild horse and burro regulations is a \$25 nonrefundable advance payment for applying for adoption of the animal. Public comment is accepted until Sept. 24. Direct comments or questions to Director (140), 1800 C St., NW, Washington D.C. 20240.

RESOURCE BIBLIOGRAPHY

A reference source for those interested in the conservation and management of wildlife, fish and forest resources is available in bibliography form. The free bibliography is published by the Cooperative Extension Service and is intended for both private landowners and natural resource managers. Copies can be obtained from the Natural Resources Unit, Extension Service, U.S. Department of Agriculture, Washington, D.C. 20250.

PRAIRIE DOG MANAGEMENT

Prairie dog control in Phillips County, Mont. is examined in a Bureau of Land Management environmental assessment. Four alternatives are outlined for the management of prairie dogs on public lands. With 96 prairie dog towns dotting 8,275 acres, the assessment concluded that populations may expand by as much as 27 percent annually. A decision will be made concerning the prairie dogs' future by the end of the month. Direct your comments to Area Manager, Phillips Resource Area Office, P.O. Box B, Malta, Mont. 59538.

WETLAND REPORT

"Wetland Management," a 150-page report focusing on the status of wetlands and their values and vulnerabilities is available. The report also reviews issues likely to arise in Congressional deliberations and gives a summary of Congressional interests in wetlands in the past. To obtain a copy, send a self-addressed mailing label to Document Clerk, 4204 Dirksen Senate Office Building, Washington D.C. 20510.

HUNTING AND FISHING DAY

Circle Sept. 25 on your calendar as National Hunting and Fishing Day. The eleventh annual observance of this day will be marked by activities helping to make non-sportsmen more aware of the need to conserve resources and of the role of hunters and fishermen in conservation. For information on how to participate, write NHF Day Headquarters, P.O. Box 1075, Riverside, Conn. 06878.

MONTANA MEETINGS

Meetings to discuss the management of the Lewis and Clark National Forest in Montana will be held throughout Sept. A draft environmental impact statement is completed and public comment extends through Oct. 31. Two public hearings on the Middle Fork Judith and Big Snowies Wilderness Study Areas are scheduled for the beginning of Oct. For information on dates and place of meetings, call the Forest Service at (406) 727-0901.

BEAR LAKE MEETING

The state of Utah's responsibilities regarding Bear Lake will be addressed at a Sept. 8 meeting. Issues to be studied include transportation right-of-way, land ownership, ramps and docks, and energy development. Public input is desired at the meeting, which will be at Laketown, Rich County from 7-10 p.m. For information, call Kay Boulter at the public affairs office at (801) 533-5356.

WILDERNESS MANAGEMENT

A draft environmental impact statement has been written on the future management of the West Needle Wilderness Study Area, the Piedra Wilderness Study Area and the South San Juan Wilderness Expansion Study Area on the San Juan National Forest in Colo. Public hearings will be Sept. 14 in Durango and Sept. 16 in Denver. Written and oral comments will be accepted until Oct. 15. To comment or obtain further information, contact P.C. Sweetland, Forest Supervisor, at San Juan National Forest, 701 Camino del Rio, Durango, Colo. 81301 or (303) 247-4874.

PROPOSAL TURNED DOWN

A proposal to improve forage production of the Beaver-Horse Cattle and Horse grazing allotment in the Bridger-Teton National Forest was not approved, according to the Forest Service. The project, in the Big Piney District, was determined unnecessary at this time. The allotment was treated with herbicides in 1969-71 to improve forage production. A copy of the Decision Notice may be reviewed at the Big Piney Ranger District or the Forest Supervisor's office in Jackson.

"ON THE AIR"

Colorado residents can view "On The Air," a half-hour broadcast portraying the philosophical debate over "clean air." The cost of polluting air is examined against the need to reduce dependence on foreign oil and to spur economic growth. National and state experts and politicians discuss the price of clean air. The program will be broadcast on Oct. 1, 9 p.m. by KRMA TV, channel 6 of Denver. Interested persons outside of the viewing area are urged to contact their PBS affiliate to request a local broadcast.

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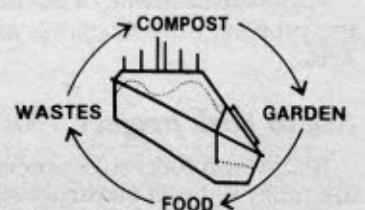
Dream Garden Press

1984 MONKEY WRENCH GANG CALENDAR

Publisher seeks radical environmental & wilderness dates for calendar. Especially Ecotage, Eco-defense, Monkeywrenching & Nuke & other disaster dates. Also looking for quotes pertaining to defending wilderness & environment, civil disobedience, ecotage, etc. Submissions must cite source or include news clipping. Free copy of calendar to all contributors. Fee can be arranged for 10 or more submissions. Write: 1984 Monkey Wrench Gang Calendar, Dept. GWH111, Dream Garden Press, 1199 Iola Avenue, Salt Lake City, Utah 84104.

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OPINION

Watt's wilderness waffle

To tell you the truth, we had reached the point where we thought nothing this administration or Interior Secretary James Watt did would surprise us.

Nevertheless, we were stunned when we read on Saturday morning that the Interior Department had issued oil and gas leases on the 1,600-acre Wambaw Creek Wilderness Area in South Carolina. This lease issuance was in direct conflict with Watt's agreement not to issue any leases until the end of the year. Watt reportedly admitted that this was "counter to my agreement with Congress."

We have come to expect a great deal of Secretary Watt. Mostly, we expect him to be narrow-minded, vindictive and arrogant. However, we have also come to expect him to do what he says is going to do. He said he was going to try to open the wilderness for oil and gas, and he tried. He said he was going to offer huge tracts of federal coal for lease and he did. He said he was going to lease offshore oil and gas in unprecedented quantities, and he has. He said he was going to ease the administrative burden placed on coal companies by the federal strip mine law, and he has. In short, we have come to see him as a man of his word.

Well, he said he wouldn't lease any lands in wilderness areas this year. In this matter, he didn't tell us the truth. Interior says now that this incident was an honest mistake, the result of faulty communication between the tangle of agencies that oversee federal oil and gas leasing. We are willing to accept that explanation — for now. But the next logical question is: What good is a promise not to lease oil and gas in wilderness areas if the right hand of government doesn't know what the left hand is doing?

A: No good at all.

Which brings us to the next issue. What is to be done? Conveniently, there has been some work done on this problem. The U.S. House of Representatives has passed legislation that would ban oil and gas leasing in wilderness areas. The legislation is now in the Senate and has garnered 54 co-sponsors. This leads one to think it would gather at least 54 votes if it were brought to the Senate floor immediately. This is cause for optimism that this issue, which should never have been brought up in the first place, is on the way to a solution.

However, there are some interesting names missing from that list of co-sponsors. So far, Sens. Alan Simpson (R-Wyo.), Malcolm Wallop (R-Wyo.) and John Melcher (D-Mont.) have not added their names to the list of co-sponsors. All three of these men have been vocal in their opposition to leasing in wilderness areas within their respective states. Yet, they haven't put their names on the list at all.

Wallop and Simpson argue that they are trying to prevent oil and gas leasing in Wyoming through provisions of the Wyoming wilderness bill. While commendable, this is not enough. Saving Wyoming wilderness won't help South Carolina or any of the others. Interior's "mistake" points up the urgency of dealing with this issue. As our friend Langdon Long, a Lander lawyer who originally hails from South Carolina, said the other day, "First they tried to lease the Washakie and now a South Carolina wilderness. They're starting to hit me where it hurts."

— DSW

Inheritance nightmares

by Steve Andreas

A little over a year ago, *High Country News* published a front-page story "Tax forges inheritance dream" (HCN, 4/17/81) about Reno Chace's 74,000 acre sheep ranch that "had to be sold" after his death because of inheritance taxes of \$670,000. "That's all the ranch was worth" his son Harry Chace was quoted as saying. That works out to a few pennies over \$9 per acre for the

GUEST EDITORIAL

land alone, not counting anything for the value of sheep, improvements, etc. It's been a very long time since I've seen any land for sale at \$9 per acre, so I was inclined to question Harry's statement.

A recent General Accounting Office study found that "little reliable evidence supports the view that farm estates shoulder an unfair tax burden." The GAO found no case in which a farmer's property was sold to pay inheritance taxes. The January 1982 issue of *People and Taxes* concluded that recent reductions in inheritance taxes enacted by Congress are of much greater benefit to large agribusiness than to the smaller family farms they were supposed to protect. The net result of these tax reductions has been to make it even more difficult for the family farm to compete with agribusiness.

These two articles got me thinking about the whole issue of inheritance and inheritance taxes. I, too, had "inheritance dreams" once, but they were exactly that — dreams — because I had not a single rich ancestor that I could inherit from. When I was young I had no property at all, and I often envied those who had a lot of property given to them and didn't have to work, while I had to work hard at whatever jobs were available. By luck and wit, I earned enough money (and paid full tax rates on what I earned) to buy some land. Now that I have it, I probably wouldn't have to work anymore — ever. I do work, because I like a productive life and there are always worthy causes to support.

I know a ranch family that has large holdings now worth several millions. The ranch has been in the family since the 1880s through four and five generations. They are very hard workers. Their ranching nearly always loses money, despite overgrazing on BLM allotments that cost about one-fifth of market value. They keep going very nicely by selling off a parcel every few years. At the rate that land values have been increasing,

the family can probably continue this practice for a thousand years or more, whether they work or not.

Large inheritances like these raise two questions that concern me deeply, and that have a great impact on every American, whether we realize it or not. Do we want a society in which certain people own and control large wealth simply because they had wealthy parents? Do we, as a society, want the misallocation of resources, the waste, and the distorted market prices that often result from large inheritance?

Let me discuss the first question by starting with the most extreme case. Let's say that all the assets in the United States were owned by one family. It's pretty obvious that all their rents and royalties would enable them and their descendants to live forever without working, and that no one else would ever be able to own land except by marrying into the family. This was essentially the situation in feudal Europe, and it is also essentially the case right now in El Salvador, where nearly all the land and assets are owned by a very small fraction of the populations.

The defects of feudal societies have been studied in great detail by historians. The main one of concern here is that success is determined not by brains or hard work, but by pedigree and ancestry.

Inheritance is usually justified by the reasoning, "He worked hard for it, he should be able to pass it on to his kids." But if so much land is locked up in large inheritances that a capable person can't "work hard for it," then large inheritance destroys the very reason that justifies it.

Our society has many institutions, such as free public schooling, the goal of which is to make it possible for capable children to maximize their potential, even if they are poor. Society as a whole benefits immensely from this investment in public schooling as these capable people grow up to make productive and inventive contributions to society that would otherwise have been lost. Large inheritance is in direct conflict with these goals because it restricts access and opportunity for people who are capable but poor.

To explore the second question we return to the extreme example in which all U.S. land and property is owned by one family. What kind of economic and land use decisions are they likely to make? Again, the feudal economies amply demonstrate what to expect. Decisions are made with the prime

objective of maintaining the status quo for the people in power.

Such issues as conservation and utilization of resources, economic progress, public safety, and other such values are seldom factors in decision-making, because they are irrelevant to the people who make the decisions.

Now let's return to the contemporary situation in the United States. If every farmer (and other business interests) had to buy farm assets at current market prices, there would be major decision changes affecting the ecology and economics of farming and land-use management. Most of these changes would be beneficial, both to the individuals involved and to our society as a whole. There are many, many farmers scratching out a minimum living raising uneconomical crops on land worth millions. Why is the land worth millions? Because so much of it never enters the marketplace due to inheritance.

If large inheritances were not permitted, more land would be available for purchase and an increase in supply would lead to a decrease in cost. This would make it easier for new farmers to enter the profession, and they would be much more motivated to make full productive use of land.

I believe that inheritance should be limited to providing care and education for dependent children, and perhaps subsistence for indigent spouses and relatives in old age.

Exactly how to legislate limited inheritance is a complex problem, for which I don't claim to have the best answer. An easily implemented possibility is to set a simple cash limit on inheritance, say \$300,000 or \$500,000. That should be ample for passing on personal heirlooms and family photos. The balance would be due to the Internal Revenue Service. The IRS could sell its interest at auction, or hold a mortgage at current market rates of interest. I'm not interested in the government owning or operating farms. Perhaps some other simple arrangement would make it easier for more people to realize the dream of owning land.

What we need are practical solutions to the remaining problems, inequities, and unfairness in America — the fairest society I know.

+++

Steve Andreas is a trainer and consultant in neuro-linguistic programming and owner of Real People Press, a small company featuring books on psychology. He lives in Boulder, Colorado.

LETTERS

BOTTLE BILLS

Dear HCN,

My compliments to Jennifer Walford on a well-balanced article dealing with the "bottle bill" issue (HCN, 8/20/82). In areas such as this where the affected industries have strong governmental lobby and sound financial support, facts and figures attesting to the true benefits of "bottle bills" get distorted, misrepresented and often politically twisted to favor industry rather than the public.

What about Wyoming? It is interesting to note that Wyoming had a "bottle bill" before the legislature. It was defeated. I hope that one of your staff further investigates the political machinations behind the defeat of the Wyoming "bottle bill." We, the public, got screwed, and in an election year it seems that answers to these questions should be forthcoming.

Name withheld by request



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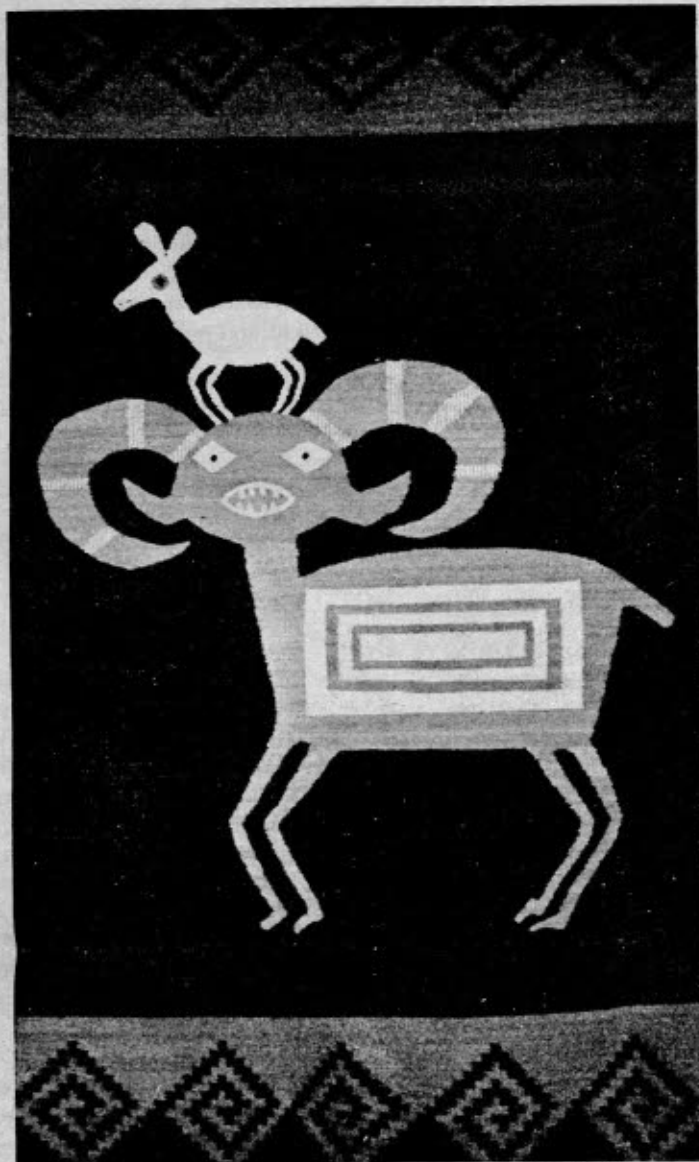
16-High Country News — Sept. 3, 1982

The First High Country News Auction

Through the good graces of Stuart and Isabel Mace and their Toklat Gallery and Malachite Small Farm School, *High Country News* is pleased to offer this auction of five outstanding Zapotec Indian rugs from the Teotitlan del Valle pueblo of Oaxaca, Mexico.

They are exquisite examples of the work of this high mountain village in southern Mexico. There, an entire family participates in the making of these tapestry-type rugs, which are hand-spun, hand-dyed and hand-woven in a traditional manner that goes back 400 years. The Maces, who carry the rugs at their Aspen Toklat Gallery, have first pick from the 800 weavers in the village.

#1



Rug #1: Mimbres Mountain Sheep
by Isaac Vasquez, master craftsman

Size: 38" x 66"

Colors: Brown background, indigo blue border design, red-orange (cochineal) and white figures.

Dyes: Cochineal, indigo

Warp: Wool

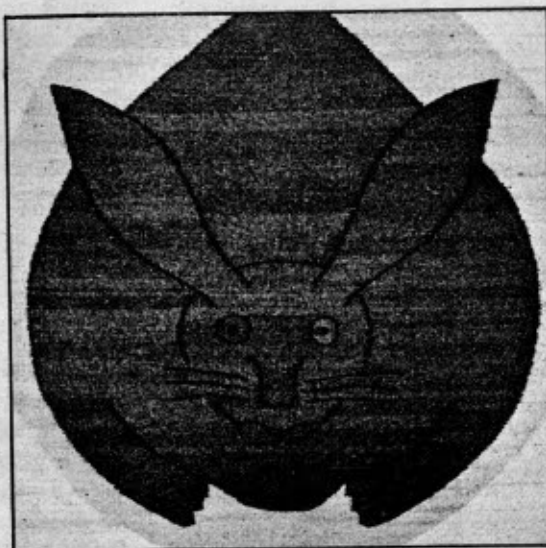
Weft: Handspun wool

Remarks: This is the finest of the five rugs in this collection. It took over 13 months to weave and is signed by the weaver, one of the finest craftsmen in his village. The central figure is taken from a pot design from the Mimbres Valley culture that flourished from 1200 to 1450 A.D. and is considered to be the highest stage ever reached in pot decoration in the Southwest. In that culture, when a young man reached maturity, he and a special friend would agree to produce for each other during their lifetimes an olla, or ceremonial bowl, which would be buried with them at death. The design would represent some aspect of the person's personality or life or feelings about things. The mountain sheep symbol adapted here for the rug would indicate that this person was very fond of his grandchildren and liked to carry them around.

Minimum bid: \$775

1. To place a bid, complete the form below (or print the required information on a separate sheet of paper) and mail it to *High Country News*, Box K, Lander, Wyo. 82520.
2. The highest bids in the possession of *High Country News* on Wednesday, September 29, will be awarded the rugs.
3. In the event of a tie, the bid with the earliest postmark will get the rug.
4. In the next issue of *High Country News* (September 17), we will publish the high bids received to date (as of September 15) along with the initials of the high bidder.
5. Minimum bids are based on the wholesale value of the rugs, the cost if you were to purchase them directly from a trader in the village. We have arranged with the donor to consider this value the "actual value" of the rugs for tax purposes. On that basis, we have been advised that the amount of the bid over and above the minimum may be tax-deductible to you, the purchaser. (Bid high!)

#2



Rug #2: Rabbit
by Lorenzo Gutierrez

Size: 38" x 42"

Colors: Cream field, light beige outline, gray figure with black accents.

Dyes: All natural fleece tones

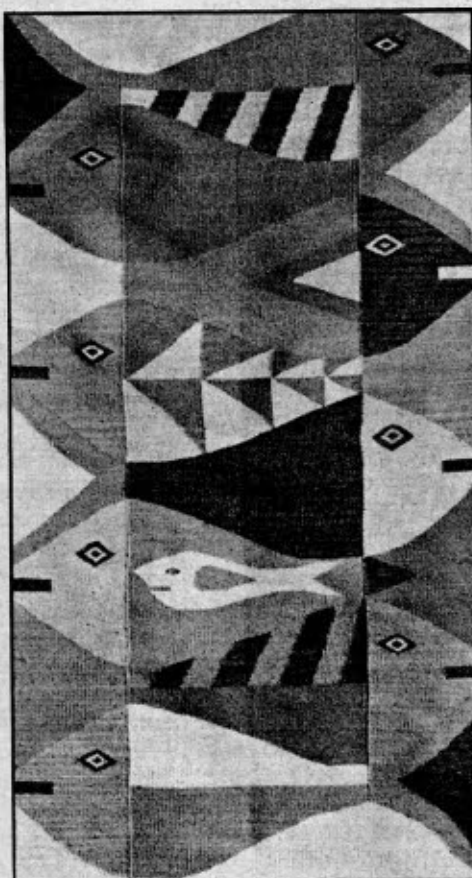
Warp: Wool

Weft: Handspun wool by spinning wheel

Remarks: The plump rabbit design is based upon an old Japanese family crest. While the subject matter is not typical of the Teotitlan del Valle village, its handling is. It is an excellent example of these people's ability to absorb ideas from other cultures and put their own stamp on them.

Minimum bid: \$210

#4



Rug #4: Modern Fish
by Cornelio Lopez

Size: 32" x 55"

Colors: Beiges, browns and light greens

Dyes: Aniline

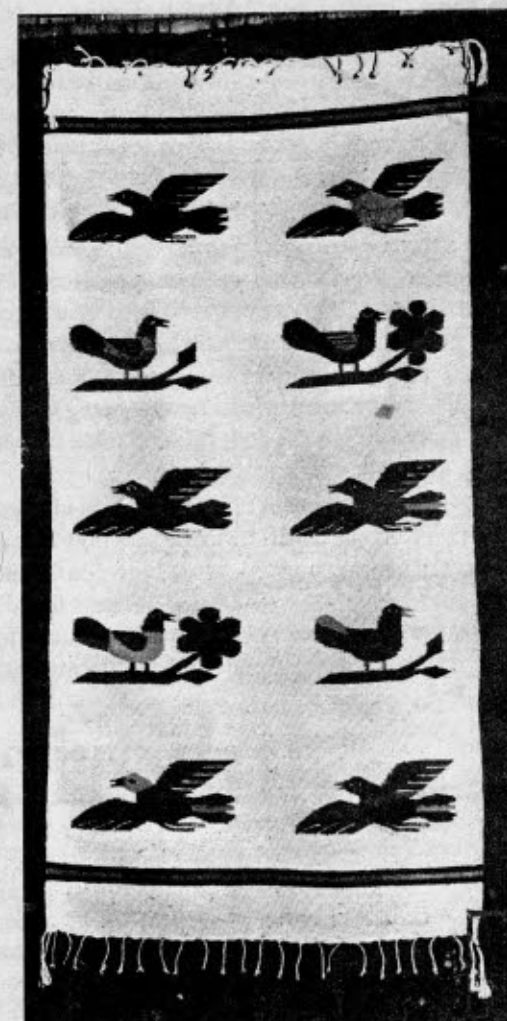
Warp: Wool

Weft: 100 percent wool, machine spun

Remarks: A beautifully executed modern interpretation of the traditional fish symbol. The design is clever and the colors are quite subtle.

Minimum bid: \$240

#3



Rug #3: Birds
by Braulio Laso

Size: 30" x 58"

Colors: Cream field, birds in brown, blue, gray, purple and pink.

Dyes: Aniline and vegetal

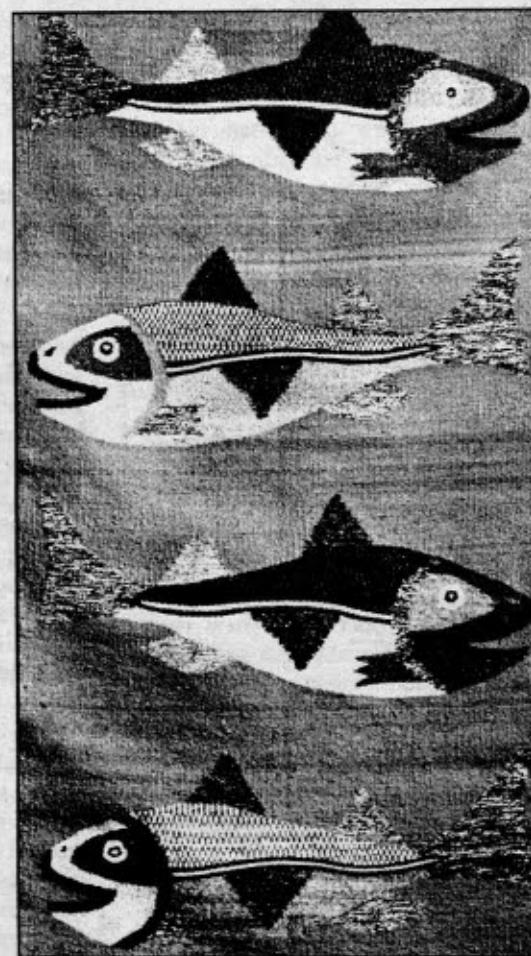
Warp: Wool

Weft: Dropspindle-spun wool

Remarks: This is a very softly woven piece, featuring multiple use of one of the main themes of the village, birds.

Minimum bid: \$140

#5



Rug #5: Laughing Fish
by Braulio Laso

Size: 35" x 61"

Colors: Brown border, tan background, brown and gray figures.

Dyes: Pomegranate pulp

Warp: Wool

Weft: Handspun wool

Remarks: The design is an original composition by the weaver. The tan background is created by the pomegranate dye; the rest of the colors are natural wool.

Minimum bid: \$285

AUCTION BID

Name _____

Address _____

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\$ _____ Rug #1: Mimbres Mountain Sheep

\$ _____ Rug #2: Rabbit

\$ _____ Rug #3: Birds

\$ _____ Rug #4: Modern Fish

\$ _____ Rug #5: Laughing Fish

Signature _____

Date _____

Mail to *High Country News*, Box K, Lander, Wyoming 82520.