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The Environmental Biweekly of the Rockies and Great Plains



High Country News

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Lander, Wyoming

Friday, August 10, 1979



Ore trucks wait for action above uranium exploration hole on the Red Desert.

Photo by Mike McClure

Uranium industry's expansion prospects bleak

*Fallout from
Three Mile Island
doesn't help*

by Marjane Ambler

Last March 28, families across the country gathered around radios and televisions to hear the latest news about the Three Mile Island nuclear plant accident near Harrisburg, Penn., wondering if it would

mushroom into a nightmare of the atomic age.

In corporate and government offices in the West, people also paid close attention to events in Harrisburg, but their concerns differed somewhat from the rest of the country's—they were wondering what the accident would mean for the billion-dollar uranium industry.

While the accident has accentuated many of the industry's problems, the issues that trouble uranium company executives

most are bigger than Three Mile Island. They know their prospects for expansion depend upon the erratic price of uranium on the world market, political decisions by utility boards and the federal government, and some luck in development of new technology to reduce mining costs.

Uranium exploration is under way in every Western state, and New Mexico, Wyoming, Colorado, Utah, Texas, Arizona and Washington are now producing the

mineral. Where development has begun, states are becoming increasingly aware of the tough regulatory and health problems that uranium development poses. But they also know the rewards. Wyoming, for example, collected \$9.18 million in taxes in

(continued on page 4)

OSM pressured to okay mine on Navajo land

by Dan Whipple

A proposed New Mexico strip mine is forcing the first major test of the federal Office of Surface Mining's power to block certain coal projects. Despite serious reservations at OSM that the land can be adequately reclaimed, political pressure is

being exerted to approve the mine.

The 40,000 acre Burnham mine, a joint project proposed by Consolidation Coal Co. and El Paso Natural Gas Co., would be on the Navajo Indian Reservation.

The federal strip mine law requires coal companies to demonstrate that vegetation can be re-established after mining. Sources in OSM, who requested anonymity, say

that Consol has not demonstrated re-claimability at the arid Southwestern site.

The mine plan at Burnham calls for essentially the same methods of revegetation used at the nearby Navajo mine owned by Utah International. The Navajo mine, which was begun long before the requirements of the federal strip mine bill were in

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GOIN' FISHING

The next issue of HCN, No. 17, will be published Sept. 7. As usual, we're skipping an issue to allow the staff its yearly escape to the woods.



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Dear Friends,

HCN has three additions to announce this week—a new staff member, a potential person and a new machine.

Geoffrey O'Gara has arrived from Washington, D.C., to begin work as our news editor. O'Gara, 28, has six years' experience editing and covering coal, Congress and politics for the Capitol Hill News Service and States News Service in Washington, D.C., and working for various community newspapers in California. He has published freelance pieces in *Mother Jones*, *Washington Monthly* and *Environmental Action*. From him, you can expect clean writing and expert editing, as well as new ideas on graphics and promotion.

Expecting a restful, cool mountain town, Geoff, his wife, Berthenia Crocker, and their baby have survived the hottest day in Lander's history as well as the rigors of house-hunting. It'll be a breeze from now on.

THE POTENTIAL PERSON

We need the extra news person because Joan Nice, managing editor for five years, and her husband, Bruce Hamilton, are going to have a baby in October. After taking some time off to get to know the new person, Joan will

return to HCN half-time as associate editor. Marjane Ambler is taking over as managing editor.

—the staff

THE NEW MACHINE

The room was littered with stained coffee cups and ashtrays crammed with cigarette butts. The only spot on the floor not buried in discarded newspapers was where I lay, propped up against the wall. Through half-opened eyelids my dulled consciousness peered into the ozone-blue pall of stale smoke. My gaze fell upon the piles of mangled stencil plates. They told the tawdry tale of a circulation manager's life: a hundred broken promises, a thousand broken dreams.

That scene was typical during that frenzied hiatus when our addressograph refused to cooperate. The letters from angry subscribers occupied a substantial portion of the circulation desk; the more amusing ones were posted on the wall.

But with the arrival of our new machine on Aug. 7, the office was filled with new hope and a heretofore unknown tidiness.

Gone for now the eaten stencils. Gone the curses that filled the office air every



GEOFFREY O'GARA

Photo by Sara Hunter-Wiles

mailing day. Gone the trips to the manicurist to repair sprocket-torn cuticles. I wish long life to the typesetting machine.

—wm

CORRECTION

In an article on nuclear wastes on page 1 of the April 20th issue, we stated that if an experimental granite tunnel at the Nevada Test Site proved successful, wastes might be permanently stored there.

We stand corrected by David G. Jackson, a public affairs director for the Department of Energy. He says, "The tun-

nel used for this experimental program will not be used to permanently store the material." The purpose of the Nevada program, he says, is merely "to assess the suitability of granite as a potential geologic medium for the storage of radioactive waste materials."

CORRECTION

The photo in the 7-27-79 HCN was of an area in Yellowstone National Park burned in a 1974 fire — not a fire this summer. The National Park Service fought the fire five years ago, but now allows most naturally-caused fires to burn.



THE CONTINENTAL DIVIDE in the Wind River Range.

Photo by Pink Mitchell

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OFF-ROAD VEHICLES won't be stopped by the energy crunch.

Sports Illustrated warns:

The Rockies may crumble

Even people positively hostile to sports find *Sports Illustrated* a good, high-quality read. And the magazine, unlike many others in the genre, occasionally takes off the sneakers and shoulder pads to take stands on controversial issues, often differing with its corporate parent, Time, Inc. Recently, mashed between ads for *People* magazine and the 1980 Chevrolet Citation, SI readers found a tough editorial on President Jimmy Carter's latest energy proposals written by Jerry Kirshenbaum and titled "The Rockies May Crumble..." Excerpts follow:

The most ambitious — and worrisome — part of the program is its emphasis on synthetic fuels. In urging that the \$88 billion be spent to achieve production of two million barrels of "synfuel" a day by 1990, Carter risks adding to the grave environmental problems already caused by such toxins as PCBs. His program would increase the pollution of rivers and might well pose additional health hazards to humans. Because it would require widescale strip mining of coal and intensive excavation of shale, it also has the potential to disfigure vast areas of the West.

At a briefing on the President's energy program last week in Washington, a member of the National Association of Manufacturers said, only half in jest, "We sure as hell better convince those people in Colorado that cross-country skiing is more fun than downhill skiing, because we're going to have to level the state."

There is substantial evidence that the cost and technological difficulties of developing synfuel to the point where it can possibly help ease the energy shortage will far exceed Carter's estimations. At the same time, he almost certainly has under-

estimated the potential rewards of conservation and solar energy.

Concern over the environment takes many forms, and even reasonable men may care little about, say, highway beautification or the survival of the snail darter. The threat to the environment and to human health inherent in Carter's energy program is not so easy to dismiss.

The perils are of such magnitude that a trade-off to allow the development of synfuels might not be worthwhile under any circumstances. With better energy alternatives available, it certainly isn't worthwhile. In the president's pledge to let nothing stand in the way of his energy policies, that one word — nothing — is chilling in its finality.

High Country News

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Will ORVs survive fuel shortage?

by Russell Shay

The gasoline shortage has renewed cries from certain quarters that off road vehicles should be eliminated because they are wasting our energy resources. A related theme is that the energy crisis will soon "solve the ORV problem" — that is, ORVs won't be able to get any fuel and will be set aside to rust away.

How much gasoline do ORVs use? According to a Council on Environmental Quality report, less than one percent of the gas America used in 1978. Gasoline, by the way, accounts for about 20 percent of America's total energy consumption.

Is that less than one percent a terrible waste? People who say "yes" usually appeal to an intuitive judgment that ORVs are non-productive, non-essential and, therefore, eminently expendable. They should remember that the same argument applies to some recreational activities as driving to Yosemite National Park or the Idaho Primitive Area. Driving to wild country probably uses far more gasoline than ORV use.

Once you start advocating fuel censor-

"I don't want the government to decide which of my trips is not essential."

ship by the government, watch out. It's a Pandora's box. I for one don't want the government to decide which of my trips is not essential. I can easily envision some bureaucrat deciding that the travel I do for the Sierra Club is expendable. And if they decided that I wasn't allowed to take my car to the trailhead...

Will the energy crisis kill the automobile? I doubt it. Will it kill ORVs? I doubt it, very much.

Gasoline is not the only high-energy content liquid fuel. There is, for example, methanol, which can be made from agricultural wastes. ORVs are in a better position to adapt to such a change than passenger cars because ORV producers constitute a highly competitive, innovation-oriented industry, far more able to make basic changes in its products than the passenger-car manufacturers.

The world has a long history of apocalyptic expectations. Don't count on them. ORVs need control — they aren't going to fade away. Not at \$2 a gallon. Not even if the wells run dry.

Russell Shay edits *ORV Monitor*, the Sierra Club publication in which this editorial first appeared.

Guest editorials do not necessarily reflect the opinions of HCN.



HCN EXCLUSIVE!

It took three weeks for the dailies to catch up with High Country News:

On June 1, 1979

HCN published the front page story "Could...Old Faithful Falter?" — reporter Phil White's exposé of how proposed geothermal exploration threatens nearby Yellowstone's geysers.

Not until June 20

did the story appear in any other regional newspapers. The *Billings Gazette* picked it up on that date, followed by the *Denver Post* on June 24, the *Idaho Statesman* on June 27, the *Los Angeles Times* on June 30, and the *Washington Post* on July 1st.

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Uranium ...

(continued from page 1)

1978 and is counting on production increasing threefold by 1990.

So far, the reverberations from the Three Mile Island accident haven't been felt much in the uranium fields. While two large mines in Wyoming have been indefinitely postponed, representatives of mining companies and state agencies say the two mines don't reflect a trend. A spokesman for Kerr-McGee Corp., one of the nation's largest uranium exploration companies, says the company feels nuclear energy can be generated safely, and Kerr-McGee is going ahead with exploration. Other uranium producers agree.

A. Payne Kibbe, an international uranium broker, thinks the accident will delay nuclear power development but that the delay will be temporary, lasting only 12-18 months. Kibbe is chairman of Nuclear Exchange Corp. (Nuexco), based in Menlo Park, Calif.

While uranium stocks dropped 30-40 percent on Wall Street soon after the Harrisburg accident and have stayed low, Darryl Gammill, an investment consultant, attributes the drop to "hysteria...a typical overreaction of the investor psychology. Gammill, who is with Neidiger, Tucker and Bruner in Denver, says, "The astute investor who understands risks will invest now and will be rewarded."

However, the stock market may be more of a harbinger of uranium's long-range fu-

ture in the United States than Gammill is willing to admit.

During 1977 and 1978, only one utility — Commonwealth Edison — ordered a nuclear power plant, and many others have delayed or cancelled construction plans but since 80 percent of the uranium is sold on long-term contracts, and since there's a 10-year lead time between when a plant is ordered and when it starts producing power, this lull hasn't hit the mining industry.

"Even if Congress called a moratorium on new nuclear power plants, you couldn't distinguish the change in production over the next five years," says John Atkins of Pathfinder Mines in Wyoming. Long-term contracts for existing plants and sales to foreign countries would absorb the loss, he says.

Annual demand for yellowcake (uranium concentrate) would be the same until 1990 — whether or not a moratorium is imposed, according to uranium market consultant Leona Kovisars of MET Associates in Dallas, Tex.

Nevertheless, the accident could stymie some expansion plans. By reducing the attractiveness of the nuclear option, the accident lowers the price of uranium, which determines how much more land will be mined, where the mining will occur and the quantity of tailings (radioactive mining wastes) produced.

After climbing dramatically from \$6 a pound in 1973 to \$42 a pound in 1977, the price of uranium has remained about the same for the past two years. The current price is estimated to be about \$42.70,

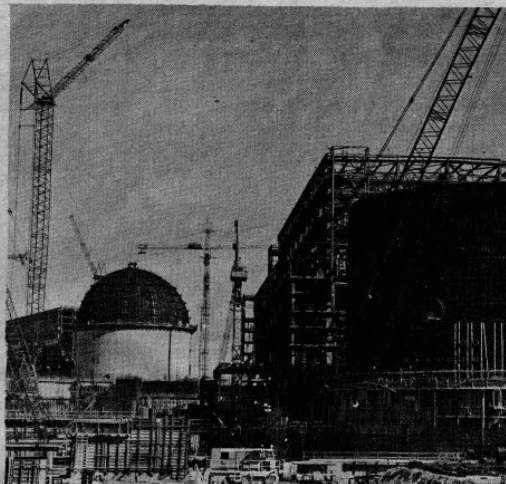
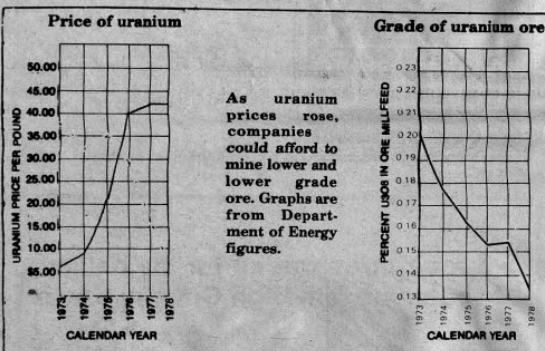


Photo courtesy of Arizona Public Service Co.

ARIZONA PUBLIC SERVICE CO. has cancelled plans for two Palo Verde nuclear power plant units, which were to supplement the units pictured above. A public utilities commissioner says the decision was brought about the Three Mile Island nuclear accident, but a spokesman for the company blames the cancellation on state and federal regulations. As of June 8, the Nuclear Regulatory Commission reports that 48 nuclear units had been delayed or cancelled during fiscal year 1979. The reasons: 21 because of reduced demand; 10, construction delays; nine, financial reasons; seven, concern over reactor safety; and one, regulatory delay.



which, with inflation, is equivalent to about \$32 in 1976 dollars.

High prices had encouraged mining lower grade ore. Uranium concentration in the ore being mined fell from a .23 percent average in 1966 to .115 percent in early 1979, according to DOE.

As a lower grade is mined, the tailings per pound of yellowcake increase. The current average concentration being mined — .115 percent — means that for every ton of ore mined, 1,998 pounds of wastes are left. Since the tailings retain 85 percent of the radioactivity of the ore and remain dangerous for thousands of years, they are a monumental problem for companies and state and federal regulatory agencies.

The uranium industry had expected uranium prices to continue rising. However, low grade properties that were thought to be "good deals" a few years ago

now "go begging," according to a representative of Nuclear Assurance Corp., a uranium brokerage firm based in Atlanta, Ga. "Many producers won't even try to mine them unless they get some protection through a joint venture with a utility," he says. "If you see a decline in growth of the market, you kind of back off."

PROSPECTS BLEAK

Two large mines proposed for Wyoming already have been postponed. The Urangesellschaft and the American Nuclear Corp. mines would have been only marginally profitable, with relatively low-grade ore. Phil Collyer of Urangesellschaft says his company, a German-owned firm, won't proceed until the uranium market shows more strength.

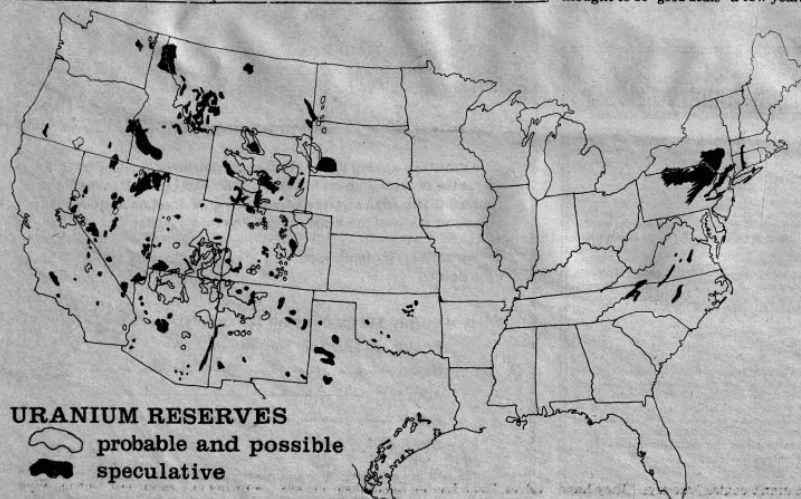
Prospects for a significant increase in the price of uranium don't look good. Uranium prices made dramatic jumps in the early 1970s because of high demand, an international cartel and the ability of suppliers to break low-price contracts.

But now demand is down, and supplies are up. Growth of the nuclear power industry in the United States has ground to a halt, and nuclear power growth elsewhere in the world has fallen short of earlier expectations (see separate story). According to the Nuclear Assurance Corp., the demand curve has flattened by a substantial margin every year for the last four years. At the same time, large, high-grade uranium deposits have been discovered in Canada and Australia. These could give the two countries the clout to control worldwide uranium prices, according to Kibbe of Nuexco.

A deposit in northern Saskatchewan, Canada, is nearly 100 times more concentrated than the ore now being mined in the United States.

Kibbe predicts the two countries, trying to maximize profits, won't let the prices drop. Nor will they push them up much because they don't want to encourage U.S. production. While the United States now produces 40 percent of the world's

(see next page)



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uranium, Kibbe predicts that by 1989, it will produce only 28 percent.

However, one DOE official questions whether the two countries could form an effective cartel. Both governments do determine the price charged by their producers, but Australian companies might have to charge lower prices to compensate for the political uncertainty there, which could result in another moratorium on uranium production. Political pressure had halted Australian uranium production for several years, and it only recently started up again. With the low value of the Canadian dollar, Canada may be tempted to undercut the market.

Before the Canadian and Australian deposits were found, the industry assumed that much lower concentrations would be mined in the United States in the future. DOE describes uranium reserves as \$15, \$30 or \$50 per pound reserves, referring to the costs of developing them, including concentration of the uranium, size of the deposit and mining, milling and hauling costs. The \$15 reserves, which are considered most valuable, are nearly exhausted, and companies are now mining mostly \$30 reserves, according to DOE.

Kibbe predicts that the low-grade, \$50 per pound U.S. reserves will not be produced before the end of the century. If this is true, Wyoming, Arizona, Colorado and Utah will not experience the uranium expansion they have expected because so much of their hope is based on mining \$50 reserves. New Mexico, which is now producing 47 percent of the nation's yellowcake, has more high-grade ore than any other state.

New technologies, such as solution mining or hydraulic mining, potentially could reduce the mining costs, or new, rich deposits could make those states more attractive. However, solution mining and hydraulic mining are only applicable under certain conditions, and recent domestic

discoveries have been mainly low-grade, small and deep.

As a consequence, U.S. utilities are looking more toward foreign countries for uranium supplies. According to DOE figures, as of Jan. 1, 1978, U.S. companies had committed themselves to purchase 1,600 tons of yellowcake to be delivered this year. This represents 12 percent of the domestic requirements. For the same year, U.S. companies have sold 1400 tons to foreign countries. The figures for 1981 are more dramatic — 3,600 tons of imported uranium commitments (or 20 percent of domestic requirements) compared with 400 tons of U.S. uranium committed for export. Some experts predict that before long, 30 percent of U.S. needs will be filled by foreign uranium.

Imports are increasing in part because government restrictions on them are gradually being lifted. DOE officials say export levels are low both because foreign countries expect foreign uranium to be cheaper and because of nonproliferation restrictions. U.S. uranium can only be sold to countries that have agreed to safeguard it and not to use it for weapons.

WAIT AND SEE

Many factors — including foreign demand, new mining technology and new uranium discoveries — will affect how much the uranium industry will expand in the West. However, any really significant increases in uranium production will depend primarily upon a revival of domestic orders for nuclear plants.

"I do not believe that there is a utility executive today who would order a nuclear power plant in the face of the hysteria about the atom on the part of a substantial segment of the public," a regional representative of the Department of Energy told *Nucleonics Week*.

The Nuclear Regulatory Commission has suspended all licensing while it re-

Utilities call nuclear moratorium

Since early 1977, only one utility — Commonwealth Edison — has ordered a nuclear power plant. Why the self-imposed moratorium?

— **Conservation.** The plants weren't needed. In the early 1970s, electricity use was expected to increase by seven to eight percent per year, but instead, it's growing by four to five percent. The Tennessee Valley Authority, one of the most active uranium explorers in the West, announced May 15 that it planned to defer four of its 14 planned nuclear plant additions because of faulty growth forecasts.

— **Politics.** David Rossin of Commonwealth Edison, which has more money invested in nuclear power than any other utility, puts much of the blame for the nuclear hiatus on the shoulders of President Carter. "He's been a disaster for nuclear power," he says. Rossin cites Carter's efforts to cancel development of plutonium breeder reactors, which produce more nuclear fuel than they use while producing electricity.

"Since you want to run a nuclear plant for 40 years, you must have confidence that even if the prices rise, there will always be fuel available," Rossin told participants in a uranium conference sponsored by the League of Women Voters of Colorado and Wyoming. Without breeders, he said, utilities

fear they will become dependent upon foreign uranium supplies.

While some nuclear proponents say Carter reaffirmed his support for nuclear power in his energy speech July 16, one investment consultant says, "He reaffirmed his commitment to everything, but his emphasis was on syn-fuels."

— **Efficiency and cost.** Already becoming notorious and expensive because of the amount of time they're shut down, nuclear plants may be out of operation more often because of new safety requirements recommended by the Nuclear Regulatory Commission staff in the wake of the Three Mile Island accident.

Three Mile Island-spawned safety modifications will be costly, and nuclear power no longer necessarily holds a cost advantage over coal, the New York public utilities board was advised by its staff in July, according to *Nucleonics Week*, a business-oriented newsletter.

Financing nuclear plants was already "very difficult" before Three Mile Island, says Rossin. Now some financing institutions have barred any new loans for nuclear plant construction until the Three Mile Island review is completed.

Results of the liability suits brought by businesses and residents in the Harrisburg, Penn., vicinity may further discourage nuclear power development (see HCN, 7-27-79).

views and acts upon lessons learned from the Three Mile Island accident. No licenses are expected before September. Congress is also investigating the accident, and it isn't yet clear what new precautions will ulti-

mately be demanded.

As one analyst says, "An incident like (Three Mile Island) is a definite downer, but not disastrous. But if there's another mistake like that..."

Injured birds make R & R stop at Layton home

From the outside, Lois Layton's house looks like most of the others in the countryside around Casper, Wyo. You might expect to find a rather ordinary family living inside.

What you would not expect would be five golden eagles, two red-tailed hawks, a mallard duck, two rough-legged hawks, a Cassin's finch, a yellow warbler, a burrowing owl and a short-eared owl.

"They all have different personalities," says Layton as the short-eared owl in her hand raises its earnest, butter-colored eyes toward the stranger standing close by.

Lois has been putting up her unusual feathered boarders since the summer of 1969, when she took in about a dozen baby robins orphaned in late spring storms. Since then, she and her husband, Frank, have taken care of hundreds of injured, sick and orphaned birds. Owls live in the garage. Eagles eye guests in the back yard. What might be viewed as an eccentric pastime actually fills a crucial need. As word about the hostel spread, people, including veterinarians and Wyoming Game and Fish employees, began bringing birds to the Laytons. Not too long after they'd begun, someone brought over a golden eagle.

"The next morning there it was sitting up in my garage," Lois says. "I'd never touched an eagle in my life!"

As corresponding secretary and editor of the newsletter for the Murie Audubon Soc-

iety, she had long been interested in birds but never handled them. She learned. Today, she calculates that well over 500 birds, from brown pelicans to peregrine falcons, have stopped in for repairs.

Not anyone can harbor birds in his home. The Laytons need both state and federal licenses, as well as a special permit to handle endangered species.

Another member of the Murie Audubon Society, Babs Wood, also began bird-mending after her experience helping the Laytons feed their brood. Wood now keeps some of the injured birds, including four great horned owls, at her home.

Another chapter member donated an old barn, and a work crew renovated it for housing birds. Last winter two young golden eagles lived there, and the Laytons traveled six miles to the barn each day to feed them.

Through the years the number of bird patients has increased steadily. "A couple of years ago I had over 40 birds at one time. I simply couldn't handle them," Lois says. Among them were 20 baby swallows and 8 to 10 baby robins, all requiring feeding with an eyedropper. Murie Audubon Society pays the birds' food bill, which is over \$25 a month. Friends often contribute rabbits and mice.

Lois thinks the increase in bird patients has been caused by several factors. "New people in the area come from places where there aren't eagles," she says. "They have



LOIS LAYTON says, "They all have different personalities."

Photo by Genevieve Dodd

more reverence for the birds." In addition, she thinks that her services are better known now and that interest in birds has grown along with environmental awareness.

A painful path often leads birds to the Laytons.

"A lot of the injuries are human-caused — some maliciously, some accidentally," Lois says. She suspects that some birds are poisoned, some shot. Others accidentally bathe in oil slicks. Last winter the severe weather forced birds to feed on road kills. Consequently, car injuries were numerous.

When birds are able to fend for themselves, Frank Layton bands them and sets

them free. Those permanently handicapped are used in educational programs or donated to zoos.

"I've learned a lot," says Lois as a tiny yellow warbler gobbles meal worms from her hand. "For instance, I didn't know golden eagles were so easy to handle."

The two eagles watching us stonily from outside the living room window, however, are not convincing.

Lois Layton was interviewed by Genevieve Dodd, a former HCN intern now working at a ranch near Dubois, Wyo.

OSM ...

(continued from page 1)

place, has only two species of vegetation established in reclaimed areas. In an undisturbed area, according to OSM experts, there would be 10 to 15 species. The strip mine law calls for establishment of "diverse, effective, permanent vegetative cover" to assure adequate feed for livestock and wildlife and to prevent loss of cover during extreme seasons.

According to OSM analysts, the soils that will be disturbed are young, sandy and not well developed — very difficult to revegetate.

OSM has been wrestling with the Burnham mine plan since October of 1978. A decision has been delayed by understaffing at OSM, and numerous OSM requests for more information about reclamation plans from the company.

On April 19, 1979, Larry C. Fuller, Consol's vice-president for the Western region wrote to Sen. Harrison Schmidt (R-N.M.) complaining about the delays. Later, Sen. Peter Domenici (R-N.M.) took up the gauntlet, and congressional hearings were held in Washington, D.C. At these hearings, OSM director Walter

Heine was accused of blocking strip mines in the Southwest. Domenici has been a long-standing opponent of strong strip mine legislation.

However, OSM contends that it has a statutory responsibility to be certain the land can be reclaimed before issuing the permit. Initial tests have not been promising. In a hand-written note obtained from OSM files, addressed to OSM regional director Don Crane, an OSM analyst says, "Re the Consol test pit on the Burnham site. Last summer (1978) it was backfilled, graded and surface material restored. There was no seeding....(Consol was) ad-

vised against seeding...since there would be little or no irrigation, the seeding would probably fail and be used as an argument that reveg was impossible. Dave Larson (Consol's environmental coordinator) says there is a good invasion of annual weeds at present. However...all of this proves nothing since no attempt to revegetate was made." The mine area receives an average annual rainfall of about 6 inches.

Meanwhile, two Burnham area businessmen contacted Congressman Manuel Lujan (D-N.M.) and Sen. Schmidt, complaining about the delays in Consol's plans.

To further complicate matters, the

Navajo tribal council approved, with stipulations, Consol's mining application, and has been pressuring OSM to approve the permit. Harold Tso, chairman of the Navajo Environmental Protection Commission, says, "We haven't wrestled with that problem (of reclaimability). We're proceeding as though non-reclaimability is not a possibility."

Sen. Domenici held hearings in Farmington on the mine plan on Aug. 9. An Interior Department source says that because of the political pressure, "I don't think there's any way in hell they can turn

Carter energy mobilization demobilized

(This article was written by Bruce Hamilton, the Northern Plains representative for the Sierra Club. Hamilton was in Washington, D.C., lobbying on the Carter administration proposals in July and early August, and the article, which outlines the legislative progress of those proposals, includes some of his views.)

by Bruce Hamilton

To the disappointment of the Carter administration and the relief of environmentalists, the 96th Congress recessed for the month of August without approving the president's ambitious synthetic fuels and "energy mobilization" proposals.

Bills to speed up energy project decisions and stimulate the development of synthetic fuels from coal began moving through Congress in June and July with unusual rapidity. Carter's new energy plan, announced in July, was based in large part on these proposals, and it appeared the president had achieved, this time, his desired partnership with Congress. But it also signaled a break with previously-voiced administration positions of environmental caution.

"The mood in Congress had taken a decidedly anti-environmental turn," reported the Environmental Study Conference, a coalition of conservation-minded members of Congress. "There was talk of the threat to national security posed by imports, the need to do something — even 'the wrong thing' — and of the environmental extremists standing in the way of our independence."

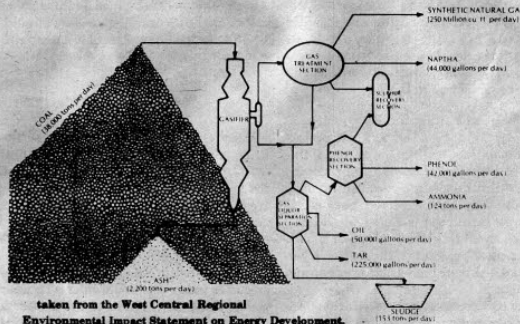
The chief legislative proposals advanced by the Carter administration were a massive funding program for synthetic fuels projects such as oil shale development and coal liquefaction and creation of an energy mobilization board to cut through the red tape of local, state and federal laws and regulations.

At first the "do-something" juggernaut gave the synfuel and mobilization proposals a good chance for action before Congress' traditional August recess, but then the pace began to slow. Some observers blamed the slow-down on the diversion of Carter's Cabinet shake-up. Others, such as Sen. Paul Tsongas (D-Mass.), attributed it to members of Congress "finally taking the time to read the proposals" and questioning their merit. Many legislators and state executives from the West echoed the reaction of Sen. John Melcher (D-Mont.): "Bureaucrats can propose fantasies, but Congress will dispose of them." The delay was also due to intense lobbying by major conservation groups against the proposals.

Work on the legislation will resume after Labor Day, but observers on both sides say the delay has hurt chances for passage of the president's proposals.

Three committees handled the brunt of the legislation — the Senate energy com-

TYPICAL COAL GASIFICATION PROCESS



taken from the West Central Regional Environmental Impact Statement on Energy Development.

mittee and the House commerce and interior committees. Key issues addressed by all three committees included limiting judicial review of projects; waiving federal, state, and local laws; setting the number of priority energy projects; and speeding up the decision-making process.

The Carter administration, while still espousing concern for environmental protection, lobbied diligently for authority to bypass legal roadblocks to development. Under the White House proposals, the Energy Mobilization Board would be able to override laws and regulations at any government level enacted after an energy project was underway. Before construction, the EMB would be able to bypass procedural rules. If local governments failed to meet the EMB's hurry-up schedule, EMB would take over completely.

Questioned about the wisdom of bypassing laws, senior White House assistant Katherine Schirmer reportedly said, "For energy, we're going to have a government of men and women, not laws."

In late July, the House interior committee approved a bill (H.R. 4985) sponsored by Chairman Morris Udall (D-Ariz.). The bill would allow an EMB to designate up to 24 priority energy projects (less than the 75 projects requested by Carter). To cut delays, the EMB could recommend that the president waive time requirements, which then must be approved by the president and the governor of the affected state, subject to a veto by the Senate or House. Judicial review during the early permitting stages of a project would be restricted.

A bill (H.R. 4862) by Rep. John Dingell (D-Mich.) was reported out of his commerce committee subcommittee that would give EMB the authority to recommend a presidential waiver of any federal, state or local law or regulation — substantive or procedural. An amendment to kill the provision giving the EMB full waiver power died in the subcommittee, but sponsor Rep. Timothy Wirth (D-Colo.) will try again

when the full commerce committee resumes mark up in September. Environmental lobbyists were particularly worried about the broad power this bill would give EMB to waive clean air, water, reclamation, and any other laws standing in a project's way. The Dingell bill does not limit the number of projects that can receive priority project designation.

In the Senate, action centers on an extensive energy proposal (S. 1308) sponsored by energy committee chairman Henry Jackson (D-Wash.). Title II of the bill would create a "fast track" for priority energy projects similar to that in the House bills.

An attempt in the committee to give the EMB waiver power for untested synfuels projects died on a near-miss tie vote. Sen. Bennett Johnston (D-La.), who proposed the waiver, claimed it would "cut through everything to find out what the environmental problems are," evidently by building synfuel plants to find out what damage they would do.

The committee agreed to streamline judicial review and environmental impact statement requirements; further committee action on the bill is scheduled when Congress returns in September.

Neither the Senate nor the House found time to take up the Carter administration's proposal for an \$88 billion Energy Security Corporation to fund commercial production of synthetic fuels.

But Congressmen on the significant committees appeared increasingly skeptical that even subsidized synfuel production could achieve the president's goal of 2.5 million barrels per day by 1990. Legislators indicated that both the production goal and the authorization will eventually be pared back.

Oil industry experts express doubts about the economics of such a program, and environmentalists argue for a more modest

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AMORY LOVINS AT FEATHERED PIPE RANCH

• September 24-30, 1979



Soft Energy Path Explorations is a special opportunity for individuals and organizations to directly benefit from Amory Lovins' experience with distributive energy systems, emphasizing practical implementation of "soft" technology in relation to participants' needs and situations. In an open exchange of ideas and resources, a series of presentations and discussion will focus on techniques for problem identification, trouble-shooting, skill-sharing, and networking, related to renewable and conserving energy strategies. The longer range goal of this program lies in participants' enhancing their communities' awareness of energy needs and uses, and developing alternatives to existing systems to further "soft path" solutions on a widespread basis.

The workshop will be held for seven full days at the Feathered Pipe Ranch, an informal atmosphere conducive to learning, relaxation, and renewed perspectives. Workshop fee is \$400.00 which includes all presentations, meals, and lodging.

HOLISTIC LIFE SEMINARS
BOX 1682, HELENA, MT 59601
406-442-8196

it down. It will probably be approved with a lot of stipulations."

Consol, asked to comment on the various aspects of the mine plan controversy, released a statement saying only, "Consol's mining and reclamation plan was submitted to the Office of Surface Mining in October of 1978 for review and approval. OSM is actively considering the plan, and Consol is hoping this will be completed soon so that Consol can meet its contractual obligations." Consol has contracts to deliver coal to the Salt River Project and New Mexico Public Service Co. The deadline for the SRP contract has passed and Consol has invoked force majeure provisions of the contract.

by Congress

demonstration program to develop synfuels technology. "Synfuels are the junk food of the energy industry," says Carl Pope of the Sierra Club. "They cost too much, provide little nutritional value, are over-processed and are full of toxic materials."

Theodore Eck, chief economist for Standard Oil of Indiana, one of several oil companies that have invested in oil shale and synfuels technologies, told *Newsweek* that the program could result in "little white elephants all over the country."

The House approved earlier this year an authorization of \$3 billion to purchase synthetic fuels for military use in an effort to spur production.

A July 27 letter from the General Accounting Office, the investigative arm of Congress, to the Synfuels Subcommittee of the Senate Budget Committee, said in part: "While synthetic fuel development is clearly an important and worthwhile national goal, we believe that conservation should take just as high or higher a priority. Conservation is likely to be considerably cheaper on a per-barrel of oil basis...and can be implemented on every level..."

ALTERNATIVE PROPOSAL

Sens. Edward Kennedy (D-Mass.) and John Durkin (D-N.H.) have proposed a \$58 billion solar energy and conservation bill. The bill, as amendments to the Jackson proposal, would give: direct grants to homeowners who install solar or conservation systems; low interest loans for commercial buildings; and loans and grants for improved efficiency in the industrial sector. They project a savings of four million barrels of oil per day by 1990 under their program.

Sen. Malcolm Wallop (R-Wyo.) added his name to the Kennedy-Durkin proposal, saying, "Conservation is an appropriate energy alternative to a massive commitment to unproven energy technologies such as a rapid synthetic fuels program."

Amory Lovins, a Friends of the Earth representative, said in a *Washington Post* article that the Carter synfuels proposals were "an exercise in Nixonian technology.... The kind of energy mobilization we need is happening today in hundreds of communities and millions of homes across America. It doesn't need a board; it needs a modest government willing to lend a hand and then get out of the way."



Small illustration of a factory with smokestacks emitting smoke.

A mild spring boosts whooper flock

by Philip White

Bad weather and predators have plagued the whooping crane foster parent project at Grays Lake National Wildlife Refuge in Idaho during its first four years. But the project, a landmark attempt to replenish the continent's whooping crane population, may have turned the corner this year.

A benevolent spring season has given biologist Rod Drewien, grandfatherparent of the project, and the U.S. Fish and Wildlife Service, its sponsor, something to whoop about.

The beleaguered flock appears to have more than doubled in size this spring, Drewien told participants at the June 30 session of the National Audubon Convention in Estes Park, Colo.

Fish and Wildlife officials have been removing whooping crane eggs from nests in Wood Buffalo Park in the Northwest Territories, Canada, since 1975 and transporting them to Grays Lake. There they are substituted for nearly identical sandhill crane eggs at carefully selected nests.

The international excursion has not disturbed the eggs. Hatching success has been good. But snowstorms lasting up to four days struck Grays Lake throughout the first four years of the project; and coyotes, given access by low water levels, played havoc with the chicks.

Officials now hope the Grays Lake birds are on their way to establishing the continent's second wild flock of whooping cranes.

The Rocky Mountain whooping crane flock had only nine members after four seasons of production.

But on June 1 of this year, Drewien placed 24 eggs under the whoopers' cooperative sandhill cousins at Gray's Lake. Sixteen hatched.

"Our success is measured in how many fly south, however," Drewien cautioned. With fingers crossed, Drewien said that 13 to 14 chicks survived as of the end of June.

"Sandhill parents take good care of the whooper chicks," Drewien said. In early October, the whoopers migrate with the sandhills directly to refuges in Colorado's San Luis Valley. From there they fly to Bosque del Apache refuge, south of Albuquerque, for the winter. It is a much shorter and better protected migration route

than the Texas to Canada route of the original Wood Buffalo Park flock.

"If all goes well," Drewien said, "the count this fall may show more than 100 whoopers in the wild for the first time in 60 years or more." In 1941, only 15 of the original flock returned to their wintering marshes at Aransas refuge near Corpus Christi, Texas.

Audubon whooper specialist Dave Blankinship, who also spoke at the convention, expressed "cautious optimism" on the

great white bird's future. "It has been a success story so far as endangered species are concerned," Blankinship said, "but many threats remain. The greatest threat is the Intercoastal Waterway, which traverses the Aransas refuge. Many barges carrying toxic chemicals travel through, and a spill could occur," he said.

Drewien said the nine adults in the Rocky Mountain flock haven't yet attempted to pair up, although they have picked out fellow whoopers among the thousands of gray sandhill cranes to have "interesting but not permanent get-togethers."

Four of the adults that flew north from Bosque del Apache last spring have returned to Grays Lake and "some have begun protecting territories," Drewien said. One or two others are summering in the upper Green River area in Wyoming, and one has been seen on Wyoming's Sweetwater River.

"If all goes well, the count this fall may show more than 100 whoopers in the wild for the first time in 60 years or more."

ATTENTION

THE ENDANGERED WHOOPING CRANE, protected by State & Federal Law, may be found in this area. It is illegal to take or attempt to take this bird.

RED CROWN AND FACE HEIGHT—4 1/2 ft. APPEARS ALL WHITE ON GROUND

GRAY'S LAKE WWR

WHITE AND BLACK 7 ft. WINGS SPREAD LEGS --- EXTENDED SLOW WINGBEAT

MONTICLOSA WWR

BOSQUE DEL APACHE WWR

THE U.S. FISH AND WILDLIFE SERVICE AND THE CANADIAN WILDLIFE SERVICE HAVE STARTED A TRANSPLANT PROGRAM TO ESTABLISH A SECOND WILD POPULATION OF WHOOPING CRANES. WHOOPER EGGS TAKEN FROM WILD NESTS IN CANADA ARE PLACED IN GREATER SANDHILL CRANE NESTS IN IDAHO. THE SANDHILL CRANES HATCH, RAISE AND IMPRINT THE YOUNG WHOOPERS WITH THEIR MIGRATION ROUTE TO NEW MEXICO AND BACK. WHOOPER EGGS WILL BE TRANSPLANTED ANNUALLY UNTIL A SECOND BREEDING FLOCK IS ESTABLISHED.

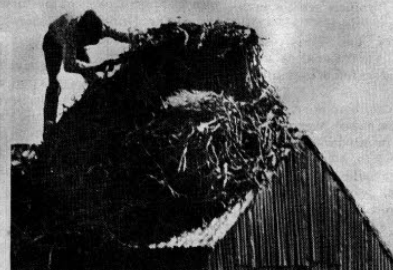
Photo by Ann Schimpf



Photo courtesy U.S. Fish and Wildlife Service

3-High Country News — August 10, 1979

Don't rile



Photos by Mike McClure



JOHN MEADE wears the evidence of his hawk encounter with a grin.

by Marjane Ambler

"She was an irate mother," John Meade says of a ferruginous hawk he discovered on the roof of a shed in Wyoming's Red Desert. He climbed up on a pole to get a closeup with his Instamatic camera, and she attacked, apparently trying to protect her young.

"She sure bent my glasses up, and I got me some scratches on my forehead," Meade says. Yet he returned the next day with a ladder. This time the giant bird tore some holes in Meade's shirt and knocked his hat off.

"It was a once in a lifetime opportunity to get some pictures of some hawks without much trouble," he says.

Maybe so. But Meade may have unwittingly risked a brush with the law at the same time the hawk was taking a swipe at him. The Migratory Bird Act makes it illegal to harass eagles, hawks or owls. For hawks, the fine can be as much as \$500 and six months' imprisonment for the first offense and \$2,000 and two years for the second. For eagles, it's \$5,000 and one year for the first offense and \$10,000 for later convictions.

Harass means to disturb, molest, chase, torment or worry — to do anything that involves getting close enough to upset the bird, according to Robert C. Gelvin, special law enforcement agent for the U.S. Fish and Wildlife Service in Casper, Wyo. Pictures taken from some distance with a

August 10, 1979 — High Country News-9



'ONCE IN A LIFETIME CHANCE.' When John Meade climbed up for a closeup shot, the female ferruginous hawk dive-bombed him, knocking his hat off and sending him scurrying for cover.



"If you're close enough to make the bird leave the nest, that's too close."

the raptors.

telephoto lens are allowed, but "if you're close enough to make the bird leave the nest, that's too close."

Frequently adult birds of prey, also called "raptors," will abandon their nests if they are disturbed, leaving unhatched eggs to spoil or young birds to die.

Meade, who runs a hotel in Rock Springs, told HCN he was vaguely aware that it was illegal to mess up a nest. Told it was also illegal to harass the hawks, he protested, "She was harassing me.... If what I was doing was illegal, there's about 200 guys — all of them that work out in that oil field — who were also illegal. We were all watching to make sure nothing happened to those birds."

Another Fish and Wildlife Service agent in Wyoming, W.D. Hawes, says most offenses are caused by ignorance — not malice. Many people who wouldn't disturb a nest don't realize that it is also illegal to possess a raptor. Even a feather, bone or egg, or any part of a nest is taboo — even if the bird is found dead along the highway.

The only exceptions are Indians and educational or scientific institutions, which can't kill raptors but can possess parts if they have permits. They can get the birds or feathers from the Fish and Wildlife Service. Indians' permits specify that feathers or bones must be used for religious or ceremonial purposes.

Hawes says he confiscates illegally-held feathers and talons several times each month.

Harassment, particularly of eagles, is

considered much more serious. A Burlington Northern railroad building crew was forced to skip over one section of track in eastern Wyoming last spring after an eagle came to nest near the site. They weren't allowed to return until after the young birds had fledged and left the area.

"Burlington Northern was extremely cooperative, and most oil and uranium exploration companies are," Hawes says. However, there are exceptions. Some people are very "anti-government," Hawes says, and when they're told they have to stop building a road because of an eagle, they are upset. In some cases, the eagles mysteriously disappear, either driven out of the area or killed.

Some raptors can tolerate a lot of activity and others can't — "they're just like people. Some are more irritable," Hawes says. The ferruginous hawk approached by Meade apparently had a high tolerance for human activity. It chose a nest next to a busy oil field road and put up with the workers' attention without abandoning the young.

Anyone in Wyoming interested in more information or wishing to report a violation can contact either Gelvin or Hawes at the Fish and Wildlife Service office in Casper at 235-1417. People in other states should contact their own Fish and Wildlife Service offices, listed under U.S. Government, Interior Department, in the telephone book.



DESPITE THE ATTENTION, the hawk did not abandon her young. Since not all birds are so tolerant, the Migratory Bird Act prohibits harassment.

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energy news of the Rockies and Great Plains

MONTANA COAL TAX UPHELD. A Montana county district judge has upheld Montana's 30 percent coal severance tax in the face of a challenge by nine out-of-state utilities and three state coal producers. The utilities had charged that the tax was discriminatory and an unconstitutional burden on interstate commerce. However, Judge Peter Meloy ruled that the tax was not discriminatory because it is imposed "on the coal that is produced in the state by Montana or out-of-state companies, without regard to consumption either in Montana or out of Montana." The 30 percent tax is the highest coal severance tax in the country. Attorneys for the plaintiffs say that they will appeal the decision. However, state Attorney General Mike Greeley said, "I believe that it will stand every test."

PIPELINE TUG O'WAR. North Dakota is the first among five states, 12 federal agencies, and the White House to approve Northern Tier's proposal to build a pipeline to carry Alaskan oil across the northern United States. Northern Tier hopes to gain approval from the others to start construction of the 1,500-mile pipeline from Port Angeles, Wash. to Clearbrook, Minn., by next spring.

DESMET SWAP TURNED DOWN. The U.S. Interior Department has decided not to exchange federal coal lands for 25,000 acres of coal lands near Lake Desmet in Northern Wyoming owned by Texaco, Inc. Interior Secretary Cecil Andrus said there was "nothing much to be gained" by federal acquisition of the land. The department found that the lake did not have sufficient public value to justify the exchange, which had been authorized by legislation passed

last October. The Lake Desmet area contains 2.3 billion tons of coal. Texaco had originally proposed a coal gasification plant on the site, but those plans were abandoned. The company says that it currently has no definite plans for the area.

CANADIAN FIRM MAY EXPORT POWER. A Canadian coal company is considering construction of a coal-fired electrical generating station that would

export much of its power to consumers in the U.S. The Missoulian reports that Fording Coal Ltd. of Calgary is contracting western U.S. power companies to determine if there is a market for exported power. A company spokesman said that the plan is still in the preliminary stages and no commitment has been made to build. The company will be seeking customers in Washington, Montana, Idaho, Utah, Oregon, California and, possibly, Nevada.



Photo by David Sumner

TRAFFIC IN COLORADO was down in June to 14.9 percent below the levels of June 1978. Gov. Dick Lamm and other state officials think Colorado avoided the serious gas supply problems that plagued other places because of this voluntary conservation. An estimated 20 percent decline in tourism also contributed to the savings, officials say. Pictured is the Front Range of the Colorado Rockies from a popular tourist mecca, Estes Park.

Uranium mill shut down after spill

Despite warnings from state officials, cattle are still being allowed to drink from New Mexico's Rio Puerco, which was contaminated by radioactive tailings when a United Nuclear Corp. tailings dam near Church Rock, N.M., broke July 16.

The company estimates that nearly 100 million gallons of tailings solution, including 1,100 tons of solid material, escaped from the dam. Tailings are radioactive waste materials from the uranium refining process, which are covered with water in ponds to prevent release of radioactive gases. The N.M. Environmental Improvement Division of the state Health and Environment Department has shut down United Nuclear's Church Rock operation until a cause for the accident can be found and the problem rectified.

The company was also ordered to clean up the arroyo and the river channel, but Doug Barber of the state environmental agency, who visited the site August 7, says there is still a significant amount of pollution. "Yellow crystals are forming along the river bank—right in the cattle footprints—five or six miles from the tailings dam," according to Barber. He says the pollution has traveled at least 50 miles down the river, over the border into Arizona.

Tests are still under way to determine how serious the contamination is and whether it has escaped into aquifers and water wells in the area. The state is testing for radioactivity, acidity and the presence of heavy metals, particularly arsenic, selenium and uranium.

Since many Navajos live along the river, Barber has issued repeated radio warnings in both English and Navajo warning people not to drink the river water, use it for their

cattle, or let their children swim in it. But apparently not everyone has heard the warnings.

The mishap may affect subsequent mill licenses not only in New Mexico but elsewhere in the country. *Nucleonics Week* quotes New Mexico authorities as saying "the earthen, clay core dam that failed was of the newest and safest type approved by federal and state agencies."

Authorities speculate that any one of

several problems could have caused the 20 foot hole in the dam—seismic activity, damage during construction or overcompaction of the clay core dam.

The most immediate effect might be on Bokum Resources, which has proposed a similar dam in New Mexico. The state turned down the application because of Bokum's proposed tailings dam site, but the company has appealed, and the state supreme court is now considering the case.

Eco-activist turns administrator to pull solar lab 'out of trouble'

Officials at the Department of Energy apparently hope that Denis Hayes' reputation as a man of action can rub off on a federally-funded lab that has been criticized for inertia—the Solar Energy Research Institute in Golden, Colo.

Hayes was named number one man at the lab shortly after the firing of SERI's first executive director, Paul Rappaport, by Department of Energy officials.

Health reasons were cited in the official announcement of the firing. But SERI information officer Judith Morison says, "It's clear that people in Washington thought we needed a different type leadership at this time."

Before he came to SERI, Rappaport, 57, spent 25 years as a researcher in photochemicals, the direct conversion of sunlight into electricity, at RCA's David Sarnoff Research Laboratory in Princeton, N.J.

Hayes' credentials are in the field of environmental activism, not science. In 1970, he organized the nation's first Earth Day celebration, an event often referred to as

the birth of the modern environmental movement. In 1978, he organized a similar nationwide celebration which focused on the potential of energy from the sun, Sun Day. He is a senior researcher for a think-tank called the Worldwatch Institute and chairman of the board of the Solar Lobby and the Center for Renewable Resources, all based in Washington, D.C.

"A wide number of people believe SERI is in trouble," Hayes told a gathering of SERI employees early in August. He said that he had been hired "to pull it out."

A recent *Denver Post* story criticized the two-year-old lab for plodding progress and for producing reports, not research. It has also been criticized by the Department of Energy for mismanagement of funds.

Morison says that she expects Hayes to emphasize better communications with the public and to encourage more research that is immediately useful to homeowners and communities. Much of SERI's long-range work has been considered "exotic" by outsiders, she says.



The **HCN**
Hot Line

energy news from across the country

THE METHANE GLUT. While the Carter administration forages everywhere for a solution to the energy problem, a Louisiana hydrologist named Paul Hastings Jones insists he's sitting right on it. Jones claims there are enormous underground reserves of methane held in porous rock beneath Texas, Louisiana, Wyoming, Utah and other states. The problem, says energy company experts, is how to get the stuff out: They don't agree with Jones that you simply drill large wells and let the gas rise to the surface. That would be, they say, expensive, dangerous and environmentally damaging.

PLUTONIUM DILUTION THE SOLUTION? Researchers at Rocky Flats near Denver are developing a method of diluting plutonium that would make the radioactive substance unsuitable for use in nuclear weapons, according to the *Denver Post*. If they succeed, they could remove a major barrier to use of the breeder reactor in the United States. President Carter has placed a moratorium on use of plutonium breeder reactors, which produce more fuel than they use, primarily because their product, plutonium, can be used by terrorists to produce a nuclear bomb.

August 10, 1979 — High Country News-11

Colorado carbon dioxide could eke out extra oil

by Heather McGregor

MONTROSE, Colo. — Carbon dioxide gas, locked thousands of feet below the mesa and canyon country of southwestern Colorado, may be the key for recovery of oil from some abandoned wells.

Shell Oil Co. and Mobil Oil Corp. are jointly planning to construct a massive carbon dioxide well field north and west of Cortez, Colo., and a 478-mile pipeline to connect the field with 40-year-old oil wells in the Texas Panhandle.

The companies expect the project to produce about 280 million barrels of oil over its 30-year life, about as much as the United States imports in a month.

Jim Dean, an environmental coordinator for the Bureau of Land Management, says, "We've known about these carbon dioxide fields for over 50 years, but they've been valueless and a nuisance. The technology for their use has just been developed in the past 10 years."

"It's one of those things that has been made economically feasible by the increased price of foreign oil," Dean says.

The carbon dioxide deposits are located below 320,000 acres of BLM, private and San Juan National Forest lands. The deposits are estimated to be 99 percent pure, containing small portions of methane, nitrogen, water and sulphur dioxide.

"This is the first project of its size in the country and probably the world. If it works, there will be great interest in other carbon

dioxide fields in the country," Dean says.

Injecting carbon dioxide and water into wells, which will be used as a third or "tertiary" step in oil recovery, emulsifies the oil trapped in rock pores and enables oil that cannot be removed by secondary salt water flushing to flow out. Shell is testing the process at wells in Texas now.

"The decision to go ahead with this project will be made next year," says Bill Scrimshire of Shell Oil in Houston.

The project calls for pumping 400 million cubic feet a day of carbon dioxide from approximately 140 wells. The carbon dioxide will be purified at 13 facilities located throughout the well fields, piped to a compressing station and fed into the main pipeline.

One drawback to the proposal is the

danger of a pipeline rupture, which BLM's draft environmental statement on the project says could occur every other year, under the "worst-case probability." A person or animal caught close to the rupture would probably suffocate, the BLM says. However, the agency says that the only carbon dioxide pipeline in existence, in operation since 1971, has never ruptured.

Of the 160 miles of road required for the project, 130 miles are already established. Most of the proposed project is outside the boundaries of BLM roadless areas, which are under consideration for wilderness designation.

While there are 10,000 suspected archaeological sites in the proposed well field, BLM archaeologist Doug Scott seems to

think that damages to them will be kept to a minimum. "I'm very pleased with the positive attitude of the oil companies in protecting the cultural resources," Scott says.

Comments on the proposed project will be accepted through Aug. 27. They should be sent to the Division of Planning and Environmental Coordination, New Mexico state office of the BLM, P.O. Box 1449, Santa Fe, N.M. 87501.

Heather McGregor, a former HCN intern, is a staff writer for the *Daily Press* in Montrose, Colo.

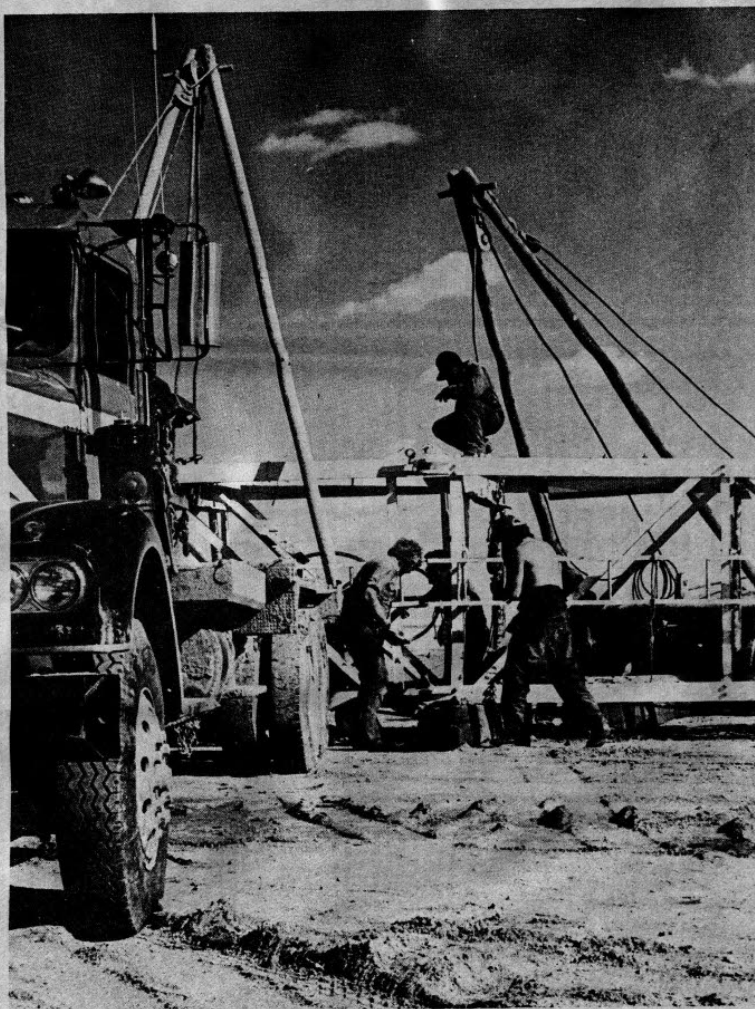


Photo by Sara Hunter

OIL DRILLING normally succeeds in extracting only part of the oil. However, injecting carbon dioxide and water will help recover much that is trapped in rock pores. Pictured is a well where more traditional methods will be used.

CITIZENS QUIT THREE MILE PROBE.

The President's Commission investigating the March 28 Three Mile Island nuclear accident in Pennsylvania will have to draw its conclusions without the benefit of citizen advisors: The 10-member "citizens advisory group" has resigned. William H. Miller, chairman of the panel, said the move was prompted by the commission's refusal to share information on personal radiation exposure around the plant. That leaves the commission, which is scheduled to report its findings Oct. 25, with only one advisory group: a panel of executives from eight electric utilities.

ALASKAN OIL SPILL. The Atigun River carried an unexpected cargo this summer as it flowed from the Alaskan Brooks Range — 2,000 barrels of crude oil. U.S. Fish and Wildlife Service officials say there is no telling what damage the oil, spilled from a leak in the Trans-Alaskan Pipeline, might have done. But early signs aren't good: In the 26 miles of river exposed to the oil, officials noted an absence of fish, fewer invertebrates, oil-soaked vegetation and oil seeping into the river's gravel bed. The Atigun was the first major Arctic river to get a taste of pipeline crude.

THE BREEDER LIVES. The Clinch River Breeder Reactor is a little like the plutonium it would manufacture: impossible to get rid of. The House of Representatives voted last month to keep a multi-million dollar line in the federal budget for the Tennessee project, which would manufacture more nuclear fuel than it consumes. And while the project still faces several more legislative tests before its survival is assured, the House vote was a major setback for the Carter Administration in its attempts to kill the breeder.

DEPARTMENT OF INSURANCE
STATE OF WYOMING

INVESTMENT IN WINNING FOR THE YEAR ENDING DECEMBER 31, 1976	
Gross Premiums Received	\$61,377,000
Less: Operating Expenses	(126,477,000)
Net Income	34,451,200
Total Adjusted Assets	2,000,000
Capital Stock Paid Up	4,987,161
Surplus	15,868,311
Income during year ending December 31, 1976	18,200,000
Residuals for year ending December 31, 1976	18,200,000

Insurance Code, Article 24, § 125 (b), Wyoming Insurance Code, hereby states that the above information is true and correct to the best of the insured's knowledge and belief, and is not intended to be in full compliance with the provisions of the law of this State relating to compliance with the provisions of the law of this State relating to the use of insurance in this State of Wyoming.

Dated May 24, 1979

W. John T. Langdon
 Insurance Commissioner

STATE OF WYOMING

31700 California Boulevard, Los Angeles		
California 90000		
ENDING DECEMBER 31, 1976		
Insurance - Written		\$25,010
Other Premiums		
	Paid	\$4,040
Direct Benefits and Losses Incurred		\$29,870
Total Admitted Assets		\$55,920
Liabilities		
Unpaid Claims		\$20,000
Stock Paid Up		\$6,965
Income during year ending December 31		\$28,955
1976 additions for year ending December 31		\$7,901
1976 deductions for year ending December 31		
Premiums to Section 264-125 (N)		
Warranties		
Knowledge and belief: the Insurer above		
listed in all reports relating to insurance		
The few of this State explaining to insurance		
and this auditor's report on the		
and of this State of the State of Wyoming		
John T. Karpman		
Insurance Commissioner		

DEPARTMENT OF INSURANCE
STATE OF WYOMING

	1976	1975
Income before taxes	\$2,010,728.29	\$2,010,728.29
Income tax	366,104.00	366,104.00
Income after taxes	1,644,624.29	1,644,624.29
Capital stock	1,000,000.00	1,000,000.00
Retained earnings	644,624.29	644,624.29
Total	1,644,624.29	1,644,624.29
Assets		
Fixed assets	65,351.00	65,351.00
Current assets	1,579,273.29	1,579,273.29
Total	1,644,624.29	1,644,624.29
Liabilities		
Accounts payable	1,000.00	1,000.00
Notes payable	1,000.00	1,000.00
Other liabilities	1,000.00	1,000.00
Total	3,000.00	3,000.00
Equity		
Capital stock	1,000,000.00	1,000,000.00
Retained earnings	644,624.29	644,624.29
Total	1,644,624.29	1,644,624.29

DEPARTMENT OF INSURANCE
STATE OF WYOMING

[illegible]

STATE OF WYOMING

BUSINESS IN WINSTON FOR THE YEAR ENDING DECEMBER 31, 1978	
Insurance - Automobile	1,000,000
Insurance - Fire	1,000,000
Insurance - Marine	1,000,000
Insurance - Life	1,000,000
Insurance - Other	1,000,000
Insurance - Workers	1,000,000
Direct Premiums	1,000,000
Direct Benefits and Losses Paid	1,000,000
Direct Expenses	1,000,000
Total Admitted Assets	1,000,000
Liabilities	1,000,000
Capital Stock	1,000,000
Surplus	1,000,000
Expenses for year ending December 31, 1978	1,000,000
Insurance Code, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575,	

DEPARTMENT OF INSURANCE
OFFICE OF THE COMMISSIONER
STATE OF NEW YORK[illegible]

DEPARTMENT OF INSURANCE
STATE OF WYOMING

[illegible]

STATE OF WYOMING
Life Insurance Company

1978	State Street, Salt Lake City, Utah	11,348
INVESTMENT PROCEEDS 21, 1978		
Investment Withdrawal		(1,720,000)
Investment Premiums Received		677,000
Investment Income		1,077,000
Investment Benefits and Losses Incurred		(334,287)
Investment Assets		350,285,240
Investment Liabilities		312,520,280
Investment Paid Up		1,837,867
Investment Paid Up		1,837,867
Investment during year ending December 31, 1978		78,960,354
Investment for year ending December 31, 1979		78,960,354

According to Section 26-3, 129 (b), Wyoming Insurance Code, the insurance company is required to provide and deliver to the insured a copy of the policy and the policy is to be in compliance with the law of the State relating to insurance, and the policy is to be in compliance with the law of the State relating to insurance, and the policy is to be in compliance with the law of the State relating to insurance.

John T. Larkman
Insurance Commissioner

STATE OF WYOMING

[illegible]DEPARTMENT OF INSURANCE
STATE OF WYOMING

Item	1978	1979
Assets	\$114,110	\$114,110
Liabilities	64,540	64,540
Net Assets	49,570	49,570
Assets	43,782,000	43,782,000
Liabilities	4,782,000	4,782,000
Net Assets	39,000,000	39,000,000
Assets	20,027,351	20,027,351
Liabilities	38,831,600	38,831,600
Net Assets	18,195,751	18,195,751

STATE OF WYOMING
Casualty Corporation

State	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383</
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Year	Number of businesses operating	Number of employees	Number of retail sales	Number of wholesale sales	Number of services sales	Number of other sales	Number of other sales	Number of other sales	Number of other sales
1978	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1979	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1980	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1981	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1982	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1983	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1984	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1985	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1986	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1987	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1988	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1989	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1990	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1991	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1992	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1993	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1994	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1995	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1996	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1997	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1998	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
1999	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
2000	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
2001	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
2002	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
2003	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
2004	1,378	3,254,866	21,724,775	14,183,242	1,417,932	46,930	1,417,932	46,930	1,417,932
2005	1,378	3,254,866	21,724,775						

STATE OF WYOMING

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404
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STATE OF WYOMING

Rank	Company	Assets	Liabilities	Equity	Assets	Liabilities	Equity
		(\$ mil.)	(\$ mil.)	(\$ mil.)	(\$ mil.)	(\$ mil.)	(\$ mil.)
1	Bank of America Corp., New York	1,000,000	1,000,000	0	1,000,000	1,000,000	0
2	Wells Fargo Bank, San Francisco	950,000	950,000	0	950,000	950,000	0
3	Citibank, New York	900,000	900,000	0	900,000	900,000	0
4	First National City Bank, New York	850,000	850,000	0	850,000	850,000	0
5	Bank of Montreal, New York	800,000	800,000	0	800,000	800,000	0
6	First National Bank, New York	750,000	750,000	0	750,000	750,000	0
7	Bank of New York, New York	700,000	700,000	0	700,000	700,000	0
8	First National Bank, New York	650,000	650,000	0	650,000	650,000	0
9	Bank of America Corp., New York	600,000	600,000	0	600,000	600,000	0
10	First National Bank, New York	550,000	550,000	0	550,000	550,000	0
11	Bank of Montreal, New York	500,000	500,000	0	500,000	500,000	0
12	First National Bank, New York	450,000	450,000	0	450,000	450,000	0
13	Bank of New York, New York	400,000	400,000	0	400,000	400,000	0
14	First National Bank, New York	350,000	350,000	0	350,000	350,000	0
15	Bank of America Corp., New York	300,000	300,000	0	300,000	300,000	0
16	First National Bank, New York	250,000	250,000	0	250,000	250,000	0
17	Bank of Montreal, New York	200,000	200,000	0	200,000	200,000	0
18	First National Bank, New York	150,000	150,000	0	150,000	150,000	0
19	Bank of New York, New York	100,000	100,000	0	100,000	100,000	0
20	First National Bank, New York	50,000	50,000	0	50,000	50,000	0

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DEPARTMENT OF INSURANCE
STATE OF WYOMING

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**OF INSURANCE
OF WYOMING**

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Financial statements of Insurance
Companies which are Authorized
to do business in Wyoming.
Published in High Country News
June 1, 15, 29; July 13, 27; |
August 10, 1979

STATE OF WYOMING
Financial statements of Insurance
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August 10, 1979 — High Country News-13



Western Roundup

HCN


Photo by Rick Graetz
FISHING AT SOME SITES IN Montana won't be good Fish, Wildlife and Parks. Pictured is Holland Lake in this year since 25,000 to 40,000 fish have been killed by herbicides, according to the Montana Department of Fish, Wildlife and Parks. Pictured is Holland Lake in northwestern Montana.

Herbicides blamed for massive fish kills in Montana streams

Two massive fish kills in Montana in less than a week's time have apparently been caused by herbicides used by irrigation companies to keep their ditches clear of weeds.

The first incident killed 20,000 to 30,000 fish in the Beaverhead River, near Twin

Bridges. It was caused by the herbicide Magnacide-H, also known as Acrolein, after some of it escaped into the river through an irrigation gate.

The exact cause of the second incident is unknown, but a similar herbicide is suspected. It killed 5,000 to

10,000 fish in Mill Creek, near Frenchtown. Jim Posewitz of the state's Dept. of Fish, Wildlife and Parks issued a plea to farmers and ranchers to use caution in the use of herbicides. They are particularly toxic to fish when the water temperature is high, and water is low.

Gray wolf carcass found in Montana

An 83-pound canine carcass found shot near Glasgow, Mont., last fall turned out to be a gray wolf, wildlife experts say. While the endangered species has been seen before in the state, this female was the first sighting in northeastern Montana since 1956.

"It was probably a lone wolf from Canada which made an unusual sortie," a Montana Department of Fish and Game official says.

Ranchers lose grazing suit

Overtaking a lower court's decision, the 9th Circuit Court of Appeals in San Francisco has ruled the Bureau of Land Management can hold hearings on grazing rights of ranchers in Magic Valley, Idaho.

The Bennett Hills Grazing Association asked the court to stop the hearings so the ranchers would have more time to study the environmental statement, which proposes that grazing in one district be cut by an average of 35 percent to allow rehabilitation of the range. More than a hundred ranchers are affected. The statement was released on April 26, and the hearing was originally scheduled for May 30.

The BLM is under court order to complete environmental statements on 212 grazing districts in the West. Only one, that for the Challis District, has been completed in Idaho.

Wilbur Nelson, attorney for the grazing association, was disappointed: "It seems the schedule is more important than public input." Nelson also said the BLM did not consider economic effects on the ranchers in the area when it prepared its statement and that it did most of its study of the area during a drought period and failed to adjust its statistics for a normal year. The ranchers may appeal to the U.S. Supreme Court.

Help for radiation cancer victims

President Carter has ordered creation of a task force to help victims of 1950s' atomic weapons tests. The task force, which includes five different cabinet secretaries, has until Oct. 1 to recommend a solution for injury claims of civilians who lived downwind from the tests, mostly in Nevada, Arizona and Utah.

Former Secretary of Interior Stewart Udall is preparing to file claims in federal district court for about 600 alleged victims. Also to be considered are the claims of uranium miners exposed in mines and technicians exposed at test sites. Many of the residents and miners have developed cancer, allegedly as a result of the exposure to radiation.

By April 1, 1980, the task force is to prepare guidelines relating illness to low-level radiation exposure and criteria for determining validity of radiation claims.

Udall is also representing uranium miners, or "developed cancer" properly regula-

Plan bans motorboats in Grand Canyon

The National Park Service is encountering opposition to its plan to phase out the use of motorized crafts in the Grand Canyon. The proposal is included in the final environmental statement for the Environmental Protection Agency July 31.

Ron Tipton, staff lawyer for The Wilderness Society, approves of the plan: "The best way to enjoy the Grand Canyon is by oar, without the noisy interference of motors."

However, Rep. Bob Stump (D-Ariz.) is angry. He says the park's plan will mean a trip that now takes five to nine days will instead take 12 to 19 days and cost more. Stump says the Park Service has failed to prove that motorized rafts damage the Grand Canyon.

The Park Service's decision came after its director, William Whalen, took two trips through the canyon, one powered by oars and one by motors. He reportedly told environmentalists, "Those damn motors have to go!"

The plan has also upset concessioners since it calls for reducing their share of trips from 92 to 69 percent, permitting more private groups to run the Colorado River through the canyon.

Comments on the plan will be accepted until Sept. 4, 1979. Write: Superintendent, Grand Canyon National Park, Box 129, Grand Canyon, Ariz. 86023. Summaries of the document are available at the same address.

Radiation contaminates 15 states' water

The water supplies of hundreds of Western communities may be dangerous for long-term use because they contain low-level radiation from uranium mining and natural occurrence of the mineral. The U.S. Environmental Protection Agency, which released the findings, has recommended "prompt control measures" to reduce radiation levels.

According to the findings, radiation contamination in drinking water is a problem in 15 Western states from the Dakotas to California. Radiation in drinking water is not regulated by either federal or state drinking water standards.

The 7,500 residents of Fairmount, Colo., are affected by radiation from the Schwartzwalder mine, owned by Cotter Corp. The uranium-tainted water results in an annual dose to bone cells 60 times the

amount an average person receives from naturally-occurring radioactivity in food and water. Low levels of radiation are known to cause cancer, but the danger threshold is not known.

Alaskan ad blitz for development

In an advertising campaign during the Fourth of July gas drought, Alaskans tried to gain support for natural resource development in the state. Headlined "Alaska wants America to Declare a New Independence Day," the ads asked Americans to back legislation to develop Alaska and assure energy independence for America, while protecting the Alaskan environment and rights as a state.

NEXT TIME YOU FLUSH YOUR TOILET
THINK OF YOUR NEIGHBORS DOWN-RIVER

Thoughtful people do not wash their wastes into sewers. That is unkind to our neighbors downstream, and to our lakes and rivers. It also wastes a torrent of fresh water. Such profligacy is not necessary. The Clivus Multrum is a waterless waste treatment system for the home or public facility which saves all that water and protects our environment. Toilet wastes and organic garbage are composted into a rich fertilizer right in your basement, conserving water, nutrients, and energy.

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Mike Evans
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Saratoga, WY 83431

Charles Woodward
P.O. Box 91
Victor, ID 83455

Clint Elston
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Multrum
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August 10, 1979

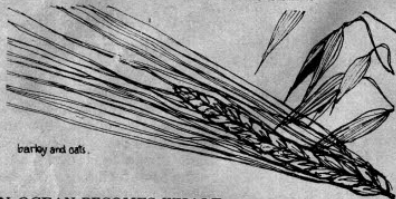


Eavesdropper

environmental news from around the world



HOUSE CUTS AMTRAK. In the face of the energy crisis, the U.S. House of Representatives has approved cuts in Amtrak's passenger rail system, but the cuts are less severe than those urged by President Jimmy Carter. Under the bill, about 5,500 miles of the system's 27,500 miles of rail service would be eliminated. Carter had originally recommended 12,000 miles for elimination. The administration said that \$1.4 billion could be saved by reducing lightly traveled routes. However, the energy crisis and rising ridership on Amtrak reduced the number of miles cut. Further opposition to the cutbacks is expected when the Senate considers the legislation.



lincoln and oaks.

INDIAN OCEAN BECOMES WHALE SANCTUARY. In a major victory for conservationists, the 23-nation International Whaling Commission has voted to make the Indian Ocean the world's largest whale sanctuary. The commission has banned all whaling in the Indian Ocean, Arabian and Red Seas as far south as 55 degrees latitude. The Indian Ocean is the spawning ground of several whale species, including the sperm whale, the species most recently endangered by hunting. The conference failed to pass conservationist-backed motions to legislate either an immediate or a phased-in worldwide moratorium on commercial whaling. Thomas Garrett of the U.S. delegation calls the meeting "a stupendous week for saving the whales."

ORGANIZING COMMITTEE FORMED. The formation of a new national political party is the goal of The Citizens' Committee, a group organized by environmentalists, educators, politicians and consumer rights activists. According to spokesman Dan Leahy, the committee intends to establish support groups in all 50 states, in hopes that they can sponsor a presidential candidate in the 1980 primaries. The group's platform includes nationalization of oil companies, halting development of nuclear power, reduced military spending and citizen control of major corporations.

WILDLIFE REFUGE GUIDELINES. Secretary of Interior Cecil Andrus recently approved recommendations for managing the 34-million-acre National Wildlife Refuge System. It is "the largest, most comprehensive group of lands set aside in the world," Andrus says, and requires "our best and most professional stewardship." The new guidelines recommend securing more lands for migratory birds and other wildlife using some alternative approaches to land acquisition such as easements. Other recommendations include the completion of state plans for a Unique Wildlife Ecosystem program, where unusual natural habitat areas are preserved as refuges, and increased public involvement and education on refuges. These guidelines also direct the Fish and Wildlife Service, in charge of the refuge system, to devise a not to mention to accomplish these goals.

RURAL POPULATIONS GROWING. A study by the Washington-based Urban Land Institute says that rural areas are growing faster than metropolitan areas. The report says that, for the first time in the nation's history, the traditional pattern of movement from the country to the cities has been reversed. Recent census figures have made the trend evident, but ULI says it has been developing over the past 25 years. The authors of the study say the establishment and expansion of higher education centers, the construction of the interstate highway system, the growth of retirement communities and expansion of manufacturing facilities are major factors in the shift.



TAX CUT MAY RAISE PRICES. A study by the Conservation Foundation indicates that California's Proposition 13, a property-tax-cutting referendum, may drive house prices up. The referendum dictated that property taxes would be held to one percent of market value and that assessed property values could increase two percent a year. Since cities don't have the money to build streets, sewers and parks, the money will have to come from development fees charged by developers and local governments. The inner city poor will suffer the most. "Unless cities find a new revenue source, the measure pretty much stops affordable housing," one planning director told **Land Use Planning Reports**.

CLASSIFIEDS

Classified ads cost 10 cents a word; they must be prepaid.

WANTED. Freelance writers or photographers to cover Idaho natural resource news. Pay is two to four cents a word or \$4 per photo. One-sided diatribes unacceptable. Contact Marjane Ambler at High Country News, Box K, Lander, Wyo. 82520.

RAFT TRIP. We regretfully announce necessity of halting Forest Service 60,000-acre spray plan in North Idaho forests. Tax deductible donations needed. Two-day benefit raft trip over Labor Day on Salmon and through Hells Canyon, \$80.00. John A.K. Barker River Trips. Address inquiries to Citizens Against Toxic Herbicides, 2737 25th Street, Clarkston, Washington 99403 (509) 758-7696.

FOR SALE: Two adjacent 10 acre lots, Driggs, Idaho. Sensational view of the Tetons. \$1,000-acre. Easy terms. 307-332-2871 or write Griffin, 966 Cliff, Lander, Wyo., 82520.

WANTED. Persuasive people to sell advertising for HCN. 15 percent commission. To apply, send references and letter with your ideas for selling advertising in your area to Hannah Hinchman, HCN, Box K, Lander, Wyo. 82520.

WANTED: Couple to trade work for room and board on alternative farm in North Cascades of Washington. Send letter describing background and interests to P.O. Box 295, Winthrop, WA. 98862.

MAGIC KINGDOM ALCHEMY. By 1981, things like orange rinds, cigarette butts and coffee grounds may supply most of Disney World's energy needs. The tourist center is planning to build an \$11 million refuse-burning plant in order to "do something useful with garbage." In addition to its own 40 tons of trash a day, the Magic Kingdom needs another 30 to 60 tons daily to power its machinery and air conditioners. Orange County, Fla., is considering donating some of its refuse for the purpose. **'SUPPER FUND' REJECTED.** The Carter administration has decided against forcing industry to help pay to clean up hazardous waste dumps abandoned by previous owners. It has rejected an Environmental Protection Agency proposal to establish a "supper fund," possibly totaling \$6 billion, collected from users of hazardous substances for cleanup of oil and waste spills, dump sites and compensation of victims. The administration and Congress now tentatively favor a government-financed fund of \$150 million, which some major environmental groups say would make the cleanup program "more paper than substance."

MOVING?

Don't forget to take HCN along.

The Post Office will not forward second class mail. So you don't miss an issue of High Country News, please notify us at least four weeks in advance of your change of address. Send us a card (you can pick one up at your local P.O.) or fill out the blank below:

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Send to: Will Murphy, HCN, Box K, Lander, WY 82520.

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August 10, 1979—High Country News-15



HCN Bulletin Board



LOONEY LIMERICKS

by Zane E. Cology

To add fuel to the nuclear fire
Ore prices went higher and higher
Til TMI's trouble
Burst everyone's bubble
Now the brokers just can't find a buyer.

SOLAR CONNECTION

A group known as the Solar Connection is now circulating petitions to encourage the federal government to use alternative energy resources. Copies of the petitions are available from the Solar Connection, 512 S. 3rd Ave. No. 7, Tucson, Ariz. 85701.

ALLEN-WARNER VALLEY ENERGY SYSTEM

Before the environmental impact statement is prepared, public comments are being sought on the proposed Allen-Warner Valley Energy System, a coal-fired power plant and associated facilities. Public lands within Utah, Arizona, Nevada and California would be involved. The Bureau of Land Management wants the public to tell it which topics and alternatives are most important. Write to Jerry Meredith, BLM, Box 724, Cedar City, Utah 84720 or call (801) 586-2401.

SOLAR EDUCATION DIRECTORIES

Department of Energy's Solar Energy Research Institute has compiled lists of solar-related courses and programs offered by post-secondary institutions in each state. The lists, called **State Solar Energy Education Directories**, are free. A directory for the state in which you reside can be ordered by calling toll free numbers: (800) 523-2929 for all states except Pennsylvania (800) 462-4983, and Alaska and Hawaii (800) 523-4700. The state directories are compiled in a larger volume, **National Solar Energy Education Directory**, which can be purchased for \$4.75 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock number: 061-000-00210-3.

ENERGY SELF-RELIANCE

The Institute for Self-Reliance has recently published two reports: "How to Start Your Own Energy Business" and "Planning for Energy Self-Reliance: A Case Study of the District of Columbia." These publications are available free of charge. Order them by writing Leslie Tolf, Publications Room 045, Institute for Local Self-Reliance, 1717 18th Street NW, Washington, D.C. 20009.

IRRIGATING POLECAT BENCH

A draft environmental statement on the impacts of irrigating 19,280 acres of range land on Polecat Bench in northern Wyoming is available for public review. Requests for a copy and written comments should be sent to: Regional Director, Bureau of Reclamation, P.O. Box 2553, Billings Mont. 59103. A public hearing on the proposed project will be held in Powell, Wyo., Sept. 19.

SUPERIOR'S SHALE

Oil shale development proposed in Colorado by Superior Oil Co. is discussed in a draft environmental statement published by the U.S. Bureau of Land Management. The proposed action involves an exchange of 2,045 acres of public land for 2,572 acres of private land, as well as the construction of a processing plant and an underground mine. Copies of the statement are available from the State Director of BLM, Colorado State Office, Room 7000, Colorado State Bank Building, 1600 Broadway, Denver, Colo. 80202. Comments, which are due Aug. 31, should be sent to the same address.

PASSIVE SOLAR CALCULATOR AIDS

Princeton Energy Group has developed two hand-held calculator programs designed to analyze direct-gain passive solar systems: PEGFIX, which predicts heat demand and excess heat available for a given space when the program user sets maximum and minimum temperatures and PEGFLOAT, which predicts hourly air temperatures for a space when no excess heat is added or removed. The programs require HP-67, -97 or TI-59 calculator models. Packages cost \$75 and include both programs and a 70-page handbook. The handbook can be purchased for \$25. Write Princeton Energy Group, 729 Alexander Road, Princeton, N.J. 08540.

WATER MEETING

The U.S. Water Resources Council, the agency that coordinates federal water programs, will meet in Coeur D'Alene, Idaho, Aug. 28-30. The meeting will be held jointly with two other government groups—the Interstate Conference on Water Problems and the Association of State and Interstate Water Pollution Control Administrators. Environmental Protection Agency Administrator Douglas Costle, Idaho Gov. John Evans and Idaho Sen. James McClure are scheduled to speak. For more information, write ICWP-ASIWPCA, Department of Water Resources, State House, Boise, Idaho 83707.

HEALTH

"Personal health and environmental health are inseparable concerns," according to the Rocky Mountain Healing Arts Institute. To drive this idea home, the theme for the group's festival this year is "Inner and Outer Environments." It will be held Aug. 21-26 near Ward, Colo. Speakers include: Environmental Protection Agency administrator Alan Merson, recording artist Paul Winter, and Greenpeace Chronicles' editor Rex Weyler. For more information contact the Institute at Box 1881, Boulder, Colo. 80306 or call (303) 443-5131.

PROJECT SKYWATER

The Bureau of Reclamation's weather modification projects are discussed in a new 170-page report from the U.S. Interior Department entitled "Project Skywater, Fiscal Years 1975-78 Report." The report discusses the Colorado River Basin Pilot Project, the High Plains Cooperative Program, the Sierra Cooperative Pilot Project and the Colorado River Basin Program. It is available from the Office of Atmospheric Resource Management, Code 1200, Bureau of Reclamation, P.O. Box 25007, DFC, Denver, Colo. 80225.

SOLAR WATER HEATER

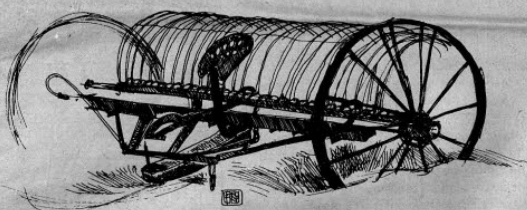
Plans for a \$350 solar water heating system are available free from the Benewah County (Idaho) Demonstration Solar Project. The system, which entails an 8 foot by 4 foot copper tube collector and a storage tank, was supported by the National Center for Appropriate Technology. For a six-page description of the system send a self-addressed long envelope stamped with 28 cents in postage to: Bill London, Route 4, Box 102, St. Maries, Idaho 83861.

PASSIVE SOLAR HOUSE PLANS

The Tennessee Valley Authority is developing plans for passive solar houses. Trombe wall plans for both one- and two-story structures are now available. Nine other passive designs are being developed. Description sheets for the plans are free. Plans for Trombe wall houses cost \$3.75 for half-size, and \$6.50 for full-size. Write to Mapping Service Branch, TVA, 200 Haney Building, Chattanooga, Tenn. 37401.

WHAT ABOUT WINDOWS?

What About Windows? is a 53-page report on how to save energy by insulating the interior side of windows. The suggestions are aimed at do-it-yourselfers. The report is available for \$1.50 from Jim Buesing, 1300 Linden Dr., University of Wisconsin, Madison, Wisc. 53706.



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16-High Country News—August 10, 1979

SEPTIC TANK PRACTICES



*A guide to the conservation
& re-use of household wastewater.*

By Peter Warshall

by Peter Warshall, Anchor Press, Garden City, N.Y. 1979. \$3.95, paper, 177 pages. Illustrations.

Review by Peter Wild

Queen Victoria, while out on excursions, used to send a team of courtiers ahead of her party to remove what she considered offensive "Ladies" and "Gentlemen" signs from public restrooms. Though the habit may be a measure of her refined sensibilities, it indicated a cultural attitude that has set us on a wrongheaded course.

For years our affluent society has prided itself in the "flush and forget" approach to water resources. That's five gallons of good drinking water wasted, multiplied by the millions of times each day Americans reach for the chrome lever. It's also good fertilizer washed out into an expensive

sewage-treatment plant or an ocean dumping ground.

We've heard the polemic before, but now it's taking on a new imperative. Now, bewildered New Yorkers witness their sewage washing back toward the city as if in counterattack. And out here in the dry West we are beginning to envision the day when we turn on a faucet and nothing happens.

Peter Warshall's book studies the "small-is-beautiful" alternatives for city planners, health officials and homeowners. Countering the philosophy of the Big Sewer—adored for years by most local governments and almost all construction companies—he concludes that on-site dis-



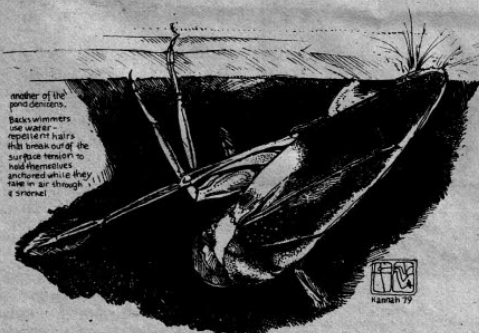
posal of wastes is often safer, cheaper and more efficient. Having made that argument, he goes into the ins and outs of septic-tank construction and maintenance.

For people considering a septic tank for their property—or those wondering how to renovate an old one—Warshall's book is a trustworthy guide. His directions, illustrated step-by-step through clear drawings and diagrams, are based on years of practical experience. Currently, the author is the water editor of *Co-Evolution Quarterly* and a co-founder of the Warshall-Breedlove Watershed Consultants.

The book was first published by a small press back in 1973. Thoroughly revised, it is now readily available through one of the country's largest publishers.



by Hannah Hinchman



members of the pond denizens. Back swimmers and water repellent hairs this break out of the surface to help the frog breathe and they take in air through a snorkel.

LANDER, Wyo. — A few nighthawks in Red Canyon were casually circling and diving over our heads last week, but yesterday, as we sat on the banks of the Middle Popo Agie River, they flew straight over in twos and threes headed for the Wind River Mountains to the southwest. They were flying purposefully, without their characteristic zigzags.

There's a swimming hole on the Middle Popo Agie at a bend where the river undercuts a red sandstone cliff. The creek bed is sandstone with a few round boulders whose

NATURE IS YOUR GUIDE

HOW TO FIND YOUR WAY ON LAND AND SEA
BY HAROLD GATTY



by Harold Gatty, Penguin Books, New York, 1979. \$3.95, paper, 271 pages. Illustrations.

Review by Peter Wild

Most of us, after a little honest reflection, can recall a time when we experienced the unique panic of not knowing where we were.

Nature Is Your Guide shows how to avoid such confusion by paying attention to the signposts all landscapes offer. It's not as simple as the oft-quoted formulas—peering around a tree to find moss on the north side or following a river out to civilization. Nature is trickier than that. Moss can grow on any side of a tree, and some rivers will take the pathfinder on an exhausting goose chase.

Rather, the author advises "reading" a combination of factors. The ways trees lean, the shapes of snowdrifts and anthills, the habits of birds—even the colors of clouds—contain clues to direction.

Gatty's emphasis on observing patterns

will make us more intimate with nature, even if we're out for a Sunday stroll on a familiar trail.

He of course includes chapters on the moon and stars as guides. As to the sun, he warns about the popular watch method. "You are supposed to hold your watch horizontally, set on local time and with the hour hand turned to the sun. If you are in the Northern Hemisphere, a line midway between the hour hand and 12 is then supposedly taken as pointing south." But, depending on time and latitude, the technique can include an error of as much as 24 degrees—which might put us in Ballantine when we wanted to be in Billings.

Gatty, an Australian who trained American pilots during World War II, eventually settled in the South Pacific, where he founded Fiji Airways—and delved into the fascinating business of ancient Polynesian navigation.

This is a practical and rich book, one of the most authoritative in the field. It shows how early man found his way and explains the importance of psychology and physiology in modern orientation.

Appearing in England back in 1958, *Nature Is Your Guide* now is available in this first American edition. At \$3.95 the price is more than reasonable—it's downright cheap.



In The News

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details are visible under four feet of water. The pool is calm, but just upstream, where the river passes through a deposit of loose rocks instead of sandstone, a solid pavement of boulders keeps it in a state of boiling whiteness.

On these solar-oven afternoons you can approach the river various ways. Wedge yourself in among the boulders and feel the force of the dammed water. Extend an arm and watch a volume of water laced with silver pockets of air pour over your skin. If you wade, mayfly larvae will cling to your ankles. Their bodies offer no resistance to the current that requires all your strength to resist; they scuttle around on you as easily as spiders on a rock.

Or drift in the pool under the overhanging sandstone cliff. The snaking light reflected on the rock wall is an accurate image of the water's topography. Stonely husks encrust the wall; the newly winged insects have crawled out a split in their backs. I lean close to examine a big patch of gray lichen—it turns out to be a solid mass of emptied housefly bodies basted together with spider's web.

As every fisherman knows, water insects undergo periodic mass hatches. Last night the overhang looked like insect boot camp—hundreds of ephemerals doing push-ups in unison. The cliff swallows who built the nests overlooking the pool would have been feasting, but for some reason they did not return to this nest cluster last spring. Wasps have moved in instead.