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High Country News

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Friday, February 20, 1981

Lander, Wyoming

Vol. 13 No. 4

In the News

DEAD DUCKS 3

While residents near the Rocky Mountain Arsenal read and puzzle over reports of possible drinking water contamination, illiterate migratory birds who stopped by the Arsenal for a swim learned the hard way...they're dead.

'PLANNING' LOLO 4

The nation's first forest 'plan' was unveiled last year for Montana's Lolo National Forest. While some critics attack it, others are still trying to figure it out.

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Energy Transportation Systems, Inc., has the best shot at building Wyoming's first pipeline transporting coal out of state. But it will be taking water and energy, too, and that has Wyomingites worried.

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Myriad solutions to disappearing farmlands have been suggested, but they rarely come to grips with the nature of the farmers themselves. Michael Moss tries to figure out the likes of his great-uncle, who grew grapes and almonds.



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Water warning: a ploy, or poison?

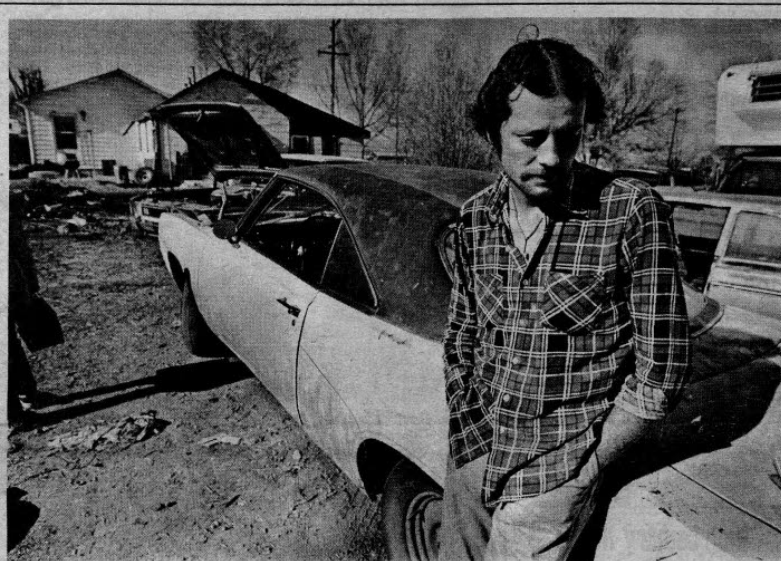


Photo by John J. Sunderland, Denver Post

IRONDALE WELL WATER is "real good," according to resident Lem Parsons, who hasn't read the letter from health officials warning him it may contain dangerous chemicals.

by Peggy Strain

IRONDALE, Colo. — The postman brought letters from the Colorado Department of Health last month warning residents that wells in this neighborhood are contaminated with DBCP, a pesticide known to cause male sterility and possibly cancer. But residents express little fear.

"This is real good water," said Lem Parsons, 23, as he and three friends salvaged parts from old cars in his front yard. Parsons hadn't bothered to read the health department letter. "There's nothing wrong with it."

The letter was sent to about 100 families in Irondale, a community of 800 in Adams County northeast of Denver. The community borders the Rocky Mountain Arsenal where groundwater is widely contaminated by Shell Chemical Co. and U.S. Army chemicals, which have migrated from federal property.

FEW WORRY

Generally, the contamination hasn't raised much concern in Irondale. A few families have switched to bottled water in the area, where wells frequently are

the sole water source, but many see no need for that, maintaining the alleged health hazard is a scheme perpetrated by nearby Commerce City to procure land for the industry that is closing in around still-rural Irondale. Others suggest that talk of contamination is a ploy by the South Adams County Water and Sanitation District to coerce residents into spending thousands of dollars on water service.

"Why should we hook on to them?" asked Parsons, a part-time roofer. Rock music blared from the radio of another car destined for the junkyard. Parsons, who lives with his aunt and uncle, said they can't afford other water service and will continue to use their well water. "It's the only thing we've got," he said.

Former bricklayer John Vogel and his wife, Rene, are openly suspicious of claims the well water is contaminated, because "Commerce City wants to annex the area. It's no big deal. The water's all good," said Vogel, the father of three children, ages 13, 10 and 8.

Every summer, Rene Vogel uses well water on the family's vegetable garden. "I like the taste of the water. I like my well. I don't want to have it taken

away," she said. In fact, Colorado and county officials lack authority to condemn private wells such as those in Irondale.

The closely-knit community is a pocket of rural land in the Denver area's most industrialized section. The small open spaces in Irondale still contain browsing horses and chicken coops.

Residents of this neighborhood of small frame homes resent big city ways and are resisting annexation by Commerce City. "We call it Communist City with their Gestapo rules," explained one man, 35, who said he has heard the suburb "has food inspectors who come to your house to inspect the family food."

One-half of the 50 wells in Irondale examined by the health department show traces of contamination by DBCP, or dibromochloropropane.

SHELL RESPONSIBLE

An official for Shell, which has leased land from the Army for its plant since 1946, acknowledged the company's "probable" responsibility for the contamination. But Shell refuses to pro-

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Water warning...

(continued from page 1)

vide funding for alternate water supplies for Irondale residents because company officials don't consider the contamination serious.

The health department's letter didn't advise residents — many of whom knew about the contamination last year as soon as tests confirmed it — whether to seek another water supply. But Jim Baker, a toxicologist with the U.S. Environmental Protection Agency in Denver, said residents should halt their exposure to the chemical, which poses a small, but unnecessary, increased cancer risk.

The highest level of DBCP found in Irondale wells was 45 parts per billion, according to the health department, which has taken only one sample and will monitor the wells every three months. No drinking water standard has been established for the pesticide, but the EPA advises persons not to drink or cook with water containing more than one part per billion. The wells also could contain other chemicals for which the water hasn't been tested, health officials acknowledge, though no specific chemicals were named.

For an alternative, residents could buy bottled water or dig deeper wells (the contamination has been found only in wells of a depth of 100 feet or less). They also could attach a carbon filter to their wells or obtain water from the sanitation district — alternatives that range in cost from several hundred to several thousand dollars.

Since the contamination was publicized, some residents said they have received repeated solicitations from businesses offering gadgets to solve the

contamination problem. Officials are worried Irondale residents may have their problems compounded by "snakeoil salesmen."

But many residents simply don't believe there is a problem to solve. One longtime resident of the area proudly said he wouldn't allow health department officials to examine his well last year because he doesn't trust politicians "or any government officials."

"It didn't bother me until I heard it could cause cancer if you drink it long enough. We've been drinking it a long time."

The man, who asked that he not be identified, believes the Army may be attempting to get his land for expansion of Stapleton International Airport or further industrialization.

But not everyone is so skeptical.

"A LONG TIME"

"It kind of bothers me," said Katherine Weigel, 60, who has lived, worked and reared 11 children with her husband, Walt, in Irondale over the past 25 years. "But then again, I've used it for so long. It didn't bother me until I heard it could cause cancer if you drink it long enough. We've been drinking it a long time," she said.

bouncing a 9-month-old boy whom she babysits. "It concerns me, especially for the kids. It doesn't seem that kids have any say-so about anything. They take what's handed to them," she said, kissing the baby's cheek.

"Being on well water, you'd think it was pure water. But I suppose this DBCP — is that what it is? — is no worse for you than cigarettes or what's in some of the food," McAlear said. Asked whether she believes Shell has a responsibility to Irondale residents, she said she hadn't thought about it but offered, "If it's their fault it's in the water, it's their responsibility to take care of it. We didn't ask them to put it there." But for now she's resigned to it because she has few practical alternatives. "I'll drink it when I have to if I get thirsty enough," McAlear said.

Peggy Strain is an environmental reporter for the *Denver Post*. This article was paid for by the HCN Research Fund.

Sharon McAlear, a homemaker and the mother of three children, aged 18, 15, and nine, worries about the tainted water. The roar of jets from the airport made conversation difficult as McAlear stood on the porch of a neighbor's home,



RENE and JOHN VOGEL, parents of three children, think Commerce City wants to annex unincorporated Irondale for industrial-use land, and is fanning fears of water contamination to scare away residents.

Photo by John J. Sunderland, *Denver Post*

High Country News

The independent
natural resources biweekly
of the Rockies

Published biweekly at 331 Main,
Lander, Wyo. 82520. Telephone
307-332-4877. Second class postage
paid at Lander. (USPS No. 087480)
All rights to publication of articles
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Publisher Thomas A. Bell
Editor Geoffrey O'Gara
Staff Writer Michael Moss
Associate Editor Dan Whipple
Contributing Editor Peter Wild
Correspondent Philip White
Business Manager

Jazmyne McDonald
Production Kathy Bogan
Photography Sara Hunter-Wiles
Circulation

Betsy Schimelpfenig
Subscriptions \$15.00 per year.
Single copies 75 cents.

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ISSN: 0191-5657

Dear Friends,

One of HCN's favorite photographers had a very good month in January. Mike McClure, a freelance photographer from Atlantic City, Wyo., won a total of seven awards for pictures. McClure specializes in black-and-white photography, a rarity these days that is particularly useful for HCN; five of his prizes from the 12th Annual Wyoming Wildlife Photo Contest reflect this interest. His black-and-white pictures won third place in the pictorial category, first place in the wildlife category and a stunning sweep of all three places in the farm and ranch life category.

McClure also captured one of 25 honorable mention awards in a nationwide Pentax camera photo contest. There were over 25,000 entries. Typically, McClure is not certain whether he won a pair of Levi's, a new camera or \$1,000. He fervently hopes it is the latter.

McClure's recognition as a photo-

grapher comes as no surprise to HCN and its readers. His pictures have illustrated numerous stories in the paper and appeared in many centerspreads. Mike was raised in Lander, Wyo., and worked for a number of years as a news photographer for United Press International in Detroit. He returned to Wyoming eight years ago. For the past year, he has been working under a grant from the Wyoming Humanities Council on a project intended to present a photographic record of the changing face of Wyoming.

HCN is also pleased to report that we are printing our first story by Peggy Strain. Strain is the environmental reporter for the *Denver Post*. She has been at the *Post* for five years and served as environmental reporter for two.

Peggy is a native of Lincoln, Neb., and has lived in Denver since she came to the *Post*. She says, "The *Post* didn't have an environmental reporter when I first got there and I saw all the subject areas that could be grouped under that

one heading, but were not being covered adequately. I lobbied the management to assign me because it's a field I've always been interested in."

Also in the issue, the alert reader will find the index of HCN stories published in 1980. Like last year's, this index is the result of the painstaking work of volunteer Vickie Sutherland of Salt Lake City. We extend our heartfelt thanks to her for her continued help.

HCN's reporters, like many in the profession, go through notebooks like some people go through Kleenex. And those notebooks often contain interesting stuff — information that never makes it into the paper for lack of a "news peg." This issue on page five we begin running a "Reporter's Notebook," background information on key issues culled from those day-to-day scribbles, as well as some of the more subjective insights that our reporters glean from their day's work.

—the staff

Dump dip is last stop for migratory fowl

by Peggy Strain

DENVER — The deaths of hundreds of ducks and other migratory waterfowl from exposure to a 90-acre chemical dump at the Rocky Mountain Arsenal last year have reopened a decades-old controversy over the U.S. Army's management of the area.

Thousands of waterfowl have perished at the dump during the last 30 years. The U.S. Fish and Wildlife Service (FWS) says the 1980 deaths are an illegal "taking" of birds under the federal Migratory Bird Treaty Act of 1918, but the agency has failed to take action against the Army or its lessee, the Shell Chemical Co.

Further, though the Army issued a memo cautioning its own personnel about hazards of exposure to the dump, wildlife officials working in the area were never warned. Federal and state wildlife officials who occasionally strapped on hip waders and entered the lake of chemicals to collect dead birds, later learned they could have died had they fallen in.

Previously unreleased research done by the Army in 1979 also shows pheasants and other wildlife at the arsenal sometimes contain dangerous amounts of several contaminants. The levels of pesticides such as dieldrin are high enough that consumption of these birds would be prohibited by the U.S. Food and Drug Administration if they were sold commercially, and the Army's research concludes that consumption "presents a health risk."

Yet neither wildlife officials nor the Army, which prohibited hunting by officers on the arsenal after the results became known, has publicized the information to hunters on nearby private lands who may be killing animals moving from the arsenal.

"DEATH TRAP"

Bird deaths have been reported in and around the arsenal, northeast of Denver, since the early 1950s. Formerly, the arsenal was used to produce nerve gas, which is still stored there. Shell has leased land from the Army since 1946 for a chemical plant, and waste from both operations has been discharged into basins at the arsenal, including Basin F, the man-made lake of chemicals responsible for the bird deaths and groundwater pollution outside the arsenal.

Neither the Army nor Shell has been prosecuted by the Fish and Wildlife Service. Within the Rocky Mountain region, several corporations have been prosecuted for the same type of violation in the past, but Fish and Wildlife Service officials maintain they lack the authority to prosecute another federal agency.

Basin F, which began operations in 1957, has become a "death trap" for wildlife, said Tom Howard, district manager for the Colorado Division of Wildlife. Since the early 1960s, an average of 300 to 500 birds have perished there every year during spring and fall migrations, division records show.

In 1975, an Army study showed that birds found dead at the arsenal died because the chemicals acted as a detergent on their feathers. The chemicals removed natural oils, which caused the birds to drown or die from the cold,

said David S. Throne, a biologist at the arsenal.

John Seidel, a biologist with the division, described how death comes to water fowl in Basin F. "They land in it, swim around and some of them can't fly so they walk out of the pond. Most, you find their necks outstretched. Sometimes, you'll find them in the weeds, dying, and they'll attack you. The grebes come up and peck wildly at you," he said.

The death toll during the last several decades hasn't received attention from environmental groups such as the Denver Audubon Society, whose members said they were unaware of any problems at the arsenal. But Howard called it, "A severe problem... It's an outright violation of the federal Migratory Bird Treaty Act. What it boils down to is the

and can't be drained, the Army says, because it isn't cost effective.

The dead waterfowl included redhead and canvasback ducks, species that are declining in the Central American Flyway through the Midwestern states from Canada to Mexico. Other dead birds included a great blue heron, a hawk, a great horned owl, a Canada goose, three pheasants and about two dozen songbirds. Three dead rabbits also were found.

In 1978, dumping in Basin F was discontinued, and officials expect that, barring unusual precipitation patterns, the surface pond will evaporate by 1982.

"We realize we have a problem. We're not ignoring it, and we're taking steps to correct it," said Art Whitney, an

thing slipped. Somebody didn't follow procedures," he said.

BARE HANDS

Two state officials have been ordered to undergo special medical examinations to determine whether their exposure poses a health threat. Such exams also are planned for two of at least five federal officials who were exposed.

Last October, the Army issued orders to its personnel about the need for protective equipment near the dump after some workers became sick even though they wore gas masks.

Wildlife officials were astonished when they learned of the potency of the chemicals around which they had worked last December. "I knew it wasn't good stuff, but I didn't know just how bad it was," explained Howard, who learned of the dangers at a meeting of the Rocky Mountain Arsenal Technical Review Committee last December.

At the meeting, Howard described watching a duck die at the dump and told how later he picked it up with his bare hand. Howard said one of his fingers began to hurt almost immediately after the incident. After the meeting, Bill Dunn, a Colorado Department Health chemist warned him about the acute toxicity of the chemicals. "He told me that if I had fallen or gotten it on my arm, I would have been dead faster than the duck," Howard said.

Others expressed anger about the danger of the chemicals, which has prompted the division to order its personnel not to return to the arsenal to conduct wildlife studies. John Griest of the Fish and Wildlife Service in Denver said, "I'm still upset about it. I was very upset that we weren't informed."

375 migratory birds were found last May at the arsenal, including a great blue heron, three pheasants and a Canada goose. There were three dead rabbits, too.

killing of migratory birds," a criminal offense punishable by six months' imprisonment and/or a \$500 fine.

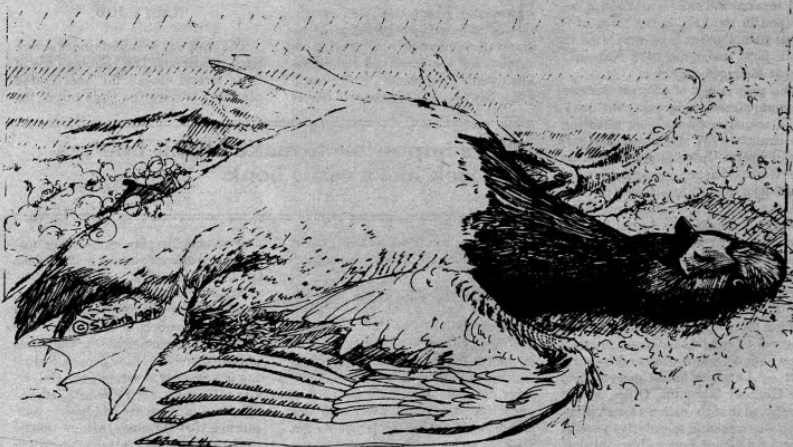
The number of deaths dramatically declined during 1976 and 1977 after several devices were installed to scare birds from the lake. But the devices need continual maintenance and wildlife officials who inspected the area last spring found most of them weren't working. Some state officials also believe the birds have become accustomed to the devices, and that they may no longer be a deterrent.

Last May, 375 dead migratory birds were found at the arsenal by the Fish and Wildlife Service and dozens more were found later last autumn at the dump. It isn't fenced across the top and

Army spokesman.

The Army has budgeted \$10.5 million for the year to fund a "containment" program for groundwater pollution. As part of the program, the Army will distribute contaminated water over already-dried basin shoreline to speed the evaporation of the dump, which the Army hopes will dissipate within two years.

The dump contains nerve gas agents and pesticides such as dieldrin, aldrin and endrin, banned from further manufacture and most use because of the dangers they pose. Whitney said wildlife officials weren't warned of their dangers because the Army personnel on duty at the time weren't aware of orders to issue warnings. "Apparently some-



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First forest plan perplexes public

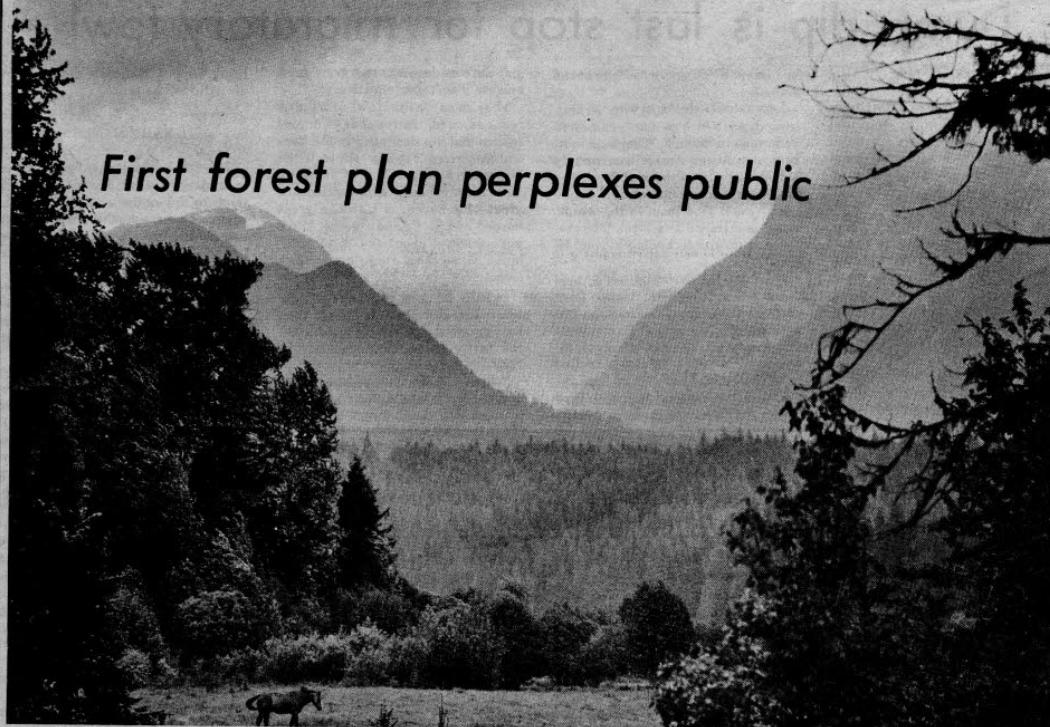


Photo by David Spear

by Louisa Willcox

LOLO NATIONAL FOREST, Mont. — Thick-girthed pines punctuate the frosty grass-covered slope on the north side of Grizzly Creek. On the south side, tightly bunched lodgepole pines set up a barricade to hikers and big game. Near the top of the ridge, deer, pine marten and frenetic squirrels have left tracks in the patchy snow.

Though the scene may appear haphazard, a precise natural ordering is in evidence. The squirrel tracks converge on a scattering of pine nuts, the young thin lodgepole mark regrowth from logging. The rimed needles point westward into the prevailing wind.

A less natural order is also being developed in the Lolo, in the form of a forest plan, the first to be completed in draft form under the 1976 National Forest Management Act.

The plan is part of a Forest Service program aimed at improving the quality of management decisions affecting the country's 187 million acres of national forests. Under the act, the Forest Service is attempting to find mixes of forest uses that are sensitive to nature, the concerns of the public and other agency responsibilities. Equal consideration of all forest resources — not just timber or range lands, but recreation, water, wildlife habitat, ecological diversity and wilderness — is supposed to prevail.

The forest management act was spurred by public challenges to practices such as clearcutting and by a report by Congress' investigative arm, the General Accounting Office, which concluded that the nation's forest planning was a chaotic, speculative process largely divorced from public opinion.

The cure lay, Congress thought, in drawing up a comprehensive list of legal requirements governing forest uses and planning, and including a strong dose of public involvement.

In addition to providing the standard opportunities for public comment and appeal on each proposed forest plan, forest managers are required to involve the public in their decision-making process.

INTENSE SCRUTINY

As the first plan under the new regulations, the Lolo has been the subject of intense scrutiny by both the timber industry and environmentalists. Environmental groups, whose comments were coordinated by John Hooper of the Sierra Club, have shown considerable support for the proposed Lolo plan. Their main complaints center around what they see as a bias toward timber

Lolo, but the industry is worried that the plan may set a precedent.

The industry's review of the plan, coordinated by Inland Forest Resource Council of Missoula, Mont., was as thick as all the Lolo planning documents put together. In it, 50 timber specialists attempted to show that it was possible to cut more, while protecting the forest's other resources.

Despite all the attention it has received, the Lolo plan may not be a very accurate gauge of the new forest planning process. The agency has already changed the format of the plans and some of its analytical tools since the Lolo draft was released in April 1980.

HASTY JOB

The draft was produced under severe time constraints. The Lolo was one of nine forests chosen for accelerated planning to work the bugs out of the

were made and what was being proposed in the thick planning tome.

"You really wonder what all this planning stuff is going to mean for John Q. Public," said Bob Ream of the University of Montana's Wilderness Institute.

Part of the problem lies in the scale of the planning endeavor. "Nobody — in any agency or university anywhere in the country — had ever tried to look at, integrate, and plan for all the resources on a large tract of land at once," said Norm Johnson, forestry professor at Utah State University, who developed the FORPLAN computer model for analyzing the Lolo data. Extensive use of computers was an essential ingredient in developing the "optimal" mix of uses over the next 120 years for 8,000 different areas on the Lolo.

"FORPLAN is an analytical tool that lets you try out all kinds of combinations of management practices on a piece of land, and compare the various levels of outputs — such as recreation, timber production, wildlife habitat — over a period of time, while looking at the associated costs of a set of actions," said Bill Russell of the Forest Service's Systems Application Unit in Fort Collins, Colo. The strength of the model is that it allows you to look at many resources at once, Russell said.

The problem, according to the Natural Resources Defense Council's Tom Barlowe and the Industrial Forest Association's Mike Sullivan, is that the Forest Service used FORPLAN as a means of justifying a set of foregone conclusions instead of analyzing the resources on the forest.

Critics also complain that computers and bureaucrats garbled the Lolo plan.

"It's impossible to make all this information look like a comic book."

— Chuck Tribe

production at the expense of old growth timber, water quality, wildlife and roadless areas.

On the other hand, the timber industry, which harvests about 97 million board feet annually on the Lolo, is seriously concerned about the environmental constraints that may be placed on logging. At stake are about 169,000 acres deemed unsuitable for logging under the new plan. Even with this withdrawal, timber activities do not stand to be seriously curtailed on the

new system. The plan was further hastened by a directive issued by President Carter in June 1979.

But in at least one important respect, the Lolo plan presages trouble ahead for those members of the public who would like to participate in the forest planning process. Many people, including professors of forestry at the University of Montana, environmentalists and members of the timber industry, complained that they had serious trouble understanding why certain decisions

reporter's notebook

by Dan Whipple

An issue generating a lot of heat — and very little light — in the current deliberations of the Wyoming State Legislature is that of coal slurry pipelines. The state has shown a curiously schizophrenic attitude about slurry lines, passing enabling legislation with one hand and throwing up barriers and political controversy with the other.

The current situation in the legislature is a good example. In 1974, the state legislature authorized Energy Transportation Systems, Inc., to take 20,000 acre-feet of water annually from the deep Madison Formation aquifer. In every biannual session since then, an attempt has been made to withdraw that approval. This year, the state House of Representatives passed a three-year moratorium on ETSI's pipeline, which was subsequently killed by the Senate. Another bill was introduced to completely withdraw the approval, but it failed.

Two weeks ago, I took part in a "Meet the Press" type of forum with representatives of both sides of the slurry issue. The meeting was sponsored by the Environmental Law Forum of the University of Wyoming's Law School. Representing the pro-slurry side were Frank Odasz, ETSI's regional manager, and Rob Wallace, vice president and director of public relations for the Little Horn Water Group. Opposing the pipelines were Warren White of Gov.

Ed Herschler's office and State Rep. Tom Kinnison of Sheridan County. A last minute arrival was one Ernest Wilkerson, about whom more later. The moderator was State Sen. Dave Nicholas.

Odasz's opening remarks summarized his project and linked it to the national drive for energy independence. "America needs the coal to protect us from supply interruptions a la 1973 Arab oil embargo," etc.

The next speaker was Warren White of the governor's office. White said Democratic Gov. Ed Herschler opposes the use of Wyoming water in slurry pipelines, a position that has underlain his actions, but which had never before been openly admitted.

The third presentation was by Rob Wallace, a former aide to Republican Wyoming U.S. Sen. Malcolm Wallop. He now represents the Little Horn Water Group, a number of Sheridan County water rights holders who want legislative approval to export their water for slurry use. Unlike ETSI, the Little Horn Group will not build its pipeline, but will simply sell water to a pipeline construction firm. The group has spent about \$1 million promoting their project so far, emphasizing that slurry lines are a preferable alternative to rail transportation of coal or the burning of coal in Wyoming power plants.

Wallace argued that a power plant uses seven times as much water as a slurry line, based upon comparable volumes of coal. By shipping the coal

out of state, the argument goes, the state discourages the siting of large "smoke industries" — electric utilities and synthetic fuels plants — within the state.

The final presentation was by Tom Kinnison, state representative from Sheridan County. Kinnison is knowledgeable and vigorous in his opposition to slurry pipelines, particularly the Little Horn proposal. The water for that pipeline would come from the Little Bighorn River, which originates in Sheridan County.

Kinnison wanted to delay the slurry line proposal until the "best use" of the Little Bighorn water could be determined. One spectator later suggested that the best use of the water would be to drown the state legislators.

After the participants had fielded a few questions, Sen. Nicholas called on the mysterious Ernest Wilkerson. Wilkerson is a Casper-based salesman — he didn't say what he sells — "with an alternative." While most of us may get our inspirations in the shower, Wilkerson conceived his alternative while making use of another bathroom fixture. His idea, as it turns out, was to use sewage water instead of fresh water as a slurry medium.

As a concept, this is not as wacky as it sounds. The Wyodak power plant in Gillette, Wyo., uses that city's waste water for a coolant. However, the water is first sent through a complex and expensive purification process. As Wilkerson proceeded, it became clear that, while he had an idea of sorts, he hadn't thought it out very thoroughly.

After the debate was over, spectators I talked to generally agreed that there

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is something unsatisfying about the arguments on both sides of the slurry issue. No one, for instance, seriously believes that there is an "either-or" decision to be made between slurry lines and power plants. Utility facility siting is a complex business at best, only one factor of which is the proximity to either fuel source or market. It would appear that the overriding factor is the availability of clean air "increments" under the Clean Air Act — that is, how much air can be polluted in an area before it violates air standards.

Finally, there are fundamental water law issues that are scarcely mentioned in all the fuss and furor about slurry lines. As State Sen. Nicholas pointed out, current law says that all the water in the state belongs to the state. However, if an appropriator can show that he will put that water to beneficial use, he can have a water right for free. When the main users were essentially non-consumptive — like irrigators — this system made sense. Now, however, with a dramatic increase in proposals for consumptive use, the state is giving away a valuable resource without accruing any accompanying benefit.

So, Nicholas poses — though he doesn't answer — the radical question of whether the state should abandon the former principles upon which all of its past water law has been based. "Should the state," he asks, "get into the business of brokering water?" — allocating and selling it for state-approved uses? And what will the courts say, asked one law professor, when the state "burdens" interstate commerce by denying the right to move water out of its borders?

They shake their heads over sentences in the plan such as:

"Fluctuations in the values for acres allocated for old-growth species maintenance, values reflecting elk habitat productivity, acres allocated for roadless management, values reflecting the maintenance of Retention and Partial Retention visual quality objectives, and base timber harvest schedule volumes for decades 2 through 12 showed strong reciprocal effects."

Montana Wilderness Society Representative Bill Cunningham said, "It just proves that the Forest Service still hasn't learned how to communicate with the public."

In the final version of the Lolo plan, scheduled to come out after the approval of the regional plan for western Montana and northern Idaho, the planners are trying to simplify the format and clarify the text.

"We're trying not to bog the reader down in the details of the decision-making process," said Don Meyer of the Arapaho-Roosevelt forest planning team, which has nearly completed the region's second forest plan. "We're trying to get right at explaining the various management alternatives and their environmental consequences."

"But it's still impossible to make all this information look like a comic book," said Lolo Supervisory Forester Chuck Tribe.

Arnold Bolle, Dean Emeritus of the University of Montana's forestry school, does not hold much hope that the second version of the Lolo or other forest plans will be more succinct than the Lolo draft plan. Bolle, a member of the committee of scientists that helped to draft the National Forest Manage-

ment Act regulations, said, "We intended the forest plans to give clear, specific management directions to the public and the district rangers on the ground. But if this Lolo plan is an example, the new plans may well be as vague as anything in the past, intended to preserve the greatest possible management discretion for the agency."



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Energy

Emotional water issues clog ETSI's pipeline

by Robert Anderson

Wyoming's Powder River Basin was chosen by nature as a place to bury large quantities of mummified megawatts, chiefly as coal. The problem has become, among other things, how to deliver those megawatts. The choices are limited to either shipping them dry by rail, wet by slurry pipeline, or converting them to liquids, gasses or electricity and shipping those.

Since the conversion process is a messy and expensive one, most coal leaves the basin currently in railroad cars. But three slurry lines are proposed for shipping coal out of Wyoming: two heading southeast to Louisiana and Texas, the other northwest to the Pacific Coast.

The Wyoming slurry pipeline closest to realization is the project proposed by Energy Transportation Systems, Inc., a joint venture of Bechtel Corp., a large firm involved in nuclear power plant construction; Lehman Brothers Kuhn Loeb, a large eastern investment house; Kansas-Nebraska Natural Gas Co.; United Energy Resources and Atlantic Richfield Co. ETSI is proposing a \$1.8 billion, 1,050-mile pipeline from the Powder River Basin to Oklahoma, Arkansas and Louisiana.

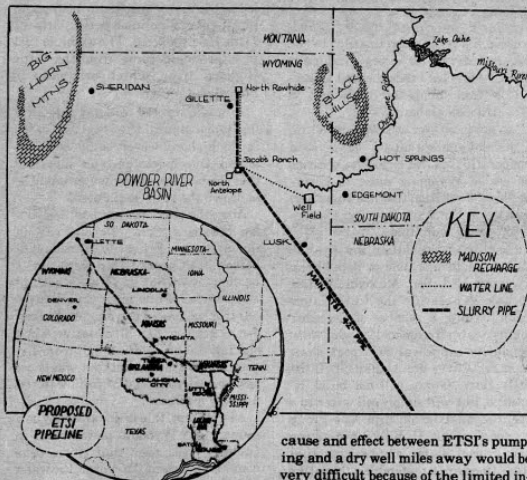
ETSI's slurry line will carry a roughly 50-50 mixture of water and crushed coal, which is pumped through a 42-inch pipe, much the same as in an oil pipeline. ETSI would handle about 37.4 million tons of coal a year from three Powder River mines. The line would consume about 20,000 acre-feet of water annually. It would require 130 miles of new electric lines and use 300 megawatts of power. A railroad would require 3,700 unit trains — 100 cars each — to move the same amount of coal.

WATER

Water is the principal emotional and political hurdle, though not the only large issue. In a controversial 1974 decision, the Wyoming legislature granted ETSI a permit to pump 20,000 acre-feet from a Madison Formation well field to be located in Niobrara County in eastern Wyoming.

The Madison is a massive, water-bearing limestone aquifer currently used as a municipal water source by the South Dakota town of Edgemont. According to the environmental impact statement prepared on the ETSI project, pressure in Edgemont's seven 220-foot artesian wells would decline dramatically as a result of ETSI's pumping. The water table would be drawn down to 300 feet and the wells would have to be deepened and pumped. The draw-down at Provo, S.D., eight miles south of Edgemont, would be 335 feet. The base flow of the Cheyenne River and the average flows of the Cascade and Hot Springs rivers would decline significantly.

However, perhaps the most pressing question regarding ETSI's pumping is its effect on the shallower aquifers into which many of the local ranchers in



cause and effect between ETSI's pumping and a dry well miles away would be very difficult because of the limited information about the aquifer.

MADISON RECHARGE

The Madison's recharge rate — the speed with which water taken from the system is replaced — is another big unknown. Estimates range from 40,000 to 400,000 acre-feet a year. That means ETSI would draw either 5 percent or 50 percent of the recharge. In its promotional materials, ETSI invariably stresses the 400,000 figure.

ETSI's promotional efforts have generated two controversies that have damaged its public image. The first occurred when the company was lobbying for its original authorizing legislation. An ETSI lobbyist told the legislature that the water from the Madison was too brackish for most purposes. Subsequent tests showed however, that the water was of very good quality. A number of state legislators have never forgiven ETSI for what they consider a falsehood.

ETSI Regional Manager Frank Odasz said, however, that the company made the statement about brackish water after very limited testing that did show the water to be of poor quality. Subsequent tests found that the water was good.

In recent months, an ETSI ad in the *Casper Star-Tribune* has generated more controversy. The ad is a cartoon showing a smooth U-shaped basin representing the Madison draped between the snows of the Bighorn Mountains and the Black Hills. The Madison and the upper aquifers are separated by a continuous Minnelusa. The Madison is shown to contain one billion acre-feet of water.

However, rather than being a smooth configuration, the geological layers are sharply bent in very confined regions, creating geological structures defined a century ago by John Wesley Powell as "monoclines." ETSI's proposed well field would lie to the east of the monocline. Here, the structure is, in effect, an underground dam, separating the Madison in the well field area from the

rest of the Powder River Basin. Thus the storage of "one billion acre-feet" is somewhat misleading. The water on ETSI's side is more closely connected to the recharge areas in the Black Hills and is fresh: The water in the middle of the basin is a more brackish quality.

POWER

Foremost among non-water issues is the power supply system needed for the ETSI line. A number of slurry proponents have pushed their product with the argument that coal mined in the Powder River Basin should not be burned there in the "smoke industries" with their pollution and social problems.

However, according to the EIS, the slurry lines themselves require about 300 megawatts of electricity. ETSI will get about 120 of these megawatts from Wyoming sources. Since a total of four slurry pipelines are projected for the region, they could create substantial new demand for power. Another 137 miles of power lines will be required to get electricity from existing grids to ETSI's pumping stations.

The EIS indicates that the ETSI line would consume the equivalent of four percent of the Btu content of the coal, as compared with the railroad's 3.5 percent. This is a very small difference, but a recent Department of Energy report on New Mexico's Black Mesa coal slurry line — the only operating slurry line in the U.S. — gives reason to expect a bigger gap. The report said that all the water cannot be efficiently removed before the coal is burned and "the higher the moisture content of the coal, the higher must be the temperature of the flue gasses to prevent erosion of the stack walls" due to a kind of acid rain in the stack. The hotter the flue gasses, the worse the energy efficiency of the system.

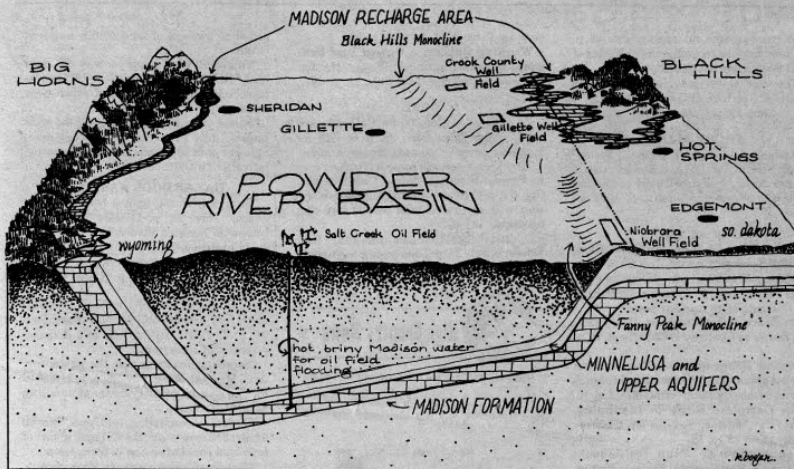
POLITICAL CONCERNS

A number of the water issues raised in the EIS cross state boundaries, and South Dakota has recently been making some unfriendly rumblings about those which affect them. The South Dakota legislature has ruled out the use of water for slurry from Oahe Reservoir and the West River Aqueduct — a source that ETSI had been eyeing as a back-up supply for its Madison field. South Dakota has also threatened a lawsuit over water rights in the Madison formation, claiming that much of the water in the aquifer originates in South Dakota's Black Hills. Thus Wyoming faces the unappealing prospect of a lawsuit from South Dakota if it allows ETSI to go forward or a lawsuit from ETSI if the state breaks the 1974 agreement.

In a Jan. 21 meeting of South Dakota and Wyoming officials, South Dakota Gov. William Janklow said that he wanted a spirit of cooperation between the two states: "We may never get married, but we're going to be going steady for a long time."

South Dakotans at the meeting questioned the legality of Wyoming's is-

Energy



suance of ETSI's water permit. One delegate stated that even though ETSI promises to compensate for lost water, the cost of future water development in the area would be more expensive because new wells would have to be deeper.

South Dakota delegates urged Wyoming to reconsider the approval of the ETSI permit. Several bills have

been introduced in the Wyoming legislature to halt or delay ETSI's project, but they appear to be dying.

In a more recent hearing, the Wyoming House Agriculture Committee was presented a petition signed by hundreds of Niobrara County residents opposing the development of Madison water for slurry. With the federal government leaning toward approval of the

system as proposed by ETSI, opponents are viewing legislative action as the only remedy, however slim their chances may be.

At the Jan. 21 meeting, South Dakota showed some spirit of cooperation by offering to reopen talks about possibly using Oahe Reservoir water. The reservoir is located in South Dakota, but some of the water origi-

nates in Wyoming.

Janklow, however, apparently favors the rail alternative. The EIS said that the tracks are in place, no additional acreage would be required and that current railroad company plans would provide enough capacity to move ETSI's share of the coal by 1985 — sooner than the slurry pipeline will be ready. Janklow said, "Let them ship it on a train. That's what everyone else is going to do...the West has never been known for its water. I can understand shipping the coal out of here and I can understand shipping the gas and oil — but for the life of me, I cannot understand shipping our water."

One final alternative — consistently rejected by ETSI — would be to build a parallel pipeline from the destination point to Wyoming to replace the water ETSI uses. ETSI says that economics rule out the return pipeline. In addition to increasing the initial capital outlay for the project, a return pipeline would increase operating costs by at least 25 percent due to power required for piping the water uphill from the Mississippi River. This would undercut the pipeline's economic advantage over railroads. ETSI's Odasz says the company also wants to conserve the steel and energy resources that would be consumed in a loop system.

Robert Anderson is a Colorado-based geologist and writer. This article was paid for by the HCN Research Fund.

Hot Line



CALIFORNIANS LEAVE UTAH. Southern California Edison and Pacific Gas and Electric, both California electric utilities, said they will withdraw their application before the California Public Utilities Commission to build the \$5 billion Allen-Warner Valley energy project in Nevada and Utah. The companies' decision comes on the heels of a PUC staff recommendation that the project not be approved because cleaner and cheaper alternative energy sources will be readily available to meet California's electricity needs. Under the original proposals, put forth several years ago by the two California utilities and Nevada Power and Light, the Alton coal field in Utah would have been mined and sent by slurry to the Warner Valley project in southern Utah and the Harry Allen plant near Las Vegas. About 85 percent of the energy would have been used in California. The two California companies now say that they will consult with Nevada Power and perhaps propose a smaller version of the project.

SOLAR HEATED WATER ORDERED. Saying "a properly designed and installed solar domestic water heater will save a purchaser money almost anywhere in Idaho," the Idaho Public Utility Commission ordered the state's electric utilities to prepare plans for financing solar water heaters in residences on a demonstra-

tion basis. The PUC ordered the state's four operating power companies to have plans for promoting the devices ready March 1, 1981. Hearings on the subject showed solar heating "a proven and efficient technology," according to the commission.

LOW-LEVEL TALKS. Differentiating between nuclear wastes produced within and outside the greater Northwest region, officials from seven western states have agreed to reject shipments of low-level commercial nuclear waste produced outside the region. Meeting in Seattle earlier this month, the officials also agreed to ensure continued access to the Hanford, Wash., disposal facility (the only repository in the region and one of three in the country) for waste generated from within the region. Pat Costello, legal counsel for the Idaho Office of Energy and a member of the task force initiating the compact, predicts it will include

Alaska, Idaho, Montana, Oregon, Utah, Washington and Wyoming. The impetus for the compact comes from an initiative passed by Washington state voters banning out-of-state radioactive waste beginning this July. Costello says only a regional compact can circumvent that ban. He hopes to present final proposals to the state legislatures during the current sessions. Seventy percent of the waste currently dumped at Hanford is generated from outside the region.

CLAIM-STAKE QUAKE. Reacting to a recently-released U.S. Geological Survey report that indicated commercial-size oil shale deposits in central Montana, federal Bureau of Land Management officials are predicting a rush of prospectors to the area. Acting Montana BLM Director Al Evans told the Missoulian that while oil shale mining would require a federally approved lease, claims on minerals

associated with shale, such as vanadium, zinc, nickel and molybdenum, can be made under the 1872 Mining Act. The USGS issued a "preliminary report" indicating that the seven-county area of central Montana contained enough low-grade oil shale to provide 180 billion barrels of oil. The shale deposits lie in a salamander-shaped band about 200 miles long and 10-20 miles wide, covering about 1.7 million acres. Most of the land is in the public domain. In addition, the USGS said the initial report was "highly conservative," and that further research may reveal 10 to 20 times the current estimate of oil shale.



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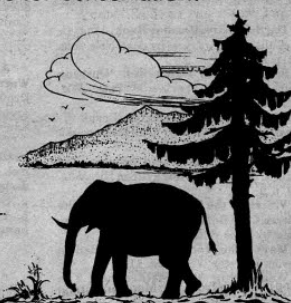
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"You can keep your big John Deere...all I need is four-horse power," John Barlow, photos by Sara Hunter-Wiles, March 21, p. 8. Photo essay on Clydesdale horses.

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Digging up the West for shipment to Japan



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"Idaho miners find persistent courting of locals pays off," Lonnie Rosenwald, Nov. 28, p. 10. Molybdenum mine wins approval.

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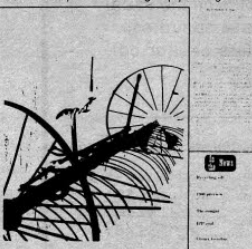
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"John Peavey: a maverick changes stripes," Jeanette Germain, July 11, p. 10. Idaho rancher combines legislative work with environmental platform.

"The prodigal son became a conservation father," Peter Wild, Nov. 28, p. 4. Biographical view of John James Audubon.

"Watt: Reagan's Interior man from pro-enterprise group," Dec. 26, p. 4. Environmentalists see James G. Watt as friend of business.

"The West on canvas: Early American artists painted romance into landscapes," Alfred Runte, Sept. 5, p. 8. Essay discussing contributions of landscape artists to preservation ideals.

PIPELINES

"Platte oil splat coats birds, beaver with crude," David Crosson, April 18, p. 10. Pipeline break dumps oil in North Platte.

"Tanker port and pipeline path pain Puget Sound opponents," Constance Wieneke, Oct. 3, p. 10. Pipeline from port to shore is subject of latest controversy.

PLANTS

"Goodbye alfalfa, hello wildrye: Elk Refuge eyes native grasses," Betsy Bernfield, Mar. 7, p. 12. Grass reseeding program started near Jackson Hole, Wyo.

"Mycophagy, anyone? Mushroom-hunting by the book," Joan Nice, May 30, p. 8. Descriptions of several wild mushrooms.

"Solitary Milk Vetch hides in desert sagebrush," Michael Hamilton, April 18, p. 5. An examination of one of the West's scarce plants.

POISONS

"Ground squirrels can expect 1080 treatment in Montana," Conrad Gilbert, Oct. 31, p. 11. EPA approves use of poison to control ground squirrels.

"South Dakota claims prairie dog damage requires use of 1080 poison," Kevin Woster, Jan. 11, p. 14. Ranchers seek permission to use pesticide.

POLITICS

"Lobbyists, radiation, politics, pop-tops on the ballot," Geoffrey O'Gara, May 30, p. 6. A look at the Montana political races.

"Politics 1980," Oct. 17, p. 1. Analyses of key political contests in the Rocky Mountain states.

"Politics 1980 Wrap-ups," Nov. 14, p. 4. Summary of the election outcomes.

"Republicans labor to oust Hart, command legislature," Michael Moss, July 11, p. 4. Colorado political races shaping up conservatively.

"Symms bid to oust Church takes top bill-

ing," Michael Moss, June 13, p. 5. Senate race in Idaho appears even.



PREDATOR CONTROL

"Federal coyote control melloes; mutt-raisers talk mutiny," Joan Nice, Feb. 22, p. 6. Killing of coyotes more restricted.

"Ranchers take Andrus to court for alleged cave-in to coyotes," Joan Nice, Oct. 3, p. 13. Farm Bureau Federation sues Interior Department over coyote control.

RAILROADS

"Ownership switch untracked, but historic train runs on," Van Becay, June 27, p. 3. Durango-Silverton train still running, still owned by D&RGW.

RARE II

"California RARE II decision impacts could be far-reaching," Jan. 11, p. 13. Commercial development halted until Forest Service explains recommendations.

RECLAMATION

"PLI: Enforcers undermining federal strip mine regulations," Geoffrey O'Gara, Nov. 28, p. 7. Public Lands Institute reports federal agencies not enforcing reclamation.

"Reclaiming the West: the jury is still out," July 11, p. 6. INFORM's research indicates reclamation efforts get mixed reviews.

"States, courts, cutbacks put pressure on strip mine agency," Geoffrey O'Gara, July 11, p. 1. Office of Surface Mining agency losing power to oversee and regulate reclamation efforts.

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SAGEBRUSH REBELLION

"July 4th fireworks miss wilderness study area," Craig Rayle, July 11, p. 3. Moab officials open their Sagebrush Rebellion with off-target bulldozer.

"Indians counter sage rebels: 'the land doesn't belong to you,'" Jim Robbins, May 16, p. 5. Tribes oppose sagebrush rebellion.

"Rebels revel in new power, polish," Joan Nice, Dec. 12, p. 1. Sagebrush Rebellion proponents add up support in Washington.

"Sagebrush revolt shows little clout," Brad Cole, Oct. 3, p. 13. Survey shows one third of Westerners support Rebellion.

SOCIAL IMPACTS

"Workers, plants, confusion come to 'sweeten' Evanston gas," Geoffrey O'Gara,

May 2, p. 4. Two plants planned to clean natural gas.

"Another — slightly different — boomtown story," May 2, p. 4. Evanston residents look forward to development in spite of problems to be faced.

"Bear Lake's high-growth future may drown rural past," Michael Moss, June 13, p. 2. Recreation and oil exploration creating boom conditions.

"Anaconda: The smelter shuts down, and so does the town," Geoffrey O'Gara, Nov. 14, p. 1. Profile of a declining boom town.

"Jeffrey City," Geoffrey O'Gara, Dec. 26, p. 1. Second part of the story of two towns past their boom stage.

SYNFUELS

"Tar sands: Utah's rocks ooze with oil," Bob Anderson, Nov. 14, p. 6. Potential new fuel faces many obstacles.

URANIUM

"Ailing uranium millworkers seek recognition, aid," Marjane Ambler, Sept. 5, p. 1. Government interest in occupational hazards reviving.

"Cleanup of inactive mill tailings to start soon," Jan. 25, p. 4. Eight sites targeted as highest priority for cleanup.

"Colo. town waits, wonders what to do with uranium tailings," Van Becay, May 16, p. 6. No solution seen to problems posed by Colorado's largest tailings pile.

"Radioactive sites in Colorado still hot," April 4, p. 13. Little progress made in cleaning up radium deposits.

"Study of radioactive homes 'lost' for 8 years," Marjane Ambler, Jan. 25, p. 1. Twenty towns may have problems with old tailings.

"Tailings, pollution haunt uranium company town," Timothy Lange, Feb. 22, p. 1. Uranium mining leaves a mark on Uravan, Colo.

"TVA stalls on Edgemont uranium mill clean up," April 4, p. 13. Utility says federal government should pay for clean-up.

"Uranium tailings taint upper Colorado River," Mar. 7, p. 13. Several locations may have polluted groundwater.

High Country News

Squeezing the daylight out of Zion



UTAH

"Squeezing the daylight out of Zion," Don Snow, July 25, p. 1. A historical overview of the settling and development of Utah.

UTILITIES

"High heating costs fire up consumers in Rockies," Philip White, Feb. 8, p. 1. Price hikes in all energy fields raise heating bills.

"Senior citizens lead battle against utilities for affordable energy," Philip White, Feb. 8, p. 5. Activists advocate rate restructuring and protection from shutoffs.

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"Cache la Poudre River: last Front Range chance to flow," Geoffrey O'Gara, May 2, p. 6. Report recommends river be protected.

"Crested Butte water ordinance immersed in AMAX court challenge," Heather McGregor, Sept. 5, p. 3. New ordinance aims at protecting watersheds.

"Debate rolls over Utah's troubled waters," Michael Moss, April 4, p. 1. Analysis of Central Utah Project issues.

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takes a political bath," April 4, p. 4. EPA withdraws objections to project.

"Farmers to try do-it-yourself sediment cleanup," Glenn Oakley, Jan. 11, p. 6. Voluntary program to improve water quality being tried in Idaho.

"Farming tops Montana water polluters," Sept. 5, p. 11. Withdrawal of water from streams major cause of agricultural pollution.

"Mining mishap could spell future trouble," Michael Moss, June 27, p. 1. Dam break spills waste water from phosphate mine; possible long-term hazards.

"State boards snub citizen input," April 4, p. 6. Water management in Utah.

"Wyoming water project faces voter test, questions remain," Philip White, May 16, p. 1. Discussion of water development plans.

WEATHER MODIFICATION

"Tampering with the elements: success or failure," Timothy Lange, Oct. 3, p. 1. History and outlook of weather modification.

WILDERNESS

"BLM names Wilderness Study Areas; regional reaction mixed," Nov. 28, p. 12. Twenty-four million acres to receive further consideration.

"Budding bureaucracy copes with crowds, confusion and conflicts," Louisa Willcox, Sept. 19, p. 4. Increased use fosters increased management of wilderness areas.

"Foley II: Second try at wilderness 're-lease,'" Michael Moss, Mar. 21, p. 6. Bill would approve RARE II areas but give non-wilderness status to Forest Service land.

"Gros Ventre faces bite of drillers' bits," Geoffrey O'Gara, June 17, p. 6. Proposed wilderness area may acquire exploratory oil and gas well.

"House OKs Idaho wilderness bill," April 18. Bill will add thousands of acres to River-of-No-Return and Selway-Bitterroot Wilderness Areas.

"Hydrocarbon hunt leads to wilderness," Joan Nice, Mar. 21, p. 11. Some wilderness areas may be opened to fuel exploration.

"Idaho's River-of-No-Return gets congressional endorsement," June 13, p. 11. Largest wilderness area in continental U.S. approved.

"Lee Metcalf wilderness may shrink to Burlington Northern, Melcher's size," Jim Robbins and Ken Western, Oct. 17, p. 4. Forest Service recommends smaller area for Montana wilderness area.

"No bombing in Montana's Bob," Joan Nice, May 2, p. 7. Seismic blasting won't be allowed in the Bob Marshall Wilderness Area.

"Solitude seekers disagree about open spaces," Joan Nice, May 16, p. 1. Analysis of the results of the BLM's wilderness inventory.

WILDLIFE

"Are bats so beastly," Tom Jenkins, Dec. 26, p. 6. Biology and habits of the bat.

"Alive and well in winter — wildlife," from On Mountaineer: Thinking about Terrain by John Jerome, Feb. 8, p. 8. How wildlife spend the winter.

"The Bald Eagle: A refugee of development," Jill Bamberg, July 11, p. 8. Wyoming Game and Fish predicts many nesting sites

will be destroyed in 5 to 10 years.

"Building a home where the buffalo (wolf) can roam," Roger Case, Nov. 14, p. 8. Lynch's efforts to re-establish buffalo wolves in Montana.

"Cutthroats make a comeback," Vicky Boyd, Feb. 22, p. 8. Transplants are doing well in Colorado.

"Eyries in the canyon, swift hunters in the sage," John McCarthy, May 16, p. 9. Pictorial essay on raptors and proposed expansion of their refuge.

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"The graceful cougar: curious from a distance," Thomas M. Jenkins, Jan. 11, p. 8. Photo essay.

"The grizzly: How many? Where? For how long," Geoffrey O'Gara, Mar. 21, p. 1. Controversies in bear management.

"Lynx, wolverine linger in Colorado — but for how long," Jim Scott, May 2, p. 8. Researchers conclude endangered mammals still exist in Colorado.

"Mountain goat," Maureen Dempsey, photos by David Spear, Jan. 25, p. 8.

"Park on trial for bear mauling incident," Philip White, Mar. 21, p. 5. Trial will determine who is responsible for bear attacks.

"Public to take Grand Canyon burros," Maureen Dempsey, Feb. 22, p. 6. Park Service plans to remove burros rather than kill them.

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"Waterfowl felled by cholera," Phil White, April 4, p. 7.

"Western Peregrine Revival Ahead," Dave Hall, June 13, p. 8. Program begun to reintroduce peregrines to northern Utah.

"Wild geese teeming in steaming South Dakota capital," Kevin Woster, Nov. 28, p. 8. Canada geese winter on thermal pond in city.

Trackings

followups on previous stories

MX land lock-up?

(see HCN 1-9-81 for previous story)

Citing a new Air Force survey that shows valuable mineral resources in the Great Basin, Nevada and Utah officials say the proposed MX nuclear missile project would "lock up" oil, gas and mineral deposits in the region.

The Air Force report concludes that a "large portion of the (MX) area...has high, good and speculative potential" for a variety of resources, including eight minerals the U.S. is now importing. Previous mineral surveys, reports the *Deseret News*, including wilderness area studies by the Department of Interior, found far less mineral resource in the region and concluded that mineral production was outweighed by scenic and tourist values.

The Air Force says it would avoid high potential areas in siting the MX and would guarantee continued mineral exploration and development. But Rep. James Santini (D-Nev.), chairman of the Mining Subcommittee, said the MX project would constrain mining even if specific mining areas are avoided.

More information on mineral deposits should be gathered by the Air Force, Santini said, a data-gathering effort also supported by Bob Warren of the Nevada Mining Association. The Air Force study is being reviewed by the Utah Geological and Mineral survey.

Nevada and Utah have received their first 1981 installments of federal planning assistance money for the MX, getting \$2.5 million and \$1.5 million, respectively.

DOE cracks WIPP

(see HCN 11-2-79 for previous story)

The Department of Energy has decided to proceed with constructing the

Waste Isolation Pilot Plant (WIPP) on public lands in southeastern New Mexico.

The facility is intended to demonstrate that nuclear waste from military programs can be safely disposed; it will occupy eight underground caverns on a site 25 miles southeast of Carlsbad. By 1987, WIPP will start receiving military nuclear waste now stored at the Idaho National Engineering Laboratory. Experiments on other high-level nuclear wastes will also be done at the WIPP site.

New Mexico officials remain critical of WIPP. "We've been taken aback by DOE's reluctance to negotiate on this," said Jack Mobley, spokesman for a state evaluation task force, noting DOE's refusal to grant the state extra time to analyze the environmental impact statement for the WIPP project. The state's comments on the statement were submitted this week.

The state is seeking powers of judicial review and concurrence in the WIPP project.

After the first phase of construction — designing a site scheme and sinking two exploratory shafts — DOE says it will again evaluate the project.



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Bulletin Board



SOLAR STUDIES

Roaring Fork Energy Center, in Aspen, Colo., is holding a six-week course on the theory and technology of solar energy. Funded by the Colorado Department of Labor and Employment - Balance of State CETA, the program is designed to train instructors who can then teach solar energy studies in secondary and post-secondary programs, and to build local community-based energy action and awareness programs. The course will run from March 2 through April 10 at Adams State College, Alamosa, Colo. Colorado residents pay \$377, out-of-staters, \$1,528. Room and board is extra. Contact the Roaring Fork Energy Center, P.O. Box 9950, Aspen, Colo. 81611.

TRAIL DIRECTORIES

Snowmobilers seem to have an edge over skiers in national forests in Idaho, Montana and North Dakota. Directories of trails now available for winter recreationists in the forests list 356 miles of marked ski touring trails and 2,218 miles of snowmobile trails. About three-fourths of the snowmobile trails are groomed; about half the ski-touring paths. Directories can be picked up at forest supervisors' offices or district offices, or from the Northern Regional Office, Federal Building, Box 7669, Missoula, Mont. 59807.

REFUGE RULES

Miners searching on federal wildlife refuges for metallic and non-metallic minerals such as gold, lead, uranium or borax may have to abide by rules now under consideration by the Interior Department. Mine operators who disturb the environment would have to detail a reclamation plan as well as protections for creatures in the refuge. Public comments on the new rules are being accepted through March 31, and an environmental assessment of the rules can be gotten from the Division of Refuge Management, U.S. Fish and Wildlife Service, Department of Interior, Washington, D.C. 20240.

Classifieds

Classified ads cost 10 cents a word. They must be prepaid.

NUCLEAR METAPHYSICS: This book explores the hidden meaning of atomic energy. Nuclear process symbolically corresponds with human transformation. Ancient myths of gods Uranus, Pluto, coincide with modern use of uranium, plutonium. Astrological meaning of planets Uranus, Pluto, provide insight into resolution of nuclear crisis. Implications fully explained for individual and society. Recommended for the enlightened anti-nuker. \$4 includes postage. Fox Publications, P.O. Box 521, Dept. H, Flagstaff, AZ 86002.

PURPOSE OF PUBLIC NOTICE

THE PURPOSE OF THIS PUBLIC NOTICE IS TO STATE THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER DISCHARGE PERMITS UNDER THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 (FWPCA), P.L. 92-500 AND THE WYOMING ENVIRONMENTAL QUALITY ACT (36-11-101 et. seq., WYOMING STATUTES 1967, CUMULATIVE SUPPLEMENT 1973). IT IS THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER DISCHARGE PERMITS TO (2) INDUSTRIAL FACILITIES, AND (1) COMMERCIAL FACILITY, TO MODIFY (2) INDUSTRIAL PERMITS, AND (1) MUNICIPAL PERMIT, AND TO RENEW (1) INDUSTRIAL PERMIT, AND (1) COMMERCIAL PERMIT.

APPLICANT INFORMATION

(1) APPLICANT NAME:

MAILING ADDRESS:

FACILITY LOCATION:

PERMIT NUMBER:

The Bridger Coal Company operates the Jim Bridger Mine which provides fuel for the Bridger Power Plant located east of Rock Springs, Wyoming.

The discharges flow into Deadman Wash, Nine Mile Wash, and Nine and One Half Mile Wash (Class IV Waters).

The discharges must meet effluent limitations which are considered by the State of Wyoming to represent "best available treatment." However, the permit also contains a "re-opener clause" which requires the permit to be modified should more stringent limitations be developed at the federal level.

Runoff from disturbed areas will be controlled by sedimentation ponds which are designed to completely contain the runoff resulting from a ten year - 24 hour precipitation event. Because these ponds will not

ENROLL FOR COAL

The Department of Energy has \$5 million (unless David Stockman hears about it) to dish out to universities interested in exploring advanced concepts of coal combustion, converting coal to gases and liquids, and related topics. The program was initiated last year with 41 grants. In addition to studying techniques for burning, liquefying and gasifying coal, studies on environmental issues are also being solicited. Proposals — no longer than 30 pages — are due by March 12, with grants to be issued Aug. 1. For more information contact: U.S. Department of Energy, Office of Fossil Energy, Office of Advanced Research and Technology, ATTN: Robert M. Welke, Washington, D.C. 20545, or call (301) 353-2784.

WYO. SOLAR INDUSTRY

If you sell solar collectors or double-glazed windows you may want to attend a conference on Wyoming Solar Industries to be held in Casper March 26-27. The gathering for business and professional people in the solar field is being sponsored by the Western Solar Utilization Network, a program underwritten by Western states and the U.S. Department of Energy. For more information contact Marianne North, conference coordinator, 29 Marigold, Casper Wyo. 82601, or call (307) 234-5567.

2-LANE OR 4-LANE?

The Coalition for Canyon Preservation is mounting a campaign to stop a planned four-lane highway to the west entrance of Glacier National Park. The coalition is encouraging people to write to the Montana Division of Highways in support of a wide, realigned two-lane highway, which they say would do less harm to the canyon corridor leading to the park. For more information write to Coalition for Canyon Preservation, Box 422, Hungry Horse, Mont., 59919.

EXECUTIVE DIRECTOR: The Wyoming Outdoor Council, a statewide conservation organization, is seeking an Executive Director. The job includes organization management, fundraising, lobbying, and issue work. Salary: \$800-1000 a month depending upon qualifications. Health insurance, mileage. Send resume and writing sample to Peter Kozisek, Wyoming Outdoor Council, P.O. Box 1184, Cheyenne, Wyo. 82001.

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GLEN CANYON DAMN T-shirts: \$7.00 postpaid; prints: \$2.50 postpaid. Exploded Views, P.O. Box 221, Moab, Utah 84532.

WATT ASKS WHAT

Those of you who think you qualify as "leaders" in business, industry, government or the environmental field have been asked by new Interior Secretary James G. Watt to let him know which Interior regulations you find "excessive, burdensome, or counterproductive." Responses were due Feb. 12. That's about when we got this press release.

SOIL SITUATION

The U.S. Department of Agriculture is distributing "America's Soil and Water: Condition and Trends," a survey of non-federal lands and their problems of erosion, loss of farmland and "the expansion of irrigation even as many water tables are falling," to quote the press release. Write to SCS Information Division, Room 0054-S, USDA, Washington, D.C. 20250, or drop in at county offices of the Soil Conservation Service.

POWDER RIVER COAL

You know there's lots of it there, but exactly how much? That's the question the U.S. Geological Survey sets out to answer in a new publication, *Guidebook to the Coal Geology of the Powder River Coal Basin, Wyo.* The six papers in the book tell more than just how much — they delve as well into the origin of the coal and its chemical and petrographic nature. The final paper describes the Rawhide Mine north of Gillette, Wyo. Write for Public Information Circular No. 14, Geological Survey of Wyoming, Box 3008, University Station, Laramie, Wyo. 82071. Price: \$5.50.

WILDERNESS CONFERENCE

The Wildlife Management Institute's 46th North American Wildlife and Natural Resources Conference is scheduled for March 21-25 in Washington, D.C. For more information contact: Wildlife Management Institute, 1000 Vermont Ave, NW, 709 Wire Building, Washington, D.C. 20005.

"WIND RIVER TRAILS" by Finis Mitchell. Backpacking guide to the Wind River Mountains of Wyoming. Wilderness area of peaks, glaciers, forests, and lakes. \$3.50 postpaid. Wasatch Publishers, 4647 Idlewild Road, Salt Lake City, Utah 84117.

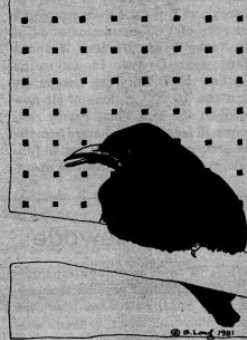
WILDERNESS POSITION: BLM and Forest Service land planning organizer for the Colorado Open Space Council. Organizing ability necessary. Writing, research, workshop coordination, knowledge of agencies, and communication skills helpful. Salary: \$4500 for first six months. Base of operations negotiable. Send resume by March 10 to: Larry Melihaff, COSC Wilderness Workshop, 2239 E. Colfax, Denver, CO 80206, (303) 399-9453.

DEVELOPMENT PERSPECTIVE

James Vanderbeek, vice-president and regional manager of Amoco Production Co., will speak on "Worldwide Energy Myths — Amoco and Wyoming" March 18 in Laramie, Wyo. The address, in Room 304 of the Classroom Building of the University of Wyoming, is part of a series called "Perspectives in Energy Development in Wyoming." Gov. Ed Herschler and the president of Exxon USA will address seminars in April.

ENERGY WEEK

Mark your calendars, March 15-21, for the American Energy Week, a "massive, national grassroots information effort" according to its sponsors, the electric energy industry. The celebration, intended to spur the country on to energy "self-sufficiency" by developing all possible forms of energy, will include regional and national seminars. Contact Week, Inc., 1111 19th St. NW, Suite 400, Washington, D.C. 20036; (202) 861-0792.



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RURAL NETWORK is a social support group for single, mid-life (broad age range), country-oriented, ecologically concerned people. Information with SASE. RURAL NETWORK, Rt. 1 Box 49B, Avalon, WI 53505.

State of Wyoming Public Notice

normally discharge, they are not specifically identified in the permit but are covered by operation and maintenance provisions. Periodic self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The permit is scheduled to expire January 31, 1986.

(2) APPLICANT NAME:

MAILING ADDRESS:

FACILITY LOCATION:

PERMIT NUMBER:

The Mobil Oil Corporation plans to open a large open-pit coal mine approximately 15 miles south of Gillette, Wyoming which will be known as the Rojo Cabellos Mine.

The discharge flows into Lea Draw (Class IV Water) which is a tributary of Cabello Creek (Class IV Water). The discharge must meet effluent limitations which are considered by the State of Wyoming to represent "best available treatment." However, the permit also contains a "re-opener clause" which requires the permit to be modified should more stringent limitations be developed at the federal level.

Runoff from disturbed areas will be controlled by sedimentation ponds which are designed to completely contain the runoff resulting from a ten year - 24 hour precipitation event. Because these ponds will not normally discharge, they are not specifically identified in the permit but are covered by operation and maintenance provisions.

Periodic self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The permit is scheduled to expire January 31, 1986.

(3) APPLICANT NAME:

MAILING ADDRESS:

(continued on page 12)

Mobil Oil Corporation

P.O. Box 1772
Denver, Colorado 80217

Rojo Cabellos Mine, Campbell
County, Wyoming

Wy-0080376

Cross C Campground

Route 1, Box 108
Buffalo, Wyoming 82834

Western Roundup

Sagebrush 'sacrifice' predicted

A successful Sagebrush Rebellion would amount to a sacrifice of federal lands to monied interests, according to a report on state land management published by the Public Lands Institute of Denver.

In an analysis of 10 Western state agencies, the report found that by law most state lands must be managed for the highest financial returns. If federal lands were turned over to states, as Sagebrush Rebels advocate, it would take a "virtual revolution in state law" for values such as recreation, wildlife and watersheds to be protected, according to the Institute.

The report indicated that most state land agencies are severely understaffed. The New Mexico land commissioner, for instance, "depends chiefly on the lessees to tell him how much grazing pressure the land can sustain," according to the report.

"Colorado has four field appraisers who try to check conditions on 2.7 million acres leased for grazing," the report said. "They don't get on site often enough in five years."

The report was written for the Institute by William C. Patric, a graduate student from Michigan State University.

PCB to burn

The U.S. Environmental Protection Agency and Colorado have approved a test burn of PCB-contaminated oil at the Rocky Flats Nuclear Weapons Plant near Denver to determine whether the facility can adequately burn the 10,000 gallons of oil now stored at the site. Some nearby residents still fear a health hazard from the test and speculate it may lead to full-scale, commercial incineration operations at the site.

tions at the site.

The EPA has also approved the country's first two commercial facilities for destroying PCB-contaminated waste oil, located in Arkansas and Texas. The incinerators may start accepting high-level PCB wastes next month from throughout the country. Whether those facilities could accept the Rocky Flats wastes remains unclear. A shipment was rejected by the Arkansas plant last year because of suspected plutonium contamination.

Cows eat sewage

While Wyoming solons consider using sewage from Cheyenne to slurry their coal, Southwest researchers are feeding Phoenix "flush" to their livestock, with good results.

Sewage solids have long been used for fertilizer, but could be far more valuable used directly as a feed supplement. The key, according to agriculture experimenters at New Mexico State University, is the four-compartment stomach of cattle and other ruminants.

The first of those compartments uses microbes to create a fermentation process that detoxifies compounds such as ammonia, cyanide and nitrate. Tests show that sewage introduces no more toxins than conventional feed supplements, while being about as nourishing as cottonseed meal (now selling at over



\$200 a ton).

"Sewage solids from a city of 100,000 could be worth about half a million a year," a researcher claims, adding the Phoenix and Albuquerque could support thriving cattle industries.



Suit filed to block June jets to Jackson

With regular passenger jet service scheduled to begin to Jackson Hole Airport in June, the Sierra Club this week filed suit in federal district court in Denver to stop Frontier Airlines' 737s. The suit cites sections of the Federal Transportation Act forbidding the use of parkland for transportation projects when a feasible alternative exists.

Jackson Hole Airport is located in Grand Teton National Park. It was served until recently by commercial prop planes. Commercial-size charter jets began flying to Jackson last December, but were cancelled because of poor skiing conditions.

The suit also contends that the commercial jets would violate a noise control plan for the park instituted last year by the Department of Interior.

That scheme was crippled when Congress blocked funding for enforcement, but the Sierra Club argues that its standards are still in effect.

One of several proposed alternative sites for the airport, near Daniel, 65 miles south of Jackson, was in the news recently when it was discovered that most of the land for the site is owned by former U.S. Sen. Clifford Hansen and his family. The site has been pushed by Laurence Rockefeller and his conservation group, the Jackson Hole Preserve, of which Hansen is a director. Hansen, however, remains opposed to moving the airport.

Wyo. hazardous waste control haphazard

Hazardous waste in Wyoming is sloppily handled, potentially expensive, and plentiful, concludes a new survey.

Prepared for the Wyoming Department of Environmental Quality by the Denver-based research firm Engineering Science, the study is prefaced by several disclaimers. Fly ash and drilling muds were excluded because they are not yet officially classified as hazardous. Furthermore, the survey was voluntary, and of 700 firms contacted, only one in four responded.

Nonetheless, some 56,000 tons a year of officially-defined hazardous waste were reported (a figure the researchers have tripled to reflect the actual amount), and much of that waste is poorly handled, the report said.

Most of the state's industrial waste is pumped into evaporation ponds. But only one in 10 permanent ponds is lined to prevent leaching into groundwater and only one in four is monitored for leaks. Temporary ponds

receive even less attention.

"Probably none of the existing disposal facilities would meet (new federal) requirements," the researchers concluded (see HCN 11-28-80 for a story on federal hazardous waste regulations). If new ponds and other facilities were constructed, properly disposing of the estimated 160,000 tons of hazardous waste would cost \$31 million a year. That cost would double if drilling muds and fly ash were classified hazardous.

State hazardous waste manager David Finely is nonetheless optimistic. Some 40 firms have applied for waste handling permits (totaling 250,000 tons, a third more than was estimated) and the bureau's staff of six is beginning to inspect facilities.

The U.S. Environmental Protection Agency has given Wyoming responsibility for running its own disposal system with federal oversight, and the state legislature is considering legislation to set up such a management program.

(continued from page 11)

FACILITY LOCATION:

Buffalo, Wyoming, Johnson County, Wyoming

PERMIT NUMBER:

Wy-0030341

The Cross C Campground is located approximately two miles west of the Town of Buffalo, Wyoming and consists of 18 permanent mobile home spaces and 30 campground spaces. Wastewater treatment is provided by a sanilogical package plant which discharges to Clear Creek (Class II Water). It is anticipated that this facility will connect to a new collection line which is scheduled to be built by the Town of Buffalo in 1982. The proposed permit requires compliance with National Secondary Treatment Standards and Wyoming's In-Stream Water Quality Standards effective immediately. Periodic self-monitoring of effluent quality is required on a regular basis with reporting of results quarterly. The permit is scheduled to expire February 28, 1986.

(4) APPLICANT NAME:

Ash Creek Mining Company

MAILING ADDRESS:

P.O. Box 6528
Sheridan, Wyoming 82801

FACILITY LOCATION:

Sheridan County, Wyoming

PERMIT NUMBER:

Wy-0025810

The Ash Creek Mining Company operates the P.S.O. No. 1 mine which is an open pit coal mine located approximately 10 miles north of Sheridan, Wyoming.

The discharge flows into Little Youngs Creek (Class III Water). The discharge must meet effluent limitations which are considered by the State of Wyoming to represent "best available treatment." However, the permit also contains a "re-opener clause" which requires the permit to be modified should more stringent limitations be developed at the federal level.

Runoff from disturbed areas will be controlled by sedimentation ponds which are designed to completely contain the runoff resulting from a ten year - 24 hour precipitation event. Because these ponds will not normally discharge, they are not specifically identified in the permit but are covered by operation and maintenance provisions.

Periodic self-monitoring of effluent quality and quantity is required with reporting of results monthly. The

permit is scheduled to expire January 31, 1986.

(5) APPLICANT NAME:

Wyodak Resources Development Corporation

MAILING ADDRESS:

Garner Lake Route
Gillette, Wyoming 82716

FACILITY LOCATION:

Wyodak Mine, Campbell County, Wyoming

PERMIT NUMBER:

Wy-0001261

The Wyodak Resources Development Corporation operates an open pit coal mine located approximately two miles east of Gillette Wyoming which is known as the Wyodak Mine.

The discharges flow into Denkey Creek (Class IV Water).

The discharges must meet effluent limitations which are considered by the State of Wyoming to represent "best available treatment." However, the permit also contains a "re-opener clause" which requires the permit to be modified should more stringent limitations be developed at the federal level.

Runoff from disturbed areas will be controlled by sedimentation ponds which are designed to completely contain the runoff resulting from a ten year - 24 hour precipitation event. Because the ponds will not normally discharge, they are not specifically identified in the permit but are covered by operation and maintenance provisions.

Periodic self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The permit is scheduled to expire January 31, 1986.

(6) APPLICANT NAME:

City of Casper

MAILING ADDRESS:

200 North David
Casper, Wyoming 82601

FACILITY LOCATION:

Sewage Treatment Plant
Natrona County, Wyoming

PERMIT NUMBER:

Wy-0021920

Western Roundup

Saving park views

While the Petrified Forest in Arizona failed to qualify, the National Park Service is proposing to protect 45 other areas with special air quality rules.

Through the Clean Air Act Amendments of 1977, Congress protected 48 units of the park system with the highest air quality designation — Class I. The legislation directed federal agencies to look for "grand vistas" or "breathtaking panoramas" that also warranted Class I protection.

The Environmental Protection Agency responded first, compiling a preliminary list last December of 182 vistas deserving special protection. Three of the 48 park areas, including the Petrified Forest, were deemed vista-less.

The park service has generally seconded EPA's suggestions, making only minor changes in the guidelines used for identifying such areas, officials say.

While Class I designation affects only new, major industrial sources of air pollution, vista protection may "require eventual reduction of pollutants from existing sources," park service officials say.

Final rules for protecting vistas,



Photo by Kent and Donna Hansen

however, rest with the states, which are required to design implementation plans under the Clean Air Act. In formulating those plans, states may consider economic and energy concerns in evaluating industrial development as long as they show "reasonable" progress towards reaching a long-term goal of visibility protection. Those state plans are due next September.

The search for scenic vistas at Glacier National Park in Montana is continuing, and that park is not on the draft list.

Williams plots

Rep. Pat Williams (D-Mont.) caught wilderness advocates off guard this month by announcing that he would introduce legislation to release 1.2 million acres of national forest in Montana for development. Williams said that industry and environmental groups had agreed the acreage was unsuitable for wilderness, and he wanted it freed for mineral exploration and timber cutting.

"He is trying to accommodate what he sees as a pro-development backlash," said Bill Cunningham, Montana's Wilderness Society representative.

The federal government's second Roadless Area Review and Evaluation (RARE II) studied 5.2 million acres in Montana and recommended 600,000 acres for wilderness, 3.3 million acres for non-wilderness and 1.3 million

acres for further study. State environmental groups, attempting to compromise with industry and timber interest, put forth a proposal under which they agreed that 1.2 million acres could be developed as non-wilderness.

But as Cunningham said, that agreement was contingent on comparable acreages getting wilderness designation. "We've been penalized for our attempts to reach some sort of consensus," he said.

Williams told the Missoulian that he was "merely trying to move on the areas where we have an agreement." Wilderness advocates, he said, "are playing this wilderness poker game just as they ought to."

But Cunningham and his colleagues were as much concerned about Williams as about his legislation. Cunningham called his failure to consult with concerned constituents "very out of character."

White River a bad choice, EPA says

The U.S. Environmental Protection Agency last week turned thumbs down on the proposed White River Dam in northeastern Utah.

Citing such potential problems as high sedimentation, water contamination, as well as the loss of habitat for several endangered fish, EPA Regional Administrator Roger Williams called the project "environmentally unsatisfactory" and criticized a draft impact analysis as "deficient."

EPA's comments came on a draft en-

vironmental impact statement prepared by the federal Bureau of Land Management, which must approve use of its lands for the state funded, \$22 million dam.

White River Dam is intended to supply water for oil shale development in the Uintah Basin, but EPA's Williams says alternative sources are available, including piping water from the nearby Green River.

Further engineering analyses and a state biological report are still pending.

FICTION and FACT from ETSI'S ALMANAC

FICTION: It would be better for all concerned if coal pipelines brought the water back in a separate pipeline.

FACT: This is a very common first reaction. But when the thinking person realizes that:

- The amount used (15,000 acre-feet) is less than Nature's ability to recharge.
- Enough water flows out of Wyoming each year to support 1,000 such pipelines.
- Even Wyoming's legal share of this outflow would support 250 such pipelines.
- The amount used is one-eighth that required to burn the coal here.
- Returning the water from Arkansas in a pipeline violates the growing Conservation Ethic by wasting steel pipe (290,000 tons) and electric power (52,000 horsepower).

Then one concludes that coal pipelines represent a conservation measure for Wyoming.

"Slurry Pipelines — Moving The Nation's Coal Safely, Cleanly, Silently, Cheaply"



Energy Transportation Systems, Inc.
330 South Center Street
Casper, Wyoming 82401 (307) 764-1800

Rock Springs, Wyoming 82901

Sweetwater County, Wyoming

Wy-0026083

FACILITY LOCATION:

PERMIT NUMBER:

The Volvic Mobile Home Park is located on the west side of Rock Springs, Wyoming. Wastewater treatment consists of a 3 cell lagoon of approximately 5½ total surface acres. The lagoon discharges infrequently, but when it does discharge the effluent flows to Bitter Creek (Class IV Water) via an unnamed drainage. Effective immediately the discharge must meet National Secondary Treatment Standards and Wyoming's In-stream Water Quality Standards. Periodic self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The permit is scheduled to expire April 30, 1986, however, it is expected that the park will be connected to the City of Rock Springs sewage collection system within one to two years.

STATE-EPA TENTATIVE DETERMINATIONS

Tentative determinations have been made by the State of Wyoming in cooperation with the EPA staff relative to effluent limitations and conditions to be imposed on the permits. These limitations and conditions will assure that State water quality standards and applicable provisions of the FWPCA will be protected.

PUBLIC COMMENTS

Public comments are invited any time prior to March 23, 1981. Comments may be directed to the Wyoming Department of Environmental Quality, Water Quality Division, Permits Section, Hathaway Building, Cheyenne, Wyoming 82002, or the U.S. Environmental Protection Agency, Region VIII, Enforcement Division, Permits Administration and Compliance Branch, 1860 Lincoln Street, Denver, Colorado 80296. All comments received prior to March 23, 1981 will be considered in the formulation of final determinations to be imposed on the permits.

ADDITIONAL INFORMATION

Additional information may be obtained upon request by calling the State of Wyoming, (307) 777-7781, or EPA, (303) 327-3874, or by writing to the aforementioned addresses. The complete applications, draft permits and related documents are available for review and reproduction at the aforementioned addresses. Public Notice No: Wy-81-004

The sewage treatment plant serving the City of Casper, Wyoming is an activated sludge plant which includes an anaerobic digester and a gas chlorination system followed by a contact chamber. The plant is currently in compliance with National Secondary Treatment Standards and discharges approximately 5.5 million gallons per day of effluent to the North Platte River (Class II water).

This permit is being modified to contain a pretreatment program schedule which will conform to Environmental Protection Agency regulations. Self-monitoring requirements in the proposed permit require the monitoring of all parameters on a routine basis with reporting of results monthly. The permit is scheduled to expire March 31, 1986.

(7) APPLICANT NAME:

Pacific Power and Light Company

MAILING ADDRESS:

P.O. Box 1200
Rock Springs, Wyoming 82901

FACILITY LOCATION:

Green River Water Treatment Plant,
Sweetwater County, Wyoming

PERMIT NUMBER:

Wy-0000027

Facility is a typical water treatment plant consisting of Alum flocculation, mixed media filters and chlorination. Filter backwash is routed to a settling pond where supernatant is recycled into the plant as raw water. Sludges from the flocculation process are routed to a sludge drying pond which also serves as an emergency pond for filter backwash. There is an overflow from this pond (discharge point 901) but there will be no discharge under normal operations. The discharge must meet limitations which are considered by the State of Wyoming to represent "Best Available Treatment" effective immediately.

A bypass for untreated water exists at the pumphouse, the permit allows use of this bypass only under emergency conditions and requires that the Department be notified immediately upon use. If experience shows that this bypass is used often, the permit will be modified to require treatment of the bypass water. The only reason for use of the bypass would be if there was a loss of power at the pumphouse but not at the plant itself, a situation which appears to be unlikely.

Any discharge would be to the Green River (Class II Stream). Because the facility is designed as a "no discharge" system, monitoring is required semi-annually. The permit will expire April 30, 1986.

(8) APPLICANT NAME:

Volvic Mobile Home Park

MAILING ADDRESS:

P.O. Box 666

14-High Country News — Feb. 20, 1981

Opinion



guest editorial

Second-hand steam could evaporate synfuels

by Neal R. Peirce

Here is a perfect example of how the Reagan administration could curb wasteful, inflationary government spending, assure a more stable U.S. energy future, and channel investment and jobs into hard-pressed urban centers.

First, follow the counsel of Office of Management and Budget Director Dave Stockman and "throttle back" on the synthetic fuels subsidy program. Congress last year authorized synfuels development at an initial \$20 billion, with a suggestion of \$68 billion more later.

Second, the administration could encourage, with minimal funds, a proven, century-old technology called "district heating" — which could eventually provide low-cost heat, hot water and cooling to the vast majority of America's homes and businesses.

National support for synfuels is extraordinarily thin.

Westerners rightfully fear coal and oil shale exploitation that would pollute their air, tax scarce water supplies and trigger growth of boom towns. Easterners foresee a massive diversion of scarce capital out of their economically pressed region. Environmentalists bemoan a program that would inject cancer-causing chemicals into the atmosphere. Stockman last year characterized synfuels as a "multi-billion dollar program (that) would not appreciably ease our energy problems."

District heating, by contrast, had an old-style American entrepreneurial birth 104 years ago when an inventive Lockport, N.Y., tinkerer named Bird-sill Holly decided it would be a smart, economic idea to produce steam with double duty — heating buildings and running fire engine pumps. He built a boiler in his basement and ran steam pipes across his neighbors' lawns to the fire station and down Chestnut Street

to nearby homes.

District heating flowered for a few decades in America, to a peak of about 150 systems in 1909. Then it tapered off as oil and gas for heating individual buildings became cheap and plentiful. Europeans, the Council for International Urban Liaison says, took district heating seriously. It now supplies one-third of all space and water heating needs in Scandinavia. The Soviet Union has 67 times our installed district heating capacity. Most modern systems use hot water, considered more economical, practical and safer than steam.

Today, by various scientific estimates, 50 to 90 percent of U.S. heating and hot water needs, plus considerable air conditioning, could be satisfied by district heating. The costs would be a fraction of the \$1 trillion-plus for full-scale synfuels development.

"If you add up the total amount of waste energy produced by all the electric power plants in the country," says Damascus, Md., district heating expert Theodore Taylor, "there's more than enough waste energy to heat the entire United States." The reason: Kinetic energy derived from an electric turbine represents only 30 percent of the energy potential of a conventional fuel burn. Remaining energy is released as steam or hot water. Recapturing it in pipes, in a process called cogeneration, gives 85 to 90 percent fuel efficiency. And hot water can be economically transported for up to 20 miles.

Cities or suburbs could build power plants to burn coal or garbage and pipe to residents the hot water produced. Homes and businesses could use the hot water in lieu of hot water heaters, and also circulate it through radiators for heating, or through radiators with forced-air systems for the same effect. Nashville has a garbage incineration plant that ingests everything from old

newspapers to orange peels, burns it to make steam and uses the product to heat part of downtown in winter and to run a refrigerator compressor that makes chilled water that is circulated for summertime cooling.

As fossil fuels continue their inflationary spiral in coming years, district heating will become more economical.

District heating systems could save the equivalent of 55 percent of the country's current oil imports by the year 2000, supporters say. Unlike synfuels, the technology is of a proven, "off the shelf variety." And since the systems would require thousands of semi- and low-skilled workers, they would create jobs for people where they live — in the cities — instead of creating intense demand for workers and scarce scientists to build questionable synfuel facilities in isolated Appalachian coal or Western oil shale areas.

The Reagan administration, says Taylor, might publicize district heating advantages, enact tax inducements, provide accurate information to cities on the systems — and then get out of the way and let the private sector build the systems without federal subsidies, except for the poorest cities.

Such counsel should be music to the Reaganites' ears. Nor need district heating systems simply serve cities, adds Taylor: Even rural areas with enough residences along a single road can construct economical systems. He suggests insulated, solar-heated ponds that can store 135-degree water in summertime for wintertime distribution with minimal temperature loss. Sweden already operates such systems — and they don't require an ounce of oil.

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Letters

"BALANCING" LAND USE

Dear HCN,

In the confirmation hearing for Secretary of Interior Designate James Watt, the word "balance" was used on numerous occasions by Mr. Watt and members of the Senate Energy and Natural Resources Committee. They spoke of balancing environmental preservation and conservation with energy development, grazing, forest management, and other utilitarian uses.

Persons concerned with preserving and protecting the environment agree that a balance is needed.

The fundamental difference of opinion between "environmental extremists" and "utilitarian extremists" is rooted in what constitutes the beginning point for measuring the compromises that need to be made. Those interested in utilizing our natural resources consider current land use and development patterns as the baseline from which to begin compromising to strike a balance of uses. Those interested in arriving at an environmental balance measure from another point in time.

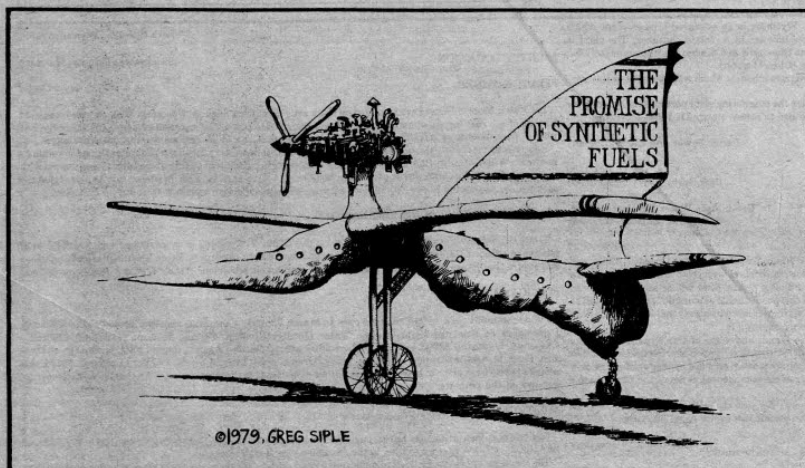
From a historical perspective the 48 contiguous states have a total land and water area of about 1.98 billion acres which, prior to the arrival of the European settlers, was all wilderness and undeveloped.

In 1700, this country had 127 million acres of wetlands and swamplands which produced untold numbers of wildlife, retained water in the spring (reducing spring floods), and, by releasing the water throughout the summer, maintained stream and river flows throughout periods of low rainfall. Today only 65 million acres of wetlands remain, 3.3 percent of the total land area.

Wilderness preservation has been criticized for locking up valuable natural resources. Excluding Alaska, there are presently 21.5 million acres of designated wilderness, roughly one percent of the original wilderness of which this nation was comprised. These figures are only two examples of what those who are concerned with the environment view as an imbalance in land utilization.

The "environmental extremists" don't want everything, only a fair share of what was originally present. The "utilitarian extremists" enjoy hunting, fishing, hiking, downhill and cross-country skiing, travel and scenic landscapes and don't want everything developed. Have the environmental groups given up too much already? Have utilitarians taken more than their fair share over the last 280 years?

A balance needs to be struck and it can be done without jeopardy to our wilderness system, our attractive landscapes and our waters. For example, there are 287 million acres of non-



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Opinion



A dam without a purpose is a risk to no avail

Biting and fighting their way through the debate, critics and supporters of the proposed White River Dam in Utah are exchanging a host of verbal volleys in what has turned into a war of imagery. They are now saying, respectively, that the choice is between building another Teton Dam or delaying another Tellico. What may ensue, however, is a dam that is not only structurally shaky and threatening to endangered fish, but also a concrete edifice that is useful to no one.

The state is bankrolling the White River Dam and reservoir with \$22 million to provide water for oil shale and other synthetic fuel production in the Uintah Basin, a promising energy field in northeastern Utah on the Colorado border. Like every big time dam project these days, White River has attracted its share of controversy.

State Division of Water Resources chief Daniel Lawrence wants Utah to tap the White River water before Colorado or some other state does, and he wants to build "his" dam before he retires. To sway the audience, Lawrence is comparing White River to the infamous Tellico Dam, which was held up by the endangered snail darter until Congress deemed the dam more valuable than the species. Lawrence thinks the people of Utah agree with Congress and so he asks: Do we care more about three nondescript endangered fish in the White River or the national need to develop new energy sources?

Utah Audubon Society leader Jim Pissot wants to save the 13.5 miles of canoeing and wildlife habitat that the dam would flood. To sway the audience his way, Pissot is raising visions of another Teton Dam, which collapsed several years ago in Idaho. Pissot, presuming Utahns do not want to build a dam that will buckle, points to a study by a ranking state geologist that finds the proposed White River site ill-fitted for a concrete structure.

Both Lawrence and Pissot have their supporters. The federal Bureau of Land Management, which owns the land, seems willing to go along with the state project. The U.S. Environmental Protection Agency, however, last week harshly attacked the dam. The EPA regional administrator alertly downplayed the endangered fish issue and stressed, instead, the option of using alternative sources of water.

The White River Dam project is anchored to anticipated oil shale development. But if the initial soundings from the Reagan administration are any indication, federal subsidies for synthetic fuel development may have left office with Carter, and energy firms may have to foot the bill themselves or abandon the effort.

The biggest user of the dam's water would be the White River Shale Project, a joint Phillips Petroleum, Sun Oil and Sohio venture, and project director Reese Madsen insists that they'll probably go ahead with plans to produce 100,000 barrels of oil a day by 1990 regardless of the feds' financial involvement. But the White River shale venture, Madsen admits, is mired in a swamp of Indian and private mining claims that could kill that project.

With no shale venture to water, the White River Dam, in the benefits vs. costs game, would be one big washout. Yet Utah Gov. Scott Matheson's natural resources staffer, Jim Butler, says all the state is asking of the oil shale firms is a

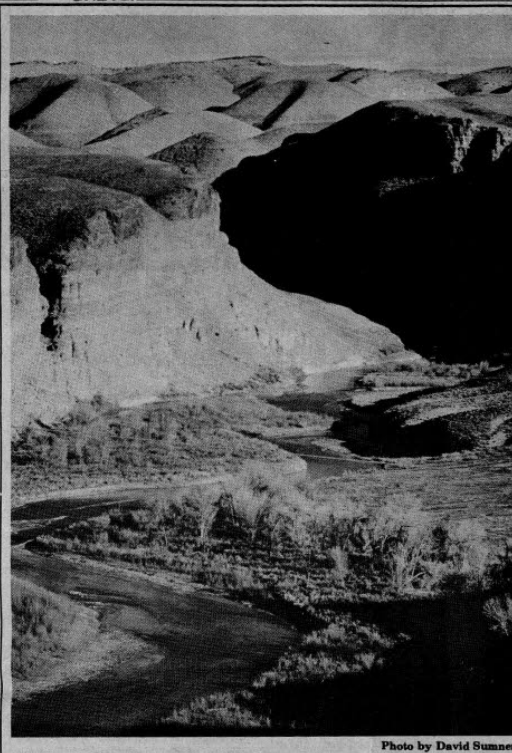


Photo by David Sumner

"firm commitment" to develop, a gentleman's agreement, not legally binding, that the companies are more than willing to give.

Build White River Dam today, given the project's tenuous economic and structural foundation, and all Utah may gain is the pleasure of snickering, "At least Colorado didn't get the water."

— MM

industrial private forestland in the U.S. which can produce vast amounts of timber but which are largely unmanaged and unutilized. We as a nation can no longer be wasteful but must manage our total resource base carefully and thoughtfully.

Forest landowners need to be taught that forest management is economical and beneficial and that forest wildlife species benefit from sound forest management. Changes need to be made in the way forest lands and timber are taxed. Owners of agricultural land need to be provided with incentives to manage their land for wildlife. Private landowners need better protection from illegal trespass and liability claims. They need social, political and economic incentives to properly manage land.

The world we live in is influenced by economics and we need to utilize economic and marketing principles to work for environmental enhancement and the production of wildlife. The skills developed by the business world in advertising, marketing and utilization of the communications media need to be applied toward the achievement and development of more effective multiple uses of our private lands as well as our public lands. The challenge for the

Reagan administration is to develop a program which identifies the environmental problems we face and change these problems into opportunities so that the private landowner is able to plan for, create and manage a high quality natural environment rather than placing that responsibility on the public.

Franklin J. Svoboda
Wildlife Biologist
Minneapolis, Minn.

THE HCN CIRCUS

Dear HCN,

Have you ever considered having your goat posed taking a bite out of "In the News?" Something good enough to eat. Perhaps the effect of a lingering anticipation of his doing such is really more dramatic.

Also, it is not clear whether he is triumphant in climbing the ladder or chagrined at being caught halfway up.

For a paper of the sterling qualities of the *High Country News* all things may be forgiven, even the goat (get your goat) and P.T. Barnum circus type. (Is it a freak show?)

Andrew Towe

BARLEY BLARNEY

Dear HCN,

I enjoyed your recent article on Colorado Senator Fred Anderson. (HCN 1-23-81)

Although the Andersons and I are poles apart politically we have been friends for many years.

I was somewhat puzzled by the article's reference to Fred as a barley farmer. It was my impression he has not personally farmed his place for many years.

It is rather common knowledge around here that the farm has been sold for development. It is better known as "The Anderson Farm Development."

Rusty Miller
Berthoud, Colo.

(Ed. note: Sen. Anderson says that he personally farmed all of his 160 acres last year; he has since sold half the farm to a developer, with rights to build houses on 12 acres, and hasn't decided whether he'll plant this year. "The pressure this session is really building," he said, "and I'm getting too old to get up at daybreak to set the water.")



This spring plant something that will really grow. Place *High Country News* in the hands of a friend and watch a growing awareness take root.



Enclosed is \$15 for 25 issues. Send HCN to my friend:

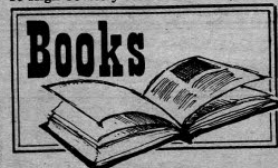
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Your address below:

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state & zip _____

Or send them a seed copy — ask for a sample. *High Country News*, Box K, Lander, WY. 82520.

16-High Country News — Feb. 20, 1981



by Michael Moss

The Farm and the City: Rivals or Allies?, Archibald Woodruff, editor; The American Assembly, Prentice-Hall, New Jersey, 1980, 209 pages, \$5.95.

Farmland, Food and the Future, Max Schnepf, editor; Soil Conservation Society of America, Ankey, Iowa, 1979, 209 pages.

The Future of Agriculture in the Rocky Mountains, E. Richard Hart, editor; Westwater Press, Salt Lake City, 1980, 152 pages, \$8.00

One of my younger-day memories is visiting Henry Dolezal, a great-uncle who raised grapes and almonds in California's Central Valley.

Just south of Manteca off Highway 99, his farm was an agrarian wonderland for the suburban child—the barn, with its dusty, real-life toys; the irrigation ditches, replete with black widows and other demons; and always, it seemed, a new ranch dog to pal around with.

In the evenings, I could count on a tear-jerking scalp rub from his fisted hands, calloused giants with chipped and blackened nails. Also in the evenings, over roast beef and garlic bread, there were those talks of toil and trouble.

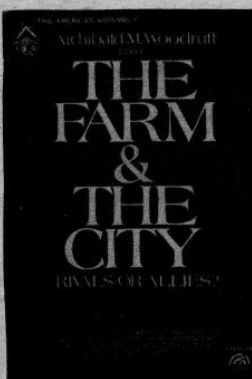
He seemed a burdened man. Invariably, there was some grave misfortune weighing him down. If the weather wasn't looming, then uppity Mexican farmworkers were. And if they were behaving, then some ignorant bureaucrat in Sacramento would be pushing a new pesticide or burning coal law.

In the early visits, my reaction to his plight-of-the-month was, "My God, what are you going to do?" The few times I spoke up, however, I'd get dismissed for the young rooster I was and he'd carry on with his quiet lamentings until succumbing to his big, brown recliner, leaving my parents to their bridge game and me to the television.

Since the first grape withered on the vine, no doubt, farmers have complained. It's in their blood and under their nails; their cynical natures call for a dose of salt. The ever-bad news gets wearisome to the urban listener and frustrating to young roosters wanting to help.

Wearisome and frustrating—those are also the hallmark of a bundle of new studies lately attempting to solve one of agriculture's biggest problems: disappearing farmland and the demise of family-run farms. Government regulators, planners and other land-use problem-solvers, it seems, have adopted the farmers' gloominess. As with my great-uncle's tired declarations, their complaints are long, their answers few.

But it's food on our plates they're talking about, and the salt of the earth that brings it to our tables. The situation, indeed, seems bad. In short, we're losing it—farmland—and we're losing



them—farmers. It's a country-wide trend that has not exempted the Rocky Mountain region.

LOSING GROUND

On either side of the great range, Utah's Wasatch Front to the west and Colorado's Front Range to the east, people are choosing to build their homes on the best agricultural soils.

Ninety percent of the Beehive state's population has clustered around Salt Lake City in the Jordan Valley. Prime soils that once sustained high yields of vegetables grown on 80-acre farms are now paved. Up to 30,000 acres of farmland in the valley is converted to urban development every year, a loss of more than one-seventh of the valley's total resource of 200,000 acres.

Colorado's sprawl north and south from Denver has consumed 1.3 million acres of irrigated cropland during the last two decades. Again, growth is occurring on the state's best soil. The Front Range has historically accounted for 40 percent of Colorado's total farm production; Weld County on the Wyoming border ranks third in the U.S. for production levels. Both records are slipping.

Throughout Utah and Colorado, pockets of fruit orchards and expanses of rangeland are also succumbing to other developments, such as power plants, military schemes and surface mines.

To the north, Idaho's population has expanded by a third this past decade. Boise, absorbing much of that growth, lies in the heart of a valley that once specialized in sugar beets, fruits and hops.

Rising land costs and taxes, declining support systems such as farm equipment dealers, and a nuisance factor that ranges from vandalism to complaints from urban neighbors disgruntled by farm noises and smells, can indirectly pressure farmers and throw three acres out of production for every acre that is directly built upon.

An expanding mining industry surrounding Pocatello is threatening traditional harvests of alfalfa, beans, sweet corn and those famous potatoes. Resource development is also the main threat in Wyoming, where most of the agricultural land is rangeland. Farmers and ranchers near the growing communities of Gillette, Casper, Rock Springs and Douglas are being forced out. Energy development throughout the state is forcing showdowns with agricultural users over water.

Throughout the country, the conflict is the same. The conclusion being reached by most problem-solvers is that

Farmland Food and the Future

Edited by Max Schnepf

Soil Conservation Society of America

suburbs and development are winning the war.

Asphalt is not the only danger a plowed field faces today. Vast acres of prime soil are being blown or washed away much faster than new topsoil is created; the rate of deterioration is faster than in the Dust Bowl years of the thirties, according to one study. Salinity is on the rise; water quality is on the decline. Today's farmer also faces a variety of traditional economic headaches and new operational problems, including an ever-dwindling supply of labor, which is being siphoned off by higher-paying energy development jobs.

LOOKING FOR ANSWERS

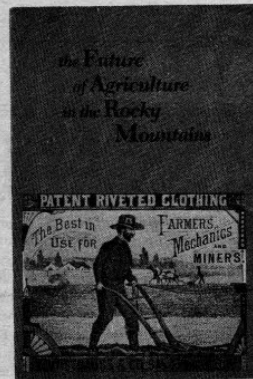
Perhaps because it most directly challenges our land ethic, the conversion of farmland to non-farming uses is receiving the most attention from the problem-solvers. Dozens of state and federal studies are underway seeking answers to the questions: Where is it happening, why is it happening, and what, if anything, can be done to prevent the loss of farmland? The literature is stacking up like autumn trimmings in an orchard.

From the Secretary of Agriculture to the lowly county official, from the Farm Bureau leader to the agrarian reformist and from the housing developer to the consumer representative, everyone seems to have an opinion. And everyone brings to the issue a particular expertise and bias. The economist thinks in dollars and advocates tax reform. The federalist fears for states' rights and demands local control. The philosopher plunges through to the deeper meaning and sees a lasting solution only in a new land ethic.

The Farm and the City: Rivals or Allies? and **Farmland, Food and the Future** taken together, run the gamut of opinion and perspective. These 24 essays collectively offer an excellent introduction to the issue.

Historians trace the growth of cities and their interaction with farmland. Biologists discuss the ecological implications of farmland loss. Geographers present land ownership patterns and trends. Economists analyze the role that private markets can play in shaping future ownership patterns. And a variety of problem-solvers summarize the smorgasbord of solutions being offered and tried, including differential tax assessment, purchase of development rights, land trusts, agricultural districts, and a range of zoning schemes.

The Future of Agriculture in the Rocky Mountains applies this national perspective to the Rocky Mountain



Region. The fruit of a conference held in October, 1979, by the Institute of the American West in Idaho Falls, essays in this collection detail the quantity and quality of farmland in the region. They also include general discussions of unique regional threats to farming, including coal-fired power plants and other energy development.

Interestingly, editor E. Richard Hart, who coordinated the conference, admits that Rocky Mountain agriculture cannot stand on economic grounds alone. In a free market, without government subsidies or intervention, it's unlikely farmers will be able to compete with resource developers for land and water. In his introduction, Hart cites Wendell Berry's classic work, *The Unsettling of America*, and argues for a cultural, humanistic justification for farming the Rockies.

IGNORING THE FARMER

There's a consistent, and disturbing, thread running through these and most analyses of the farmland preservation problem. Almost exclusively, experts are talking to experts, and usually left out of the discussions is the one figure integral to the success of any technical or political fix—the farmer.

There's good reason. Today's farmer continues, for the most part, to take a frustratingly hard-line stand on the issue of government intervention. It remains a widespread conviction among farmers that landowners have a God-given, inviolate right to use their land as they please. That right, many feel, includes making a profit by selling out to a developer, if the occasion arises.

Even those who want to continue farming seem unable to bite the bullet on government land-use regulation. Yes, many a farmer will admit emphatically, developers may well run me out of business; but no, accepting government interference in my life is an unacceptable solution. That attitude makes most planning attempts to date, including zoning, doomed to failure with only minimal pressure from developers.

The problem-solvers come up with regulatory solutions for preserving farmland, but their efforts remain on a collision course with the traditional values of private ownership. As Garrett Hardin noted, it's a tragedy of the commons.

