

High Country

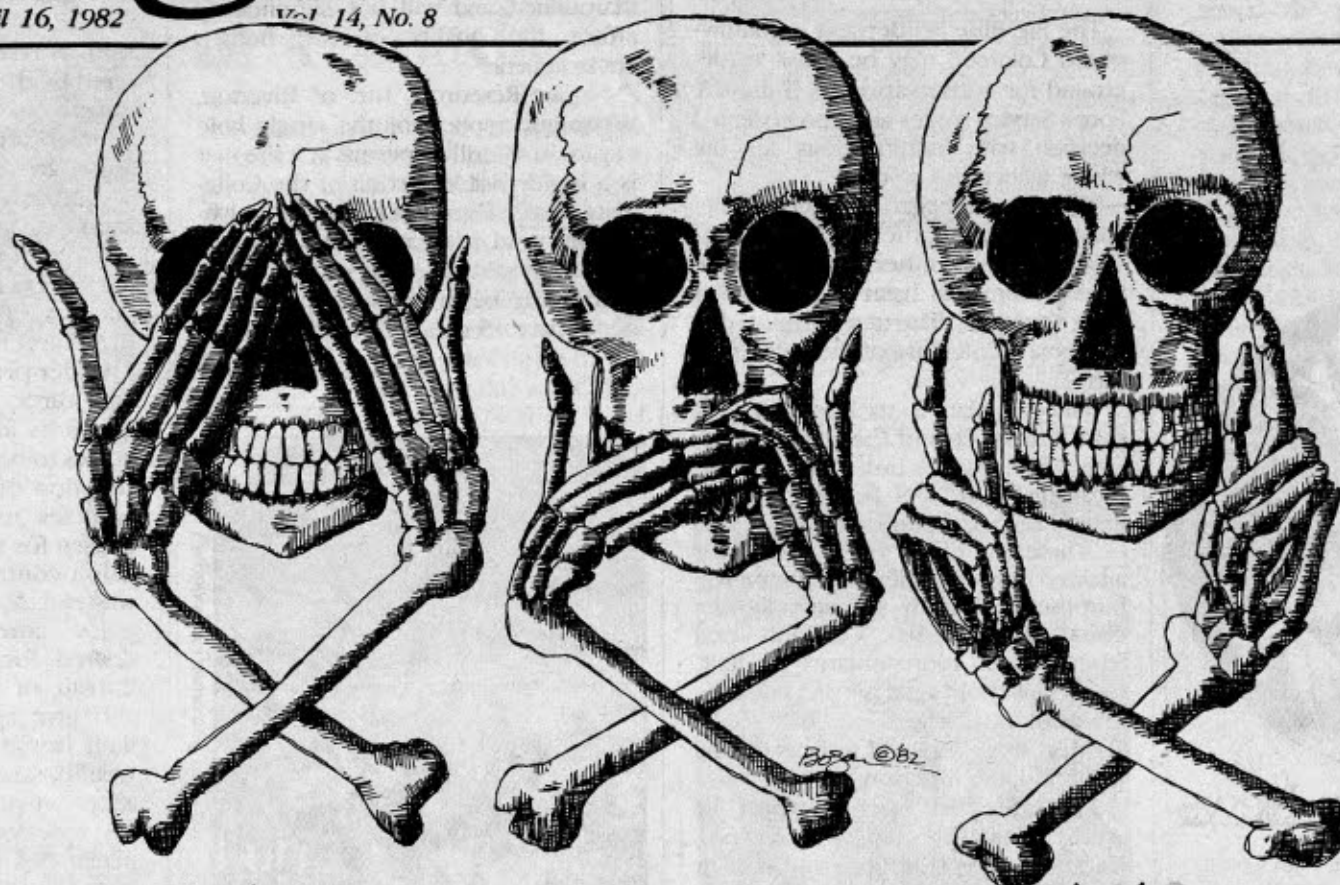
news

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THE BIG SECRET: Highly toxic pesticides in the Rockies

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Although the use of toxic chemicals in the Rocky Mountains is a public health concern, it is not a matter of public record. Specific and complete information on the use of chemicals restricted by the U.S. Environmental Protection Agency because of their extreme toxicity is not available. What records are kept — and they are spotty at best on both state and federal levels — may not be examined by just anyone. Pesticide "privacy" rules prevent the disclosure of such information to protect chemical applicators and sellers from their competitors.

At the same time, the use of highly toxic chemicals has not waned, despite renewed national concern over the issue growing out of New York's Love Canal tragedy. Farmers in the West, faced with possible crop losses to insects or fungus, reach for chemical solutions at least as potent as the DDT that was banned years ago. Those chemicals, some old, some new, are still turning up in the food chain, and in the West, where a large portion of the population hunts for food, there is new concern that game animals may harbor dangerous amounts of toxic chemicals.

Richard Fichtler, a lifelong Montana resident from Missoula, makes a trip at least once a year with a group of friends to hunt on the state's eastern plains. Fichtler was raised eating game meat, and it is the predominant meat on his family's table — he is more than just a recreational hunter.

But last year, Fichtler and his friends ran into a problem. Just before the hunt-

ing season, they read in the papers that birds in eastern Montana had been found to have in their fatty tissues traces of endrin, a highly toxic chlorinated hydrocarbon pesticide. It seems farmers, fearing an attack on their winter wheat by army cutworms, had been spraying their fields since March with the pesticide.

Endrin is no mild bug killer. It is more toxic to birds, fish and many mammals than the banned pesticide DDT. A dose smaller than a pea would kill an average human. Although media reports on the Montana problem were confusing and often contradictory, Fichtler, who with his wife Kathleen had been contemplating parenthood last year, did not want to risk putting contaminated birds on the table.

Fichtler and his friends decided to avoid game birds entirely, and before they hunted deer they wanted to be sure the animals hadn't been grazing on endrin-sprayed wheat fields. So they called the Montana Department of Agriculture and the Department of Fish, Wildlife and Parks and asked where the spraying had taken place. All they got in response was a recipe for cooking endrin-contaminated game.

They next called county agricultural extension agents, asking for specific information on spraying. They were told that the agents could not reveal "important marketing information for the various pesticide companies" to the public. Off the record, some of the agents told them which drainages were all right.

Finally, the hunters got land ownership maps, opened their phone books, and started calling farmers directly. It worked, though "we spent many nights on the phone," said Fichtler. The

farmers cooperated, telling them where they had sprayed, though a few lectured the hunters on the benign nature of pesticides.

When they finally *did* hunt, Fichtler said, "We ended up selecting deer pretty much the opposite of the way we usually did, selecting for younger animals, females and that sort of thing, to kind of cinch up the fact that they hadn't migrated out of the area."

Montana's endrin scare changed a lot of hunting habits. Many chose not to hunt at all — license purchases were down 50 percent. And many of those who purchased licenses didn't use them, according to Wilbur Rehmann of the Montana Wildlife Federation.

Hunters were not the only ones stymied by the "privacy" veil that darkened to the public all Montana files detailing pesticide use. Stan Walthall, an environmental health specialist with Lewis and Clark County, said his department tried unsuccessfully to get information on spraying around Helena. They intended to test water and food for contamination by any heavily used chemicals, as part of their mission to protect public health.

County officials argued back and forth with the state Department of Agriculture, which is in the midst of revising its pesticide regulations. Months later, the county is still waiting for that information.

The state's law protecting the "privacy" of pesticide users and sellers is a source of much confusion, but there is no question as to its origin. It is there because chemical retailers and pesticide users want it there, because, they say, they have to keep the locations and

amounts of pesticides used a secret from their competitors. In Montana's efforts to protect and encourage its agriculture industry, state agencies have never challenged this peculiar form of trade secrecy — nor have any other states in the region.

This is not the only hindrance to persons or organizations seeking information about pesticide use. Montana is considered relatively "enlightened" in its regulation of pesticides, yet its record keeping on pesticide use is fragmentary at best. When, for example, endrin began showing up in game birds, there was no ready record of where it had been used. To this day, the acreage figures on endrin-sprayed fields are more a guess than an exact tabulation. In Wyoming and Colorado, where endrin is also used, acreage figures are even less certain.

Even the information that the Montana Department of Agriculture *did* have, it felt duty bound not to reveal.

Few of the Montanans and others around the country who read about endrin in the newspapers last year would recognize it as one of the chemicals author Rachel Carson warned about in *Silent Spring* 20 years ago. While everyone knows of DDT, which was banned because of its persistence in the environment and its deadly effect on wildlife, the large family of chlorinated hydrocarbons to which it belongs includes endrin, toxaphene, 2,4,5-T, and many more — some of which are banned, some of which are not, and some of which, like endrin, are restricted in their uses.

To Rachel Carson's philosophical
(continued on page 10)

WESTERN ROUNDUP

Proposal: Bulldoze wilderness

The Big Blue Wilderness in southwestern Colorado may be a new battleground for conservationists if the U.S. Forest Service makes an unprecedented decision with ramifications for the whole wilderness system.

The situation began when O.M. Gallegos, a heavy equipment operator from Craig, Colorado, inherited a hard rock mining claim that hasn't been worked since the 1930s. The claim is located in the most scenic part of the wilderness area.

Gallegos' plan is to blast a mining shaft into the face of the cliff and excavate material with a bulldozer. Gallegos estimates there will be only one-half acre of surface disturbance.

"There has never been a bulldozer allowed in a wilderness area for mining purposes, especially for an unproven claim," said John Sisk, Colorado Open Space Council representative in Montrose. "This could set a big precedent for the whole wilderness system."

Craig Rupp, regional forester for the Rocky Mountain region, said that once Gallegos files an operating plan for access to his site, "then we have to provide him reasonable access to it, with the least amount of impact according to court rules. It's a real balancing act."

Sisk also questioned the validity of the claim. "Gallegos said it has a vein of silver of incredible value. I don't blame the guy for wishing, but he is dreaming."

The Forest Service is now working on the environmental assessment. The operating plan calls for the bulldozer to pull an air compressor along an abandoned mining road to within a half mile of the site, then go cross country. The mine site is at 13,000 feet, about four miles within the southern boundary of the 100,000 acre wilderness.

Sisk said the environmental groups are organizing. "Everyone from the Uncompahgre Resource Council to the Sierra Club Legal Defense Fund and every citizen group in between is getting together. If the Forest Service comes out with permission for a bulldozer in there, it's a case for appeals. We're not going to let a bulldozer roll in there," he said.

The Forest Service will decide by May 29 whether to approve Gallegos' plan.

In another action by the Forest Service, approval was given for helicopter access to a mining exploration site atop the continental divide in the Collegiate Peaks Wilderness near Buena Vista. The decision, signed April 9 by Wilkins, stated that helicopters have "only a slight affect on the ecosystem." And by their use, "wilderness values will be maintained...and will not significantly affect the quality of the human environment."

Nupec Resources, Inc. of Riverton, Wyoming, applied for the single hole exploratory drilling permit at a site that is a highly visible portion of the Collegiate Peaks. The claim promises molybdenum, gold, silver and other minerals.

Wilkins said the project's implementation may begin immediately. Opponents have 45 days to file an appeal.

— Marice Doll



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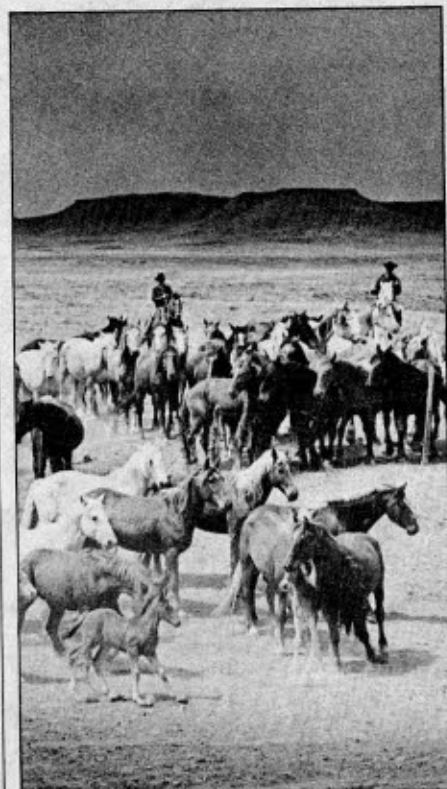
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Montana Chamber of Commerce

Bill proposes selling excess wild horses

The sight of a wild stallion, mane streaming in the wind, has not lost its allure for most visitors to the West's open spaces. But in a little over a decade, the U.S. Congress has come full circle on the subject of strong legislation to

protect the herds in 1971 to the introduction of bills aimed at efficiently reducing their numbers in 1982.

Sen. James McClure (R-Idaho) and Rep. Don Young (R-Alaska) have introduced identical legislation that would amend the Wild and Freeroaming Horse and Burro Act to allow the sale of excess animals.

The problem appears to be of Congress' own making. According to figures cited by McClure, horse populations have grown dramatically since the passage of the act. In 1971 some 17,000 animals roamed federal lands administered by the U.S. Forest Service and the Bureau of Land Management. Their numbers reach almost 45,000 today. Most are in Nevada (26,050), and Wyoming (9,000), California (3,320) and Oregon (3,270).

"The act merely elevated the horse to the level of some sort of sacred animal," said Dave Tidwell, a special assistant to BLM Director Bob Burford.

Under present law, the agencies have only three options when a herd outgrows its food supply: to move excess horses to new ranges, to put them up for adoption or to kill them. Allowing the agencies to sell horses that are not chosen for adoption would make population control cheaper, easier and less wasteful, McClure said.

The amendments, which are first drafted for the congressmen by the Bureau of Land Management, would also give agencies more authority to limit horse numbers on public lands, would streamline horse and burro adoption procedures, would set up an advisory council and would set stiffer penalties for violations of the horse and burro law.

"It's simply untrue that there's an over-population of horses," said Lewis Regenstein, vice-president of the Fund for Animals. "This will mean horses will be sent to slaughterhouses for cat and dog food or to Europe to be sold as horse meat."

Regenstein said that if Congress wants the program to be more cost effective, it should "leave the horse alone," subject to natural methods of population control.

But most environmental groups, disturbed by denuded landscapes where horse numbers have grown too high, are not expected to oppose the changes. McClure said he worked closely with groups such as the National Wildlife Federation and the Izaak Walton League in preparing the legislation.

For the National Wildlife Federation, the issue boils down to one of conservative management of resources.

"The BLM already has the authority to kill horses," said Dusty Zaunbrecher, a resource specialist for the conservation group. "They just don't have the authority to sell the carcasses. If sales can help

Dear friends,

High Country News has recently embarked on an experimental project in direct mail subscription solicitation. The results are still coming in, but the reaction from some of the recipients of our "junk mail" has occasionally been spirited.

While it is our fervent hope that each newly-arrived, "postage will be paid by the addressee" envelope will contain yet another order for a subscription, this is not always the case. The national annoyance level seems to have reached highly sensitive proportions and Box K has not been immune from the junk mail revolt.

Some disgruntled recipients, realizing that *HCN* must pay postage on the envelopes whether there is anything in it for us or not, simply fold up the entire piece and send it back — absent, of course, the subscription blank. The less industrious seal the envelope and mail it unfilled.

Others send back the subscription blank with the relatively polite note, "Please remove my name from your

mailing list." This is a worthy thought but is, in this case, misdirected, because *HCN* bought the lists it used from other publications. The recipient would have to find out which list his or her name came from and ask that publisher to remove it, so that it will not be sold or bartered to other direct mailers.

One fellow from Montana removed his name from the order blank and wrote across it, "Communist newspaper."

Finally, there are those who are already subscribers to *HCN* who received the pitch. Although the lists were computer-culled in an attempt to remove *HCN*'s current readers from them, an occasional current subscriber slips through. A couple who wrote to us gave us pause. After cautioning us to save money by not sending such things to folks who already receive the paper, they wrote, "Your letter looked just like every other direct mail piece we get. We were very disappointed."

This proves, we suppose, that our readers expect something out of the ordinary from us. As an office that

receives far more than its share of direct mail solicitations, we know how unwelcome "junk mail" can be. However, there appear to be few other ways for us to get *HCN*'s message out to potential subscribers.

With this issue, we would like to welcome our new readers and hope that they enjoy the paper they ordered more than they enjoyed the mail that induced them to order it.

Susan Tweit, our industrious intern, has departed *HCN* with this issue. Her swan song is a centerspread (pp. 8 and 9) on medicinal herbs. She will be going to Laramie, Wyoming to become director of the Women's Studies Center at the University of Wyoming. She did a good job for us here at *HCN*, regularly pecking out Bulletin Boards, Hotlines, and Roundups. We are certain that she will turn in a fine performance at UW as well.

We have already selected an intern for the summer, but anyone interested in this unpaid position working with a batch of heartless editors for the fall should send a resume to *HCN* before June 30.

— the staff

generate money to run the wild horse program, the agency should take advantage of that."

The BLM spent \$4.4 million on the wild horse program in 1981. BLM's Tidwell thinks the proposed changes could put the program in the black.

— Joan Nice



To 'bile or not to 'bile

Letters are again pouring into Wyoming's Grand Teton National Park on the controversial question of whether off-road snowmobiling should be allowed in the Potholes area as an exception to the national policy, which limits snowmobiles in national parks to unplowed roadways and frozen lake surfaces.

The occasion for the latest volley is an extension of the comment period on the proposed rules for the area, which were published in the *Federal Register* on March 1. Park officials said they had received between 40 and 50 letters since the announcement that the comment period would be extended to April 30.

The proposed rules would make permanent the "Stark compromise" put into effect on an experimental basis by Grand Teton Superintendent Jack Stark two years ago. Under the compromise, 16,000 acres in the 29,000-acre Potholes remain open to snowmobiling, while the surface of Jenny Lake, an area more popular with cross-country skiers, remains closed.

In addition to the perennial questions of whether snowmobiling is appropriate in national parks and whether the treatment of the Potholes sets a precedent that weakens the national policy (*HCN*, 1/8/82), the current debate also centers on more practical questions of enforcement.

A petition being circulated in Jackson Hole charged that "since your proposed policy has been in effect, there have been numerous boundary violations especially in the Oxbow area and along the Snake River bottomlands which have abundant wintering wildlife populations...It seems that you have set up a situation that cannot be effectively controlled."

Chief Ranger Alan Atchison acknowledged that boundary violations are a problem. Stepped-up patrols this past winter resulted in nine citations and 13 warning tickets — "more citations than in the past five years put together" — but Atchison estimated that actual violations probably totaled several hundred. "You just can't be every place at once," he said.

That problem is likely to be compounded in the future as budget cuts and personnel reductions require enforcement officials to cover the same amount of ground with fewer resources and "marginal" machines. This year, the

area was more thoroughly patrolled than ever before and violations probably went down, but, added Atchison, "we sacrificed some other things in order to do it."

Public input not required in Canada

Despite public outcry on both sides of the U.S.-Canadian border over the proposed Cabin Creek coal mine, the British Columbian government is not required to hold public hearings on the issue.

The Sage Creek Coal Company's proposed open pit coal mine would be located about eight miles north of the Montana border, straddling Cabin Creek, a tributary of the North Fork of the Flathead River. The company proposes to excavate two mile-wide, 1,000-foot-deep pits where two 1,000-foot-high hills now stand. Environmental concerns span the border and include silt pollution in the North Fork and Flathead Reservoir, interference with big game migration routes and loss of critical habitat for the threatened grizzly bear and endangered wolf.

Although the B.C. government has just released a stage two environmental assessment including the same type of information that would be found in a U.S. environmental impact statement, the Canadian provisions for involving the public in the review of that document are radically different.

In Canada, although the relevant documents are made public, the review process is essentially a technical review conducted by the government for the government. The proposal is now being reviewed by the Coal Guidelines Steering Committee, an interministry committee that will make a recommendation to the provincial cabinet. According to the group's secretary, Raymond Cook, the steering committee's mandate is to coordinate the concerns of 15 or 16 provincial ministries and see that all of them are satisfactorily addressed in any proposal that goes to the cabinet with a favorable recommendation.

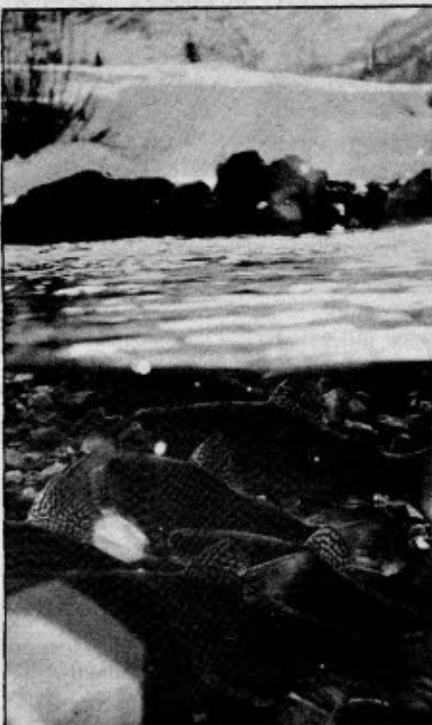
The proposal must then secure the approval of the Environment and Land Use Committee, a group that includes half the cabinet. This committee has the option of holding a public hearing, but Cook said it has not held hearings on mines in the past. In general, he said, "if the ministries can live with the mine decision, then it is acceptable to the provincial government."

The Coal Guidelines Steering Committee "has no mandate" to consider the mine's impacts on the U.S. environment, according to Cook. And although there have been some informal exchanges of information between B.C. and Montana officials, he said U.S. citizens wishing to press their concerns "would have to follow channels," going

to the U.S. federal government, which would then go to the Canadian federal government, which would in turn go to the B.C. provincial government.

Montana conservationists are just beginning to reorganize themselves on the issue, which they also contested five years ago. James Cumming, a Columbia Falls lawyer who advised the Flathead Coalition then, said legal action this time is "a distinct possibility," although the group has made no firm commitments.

The 1976 Foreign Sovereign Immunities Act could make such a challenge easier. The law abolishes the claim of sovereign immunity in all matters where a U.S. citizen is injured by an activity of a foreign country and "makes it possible for U.S. citizens to file suits in U.S. courts against foreign countries," Cumming said.



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Avoid taxes: create homes for fish

An Oregon bill designed to protect riparian habitat will go into effect January 1, 1982 and the Idaho Department of Fish and Game may follow suit by proposing a similar bill to its legislature next session.

Following an aggressive lobbying campaign by the Fish and Wildlife Department and conservation groups, the Oregon legislature passed a bill in 1981 that provides tax incentives for landowners who voluntarily enact programs to protect their streams and banks.

Starting in 1983 an Oregon landowner will not have to pay county property taxes on land up to 100 feet on either side of the stream if the Department of Fish and Wildlife approves the landowner's plan to protect the riparian area. The landowner can also claim a state income tax credit for up to 25

percent of the costs incurred in a fish habitat improvement project.

Fish and Wildlife biologist Errol Claire said the department convinced farmers, ranchers and legislators that preserving riparian habitat — streambeds and adjacent wetlands — saved farmland from erosion, turned intermittent ditches into perennial streams and stabilized the water table. The side benefits include cleaner water and vastly improved fish and wildlife habitat. Claire said ranchers initially resisted the proposals to fence their streams because it meant a loss of grazing land. By making the program voluntary and offering tax incentives for those who joined, Claire said the ranchers' protests were effectively defused.

Claire said if the program is fully implemented the counties would lose a maximum of \$6,000 a year in tax revenues. To spare the counties financial hardship, the bill allows for a maximum of 100 miles of stream to gain tax exemption in a year. Participation in the program is limited to lands that are zoned agricultural or forest land.

Idaho Fish and Game Department Director Jerry Conley said his department is "very interested" in the program and may submit a bill to the 1983 Idaho Legislature "very similar if not the same" as the Oregon bill. The Idaho Conservation League, which initially proposed the idea to Conley, will work this summer on drafting legislation and building support for a riparian protection bill, according to ICL Director Pat Ford.

— Glenn Oakley

Washington rejects oil pipeline

Acting on the recommendation of the Washington Energy Facility Site Evaluation Council, Gov. John Spellman on April 8 rejected the application of the Northern Tier Pipeline Company for a permit to construct the controversial Northern Tier Pipeline project.

Northern Tier has spent \$55 million to gather over 1,400 permits during the last five years to build an oil superport at Port Angeles, Washington, and a 1,500 mile pipeline under Puget Sound and across the Northwest to a distribution point at Clearbrook, Minnesota. The Washington permit was the sole remaining hurdle (*HCN*, 10/30/81).

Saying the Northern Tier had failed to show that the submerged portion of the line could operate without rupturing, Spellman branded the \$16 billion project "a very real threat to Puget Sound."

In addition, Spellman agreed with the site council's conclusion that the danger of explosion and fire at the Port Angeles dock would be extreme. The site council recommended denial of the permit in January after more than a year of public hearings which produced 44,000 pages of testimony.

Spellman was under pressure from the federal government to okay the project. Both Presidents Jimmy Carter and Ronald Reagan claimed the line was vital to national security. The line would have moved Alaskan and Persian Gulf crude oil to landlocked refineries.

Northern Tier officials were guarded in their comments after Spellman's announcement and said they would study the decision before announcing further plans. But U.S. Secretary of Energy James Edwards criticized the decision as "parochial" and raised the possibility of federal intervention to override the permit denial.

Northern Tier is a joint venture of Getty Oil Company, U.S. Steel, Westinghouse, Burlington Northern, MAPCO Inc. and three smaller corporations.

— John Soisson

BARBED WIRE

How's that again? A sign at a Denver reapportionment hearing read, "Stone Age politicians do it with their gerrymanders."

Nuclear fishin'. Having abandoned plans for several nuclear power plants, the Washington Public Power Supply System is trying to figure out what to do with the six-story high cooling towers it built at the Hanford nuclear reservation. The latest idea: use the concrete ponds at the base of the towers as fish hatcheries, with water from the Columbia River.

Shafted. A Rock Springs, Wyoming, man knocked out a wall in his basement and discovered an abandoned mine shaft. Even after lowering himself 30 feet into the darkness, he still couldn't find the end of the opening.

First, you have to have a heart. Interior Secretary James Watt told the Izaak Walton League meeting in Des Moines, Iowa, that Americans "should use the resources as though we love them, harming them as little as possible so that the resources will continue to help us meet our economic needs, help us to enjoy life more fully and help us to survive on earth."

WESTERN ROUNDUP

R/UDAT: a different way to plan

Six high-powered land use planning specialists converged on Jackson Hole, Wyoming recently for an intensive session to help the resort community direct future development while preserving open space values.

The team, known as a R/UDAT (Rural/Urban Design Assistance Team), was assembled by the American Institute of Architects, which has provided this service to 74 communities since 1967, when a flooded Rapid City, South Dakota, made the first appeal for AIA assistance. R/UDATs, arranged at the request of local AIA chapters and community officials, have dealt with a wide range of planning problems over the years, from the revitalization of downtown business districts to the development of growth control strategies for outlying areas. Team members donate their time and agree not to accept commissions if future work results from R/UDAT's recommendations.

In Jackson Hole, the study area was South Park, a 12,000-acre area southwest of the town of Jackson that is a logical and rapidly developing "urban expansion area." The interceptor line to the new municipal sewer plant runs through the area and a majority of the county's development since the plant's construction in 1980 has occurred in South Park. Nonetheless, the area still includes significant wildlife habitat and several large family-owned ranches that preserve scenic vistas and a western flavor important to both residents and tourists. There is substantial economic pressure to develop the ranches.

The challenge facing the R/UDAT was to make recommendations that would give the ranchers fair and economical alternatives, permit substantial development and still preserve the area's significant amenities.

For three days, the team — a lawyer, an architect, an economist, a land use planner, an urban design professor and the team's wildcard, a professional southern gentleman and Louisville, Kentucky landowner — engaged in non-stop private meetings with local landowners, public officials, private citizens and each other.

The report is, of necessity, general and it does not contain "a whole lot that we haven't already talked about," according to county planner Dan Cowee. But he said it did identify "things that really need some more work" and he had high praise for the opportunities the R/UDAT gave the community "to give their honest opinion without being pressured one way or the other."

Story Clark of the Jackson Hole Alliance for Responsible Planning, a citizen group, was also enthusiastic about the weekend, which she thinks improved the image of planning in the community and helped residents focus on the "commonality of interests" in South Park for the first time. "They didn't come up with a whole lot of new ideas, but a whole lot of ideas have already come into this valley. They filtered through a hell of a lot of ideas and focused us on the ideas that they think are most important, and they put it all together in a package for South Park for the first time."

She felt the R/UDAT program can be helpful to other Rocky Mountain communities as well. "What was really exciting was that we had access to five or six really bright, experienced people who came to help us. For pennies relative to normal planning costs, other communities can also get 'top notch help.'"



Greg Ray, Wyoming Game & Fish

Guides may face permit changes

The U.S. Forest Service is considering changes in its permitting of outfitter and guiding activities in the national forests. The agency says it wants to increase the fee collections paid by outfitters to the government, but outfitters say some of the proposed changes could drive them out of business.

Under current Forest Service policy, "the minimum fee which may be charged per service day is 25 cents...Almost all permits provide for use of this 25-cent minimum." Annual fee collections are estimated to be \$500,000 from permittees whose gross revenues exceed \$50 million.

In addition, current permit holders are given preference for new permits in the following years, provided they have conducted their businesses in accordance with Forest Service guidelines.

To increase the fee collections to reflect "value of permit use," the Forest Service is proposing three options. First, establish a minimum percentage amount of the permittee's gross revenue — between two and 10 percent — as the fee. Second, increase the minimum fee, but continue to base it on service days. Third — and most troubling to the outfitters — install a competitive bidding system, eliminating the season-to-season preference given to existing permit holders.

The Forest Service has prepared a paper reviewing the various options, but according to Wayne Johnson, a partner in Barker-Ewing Float Trips in Jackson, Wyoming, and a director of the Western River Guides Association, "They've pretty much told us that they intend to institute the bid system. They want the permit fees raised substantially and no preferential use based on historical use of the forests."

Johnson concedes that the outfitters and guides have gotten "a bargain" with the low fees charged so far and that there is little resistance to increasing them. However, he said, "If you were on the last year of a permit that was going out for competitive bids, you would not be guaranteed of being in business next year. So you wouldn't invest in any new equipment — rafts, tires for your vehicles, whatever. The quality and safety of the trips may suffer."

"This could affect a lot of guides who have invested time and effort in building a business. You can't do that if you have

no reasonable assurance that you're going to be in business next year."

Charles Petersen, vice-president of the Wyoming Outfitters Association, told the *Jackson Hole Guide*, "If it goes to sealed bids, there won't be any more outfitters. Oil companies will own all the hunting camps. He said a hunting camp near Cody, Wyoming was sold for "an outrageous sum" to an oil company in a competitive bid.

Bob Wier of the Forest Service office in Washington, D.C., said of the competitive bidding proposal, "The outfitters are concerned and we can understand those concerns, but there has been no decision made on which system to implement." Wier said no final decision would be made until fall and that there would be ample time for public comment.

Denver appealing for water

The Denver Water Department will appeal a decision made by a Glenwood Springs, Colorado, judge who ruled last month that Denver could not appropriate Western Slope water to sell to its suburban customers.

District Judge Gavin D. Litwiller had rejected the Denver Water Board's claim to 150,000 acre-feet of water annually from the Pinyon River and other rivers on the east side of the Gore Range in western Colorado. If this judgement stands, it would prevent Denver from selling water to Adams, Jefferson and Arapaho counties in the metropolitan area.

"The ruling said we could not appropriate water in order to sell it outside the city, but we've been doing that since 1918," said Ed Ruetz, manager of community affairs for the Denver Water Department. "We have a contractual obligation to the counties, and must provide them with the water they need," he said. "We feel that the welfare of the city is related to the welfare of our neighbors." At present the water department serves about one million customers, more than half of whom live in Denver suburbs.

Ruetz said Judge Litwiller's decision would be appealed to the Colorado Supreme Court, and if need be, to the United States Supreme Court. "In all its years the Denver Water Board has never won a major water rights decision heard in a West Slope courtroom," he said. However, Ruetz maintains there are signs of support for the city's water projects, even among residents of the Western Slope. Ruetz noted that some people were concerned about having to deal directly with several county bureaucracies, rather than with a single one from Denver "which has always pursued water rights in a competent way." According to Ruetz, the suburbs would have to learn a great deal before they could buy their own water.

In addition to the water it has claimed since the mid-1950s, the Denver Water Department is also seeking rights to store the water it obtains from the Western Slope. "Given our present reservoir capacity, we can keep up with the demand until 1986," Ruetz said.

Based on projections of the Denver Regional Council of Governments, the Denver metropolitan area is expected to have 2.4 million residents by the year 2000, 800,000 more people than live in the area now.

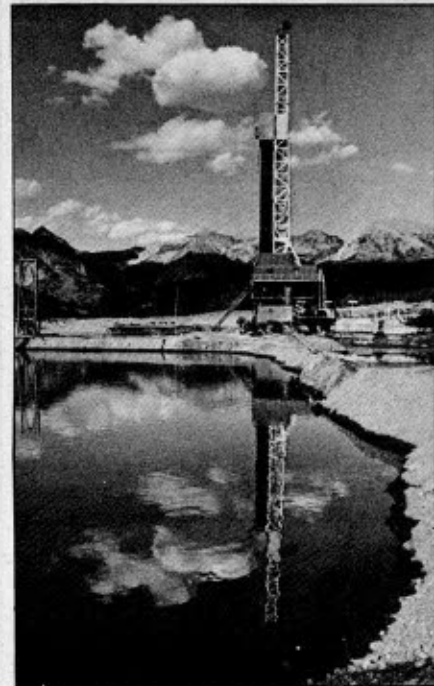
"The simple homily of the no-growthers of the 1960s and 1970s was that if you shut off the water, you'll stop growth. But there isn't a scintilla of evidence that that has ever worked," Ruetz said. "And if the Denver Water Board took that position, it would be rightfully accused of having an arrogant and arbi-

trary attitude, and its decisions wouldn't hold up in court."

Ruetz also mentioned that a Colorado state water study completed in 1975 found that Colorado could support up to 10 million people on its water supplies, as long as the water was stored and managed properly.

"Under the state constitution the water belongs to the whole state, regardless of geographic separation," Ruetz said. "The water belongs to all the people, and is subject to the greatest beneficial use."

— Dyan Zaslowsky



Brinkerhoff rig, Granite Creek, Wyoming

FS okays Jackson well site

The U.S. Forest Service has recommended that Getty Oil Company be granted permission to drill for oil and gas in the controversial Little Granite Creek Canyon area near Jackson, Wyoming. The well has been opposed by environmentalists, the Jackson business community and local residents.

The drill site is within the Forest Service's recommendation for the Gros Ventre Wilderness. However, it is not included in the Wyoming congressional delegation's recently introduced wilderness bill.

Construction of a road about six miles long would be required to reach the site. The Forest Service did not require helicopter access because it would have increased the costs to the company by about \$3 million.

Conservation organizations are currently studying their options in further attempts to block the well. Their choices are unclear because the permit recommendation comes on the heels of a court decision on the Palisades area in the Bridger-Teton National Forest which sent mixed signals to all concerned.

The Palisades is a RARE II (second Roadless Area Review and Evaluation) further planning area which is also the target of oil and gas exploration. Leases have been sold to oil companies on the area, with stipulations that substantially limit the right of access. The Forest Service, basing its decision on an earlier court ruling that such stipulations were unenforceable, issued drilling permits in the Palisades to a number of companies.

The Sierra Club sued, arguing that the Forest Service must prepare an environmental impact statement on the lease issuance. The court ruled that no EIS was required, but contradicted the earlier decision that the stipulations were unenforceable. The decision said that the stiff access restrictions on leases could be enforced.

The conflicts in the law still have to be worked out on the appeals level.

Chip Rautins

However, Bruce Hamilton, Sierra Club representative, said, "In light of the Palisades decision, we think the Forest Service should reconsider its entire decision to let Getty drill in Little Granite Creek. They are still assuming that their stipulations are unenforceable, but now another court has said that they are valid and enforceable. So, the Forest Service is not required to allow drilling in the area if the road is not reclaimable. And their own EIS admits that the road is not reclaimable."

While most conservation groups are considering legal avenues to block the drilling, the radical environmental group Earth First! is threatening civil disobedience to block construction equipment moving into the area. The group wants to hold a rally in the canyon on July 4, the day after the final decision becomes effective.



Timber management reviewed

A ten-year-old review of timber practices in Wyoming national forests will get a second look this year, when the original study team, joined by a representative of Wyoming Gov. Ed Herschler, regroups to see whether its recommendations of 10 years ago are being followed.

The new study is expected to be completed early next year.

The effort was prompted in part by a request from Gov. Herschler and by protests over recent timber sales proposed on Bridger-Teton National Forest.

The 1971 report concluded that there was considerable room for improvement in timber management practices in the Teton, Bridger, Shoshone, and Bighorn national forests. It recommended increased staff, particularly in the areas of silviculture and wildlife biology; it proposed limits on the size of timber clearcuts and the closing of temporary roads that had been allowed to stay open. It stated that "the importance of wildlife, recreation and scenic quality as key values should be

recognized in every management decision."

The original report was written by a group of Forest Service research scientists, modeled on a similar critique of practices in Bitterroot National Forest in Idaho, and was generally well received. The group will be joined this time around by Paul Cleary of Gov. Herschler's staff.

Two proposed Bridger-Teton timber sales — the Klondike Hill and Jack Creek sales, located near Pinedale, Wyoming — have sparked protests from local residents, environmentalists, and county commissioners. Recently, the Forest Service Deputy Regional Forester for Resources, Kent Mays, blocked the Klondike sale, returning it to Bridger-Teton Forest Supervisor Reid Jackson for further review. Mays expressed concern over the sale's effect on wildlife habitat and adjacent wetlands, and post-sale road closure and management.

Sen. Malcolm Wallop (R) suggested that both sales be postponed until the update of 1971 study is complete. "Why put the cart before the horse and make a decision on these two controversial sales before we've seen the report?" asked Wallop.

Doug Eggers, a silviculturist at Bridger-Teton, said most of the recommendations in the report had been implemented. He said the largest clearcuts now allowed in the forest are only about 35 acres, that no cutting is done in low-yield timber areas, and that temporary road systems are always closed. Where there were only two wildlife biologists in 1971, he said, there are now 10.

Eggers, contradicting another Forest

Service official, denied that the 10-year review was being done in response to protests regarding the Pinedale area sales. He said Forest Service officials wanted it to "give us a general idea of how we're doing" and because Herschler had asked for it.

— Geoffrey O'Gara

Trapping outlawed in urban areas

Within the past two years at least four cities along Colorado's Front Range introduced ordinances banning certain kinds of animal trapping within city limits. Aurora, Arvada and Westminster, all Denver suburbs, have passed laws aimed at preventing cruelty to animals from the use of leg-hold traps. Boulder joined the group in late March, spurred by a dramatic increase in the incidence of trapping on the city's 17,000 acres of foothills open space.

Boulder City Ranger Jack Kissell said hunting and trapping was never legal on open space lands and is now illegal within city limits. Several traps have been confiscated and some trappers apprehended — one leaving the foothills with traps in his backpack. Boulder recently purchased a metal detector to help in locating concealed traps.

Security officers at Denver-owned Red Rocks Amphitheater and at Jefferson County's Green Mountain Park also discovered illegally set traps. Ron

Elmore from Jefferson County said the increase can be linked to the slowing of the economy nationwide. "A lot of places take the animal 'on the hoof' for \$35-\$40," he said. "The trapper doesn't have to tan the hide or anything. You pick up ten of those a week and it's a pretty good living."

Colorado coyote hides bring around \$100 and red fox about \$65-75, while beaver sells for about \$20. Most of the furs are used by the clothing business, with a fashionable western style leather coat with a large coyote collar retailing for over \$1000.

Most wildlife officers agree there is a place for trapping when done humanely to manage wildlife populations by legally licensed persons. Gary Berlin, area officer for the Colorado Division of Wildlife, said, "Evaluation is a problem with people that think all trapping is illegal. Actually, removing a legally set trap and/or the contents is a felony."

A legal trapper must be licensed by the state, adhere to seasons as in hunting and fishing, and mark his or her name and address on all traps. Trapping is restricted to private property with the landowner's written permission, U.S. Forest Service lands, and other property statewide except where prohibited by statute as in the case of the cities.

"There's not an extreme problem with trapping for profit in the metro area at this time," said Steve Putnam of the Colorado Humane Society. "Most people set traps for 'problem trash animals' like dogs, cats, and the occasional raccoon and skunk. However the Humane Society has live traps and will handle the problem for the resident."

— Deidre Duncan

HOTLINE

WINDY GAP REPRIEVE

The contractor building a water pipeline through the Windy Gap archeological site near Granby, Colorado (HCN, 4/2/82) has agreed to delay construction until the end of July so that archeologists can finish research on the site. The Northern Colorado Water Conservancy District appropriated \$30,000 to pay for the delay penalties in the contract. Funding for the excavation will be provided by donations from private organizations, but details are still being worked out. The Windy Gap site contains what are believed to be the oldest permanent structures constructed by Indians in the northern United States. Carbon dating estimates the age of the remaining walls at about 8,000 years. The site was threatened with destruction by a pipeline carrying water to five Colorado Front Range cities.

RAISING BIG USER

Public Service Company of Colorado has asked the Colorado Public Utilities Commission for permission to institute a new rate schedule designed to put the financial burden of building new power plants on the large users who require them. Existing big users whose needs increase would also see a rate increase. A PSC spokesman told the *Denver Post* the commission felt it was "necessary to shift part of the responsibility for building new power plants from our (PSC) shoulders to those who create the need for them."

WITHDRAW FROM COAL LEASING

Six areas in eastern Montana and northern Wyoming have been withdrawn from the federal coal-lease sale scheduled for April 28 in Cheyenne, Wyoming. The six areas were withdrawn because owners of the land refused consent to leasing, according to the *Denver Post*. The withdrawn areas constitute 35 percent of the original lease offering and contain about 775 million tons of coal.

EPA BAN ON AGAIN

The Environmental Protection Agency has reinstated its ban on dumping hazardous liquid wastes in landfills only three weeks after the ban was lifted. Despite the EPA's comments that the controversial lift was "blown out of proportion and misunderstood," (HCN, 3/5/82), the agency received so much criticism that it reinstated the ban. EPA told the *Wall Street Journal* it intends to ban such dumping until it can develop new, less-restrictive rules for controlling hazardous liquid wastes. The ban was lifted because industry complained that the dumping restraints were too extreme.

JET QUESTION CONTINUES

The Sierra Club has filed a petition to have the case which allowed jet service into Jackson Hole (Wyoming) Airport reheard. The U.S. Circuit Court of Appeals in Washington, D.C. ruled that jet service could continue into Jackson Hole on March 3 (HCN, 3/19/82). The Sierra Club Legal Defense Fund questioned the validity of the environmental impact statement prepared for the area.

CHOPPING SOLAR FUNDS

Energy conservation and solar energy are being sacrificed by the Reagan administration in favor of a costly "nuclear binge," according to a study by 14 environmental and public interest groups. "The Reagan Energy Plan: A Major Power Failure" charged the administration with failing to understand the energy problem and failing to analyze the benefits and costs of alternative approaches to the problem. The Reagan administration has cut federal conservation and solar programs and proposed more subsidies for nuclear power. According to the study, if the administration's fiscal 1982 budget figures are approved, solar energy funding will be cut by 86 percent and energy conservation programs by 98 percent.

UTILITY RATES INCREASING

Montana Power Company released an energy outlook report that forecasts a 130 percent increase in natural gas rates and a doubling of electricity rates over the next 10 years. The company told the *Missoulian* that the completion of Colstrip 3 and 4 coal-fired generators is the reason for the large increase in electricity rates. The increases in natural gas were blamed on inflation, Canada's escalation of prices and price decontrol. The *Missoulian* also reported the company earned \$62 million in 1981, a 43 percent increase over 1980's \$43 million.

MINE SITES SUBSIDING

Officials at Jefferson County, Colorado, which includes Denver suburb Golden, have discovered that 91 homes and apartments were built on abandoned coal and clay mine sites that could possibly subside. Officials found more than 70 sites throughout the county in danger, but only three of the sites have been built upon. County planner Mike Davidson told the *Denver Post* he did not know who was responsible for overlooking the necessary follow-up on such hazardous sites. A construction ban at the 70 sites has been proposed until a special geological review can be conducted.

EXPLOSIVE EXPLORATION

ARCO Exploration Company of Denver has made an application to conduct explosive seismic exploration in an area that includes seven miles of the Silver King-Falls Creek RARE II (second Roadless Area and Review Evaluation) recommended addition to the Scapegoat Wilderness in Montana, located south of the Bob Marshall Wilderness Area. The company also wants to conduct the seismic blasting in the Helena and Lewis and Clark National Forests. The Forest Service will prepare separate environmental assessments for the wilderness study area and for the forest lands. ARCO plans to bring its crews and supplies into the area by helicopter to avoid building roads.

Soil erosion:

Story and photos by John McCarthy

Idaho farmer Gary Morris recently walked through one of his fields striped by last year's chaff and framed by a blustery March sky. Poking up from the faded straw was a carpet of new peas running over the rolling field.

Morris was pleased. Last fall, he chanced seeding 1,600 acres of Austrian peas with a no-till seed drill. It looked like his gamble with winter snow and rain had drawn a full house on the deal.

"I don't see any way the dang thing won't pay off," he said stooping over the finger-sized plants. The rows are thick, the plants are up to good size, they are well-rooted and they held the soil, he said, emphasizing that the soil is undisturbed.

Across the road, still on his farm east of Potlatch, Idaho, he has conventionally plowed and planted a field of fall wheat. Morris is well aware of the cuts and rills slicing down the smooth slopes. It is slick all over, the draws have been dug into gullies and the new wheat has been washed out in too many places.

Morris farms several thousand acres. As he looked back over the peas, he said, "No-till maybe, just might, be the thing." He is battling to stop erosion and stay in business so he can some day benefit from keeping the topsoil in place.

No-till is one of the new technologies in the old battle of tilling the soil without losing it to wind and water erosion. A no-till drill prepares, fertilizes, and plants seed in one pass over a field. It does it directly into the residue of the previous crop without turning the soil. Only the thin band of the seed bed itself is disturbed. There are still many questions to be answered in this new system — such as weed and rodent control — but it is one possible solution.

The dust bowl days of the '30s and '40s left a strong impression on farmers and land. Agricultural land was converted to sand dunes. Gullies were worn into chasms. Land that was marginal was left worthless. Farmers and soil were washed and blown out of production.

The green revolution surged ahead in the '50s with new fertilizers, new herbicides, new insecticides and new hybrid seed varieties, boosting production to previously undreamed of yields. Farmers kept the soil, conserving grass waterways in the gullies and continued to plow on the contour, at least until the massive machines couldn't work in the



Farmer Gary Morris in no-till pea field, Potlatch, Idaho

The estimated amount of topsoil that can replenish itself from the yearly addition of crop residues is about five tons per acre.

tight spaces. Fields were realigned to use the new equipment. Some erosion controls were dropped. Yet yields increased, until the last decade, when the climb has leveled off. Farmers and agricultural researchers have looked back at the soil itself, and found it moving downstream.

Nationwide almost four billion tons of topsoil are lost every year to water erosion, according to U.S. Department of Agriculture figures for 1977. About half that topsoil loss is on cropland. Wind erosion moves more topsoil, especially on the Great Plains where in some years more than one million acres are damaged.

Each region has specific problems according to its crops, precipitation cycles and topography. The summer rains on Iowa corn fields produce a different situation than the winter rains on Idaho wheat fields. Wind over spring wheat in the northern Great Plains of Montana is different than wind over winter wheat in the southern Great Plains of Texas. Rain on Maine potato fields is different than high-pressure irrigation spray on Idaho potato fields. While each crop and condition requires unique controls, the principle of land and people remain the same.

The Palouse hill country in northern Idaho and eastern Washington is one of the five most critically erosive areas in the nation. The deep, rich topsoil of windblown silt (loess) provides the seed bed for excellent dryland farming. It is an area of mostly locally owned, family farms, ranging from 400 to 4,000 or more acres. Last year was another record crop of soft, white wheat, most of which is exported to Asia. The

Palouse is also considered to be the pea and lentil growing capital of the world.

The topography of rolling hills and the winter climate of warm rain on frozen ground sets up unique conditions for erosion. Fields are either broken by fall plant plowing, which opens the ground to take in moisture before spring seeding, or fields are planted in the fall after plowing, leaving young shoots of peas or wheat to winter over.

If rain can't enter the frozen soil and if the surface is smooth except for small, thinly rooted shoots sticking up, runoff picks up speed, taking the soil with it. Soil may come off in layers as sheet erosion. The runoff may dig channels down a slope as rills. The depressions or flow concentrations may be cut into gullies. The steep slopes of 30 to 50 percent on the Palouse are susceptible to severe soil loss from sheet and rill erosion.

Farmers try to slow runoff by leaving crop residues, by contour and uphill plowing, by dividing slopes into two crops to break the runoff speed to keep part of a field protected, by planting the draws into grass waterways and by seeding the worst slopes into perennial grasses. While the concepts are not new, some of the refinements are.

The break-even point, the estimated amount of topsoil that can replenish itself from the yearly addition of crop residues, is the loss of about five tons per acre. Prime Palouse cropland that is not treated with conservation practices loses between 20 and 100 tons of topsoil per acre in a bad year. When spread over one acre, a 20-ton loss is equivalent to a one-eighth inch loss of topsoil. At that rate it takes seven to 10 years to lose an inch of topsoil, or close to 80 years to lose the average tillage or seed layer of

six inches common in the Palouse area. Farming and soil erosion problems have been going on in the Palouse for 100 years and the danger of reduced yields is directly related to the loss of the valuable upper layers of topsoil.

This year's snow cover over the Palouse melted within one week in mid-February. The valley rivers choked full with a brown soup of lost soil. Rushing streams cut gullies down hills. Open, exposed slopes became riddled with rills.

Since 1935, the Soil Conservation Service has been charged with providing technical assistance to farmers to do just what its title describes. Ron Gill of Moscow, Idaho, is part of the SCS front line in approaching farmers with the latest programs and practices. He went out to tour the spring break-up in February. "In fields where we can identify good practices, coupled with other years where losses aren't as great, we'll make it (to the break-even point of five tons loss per acre) — on the well managed fields," he said.

Gill said the tons per acre loss is measured across the entire field and averaged over several years. The last few winters were not severe, the soil remained unfrozen and open to soak up runoff.

Gill and other soil conservationists are the bridge between government and farmers, researchers and farmers, equipment manufacturers and farmers; acting to put conservation practices to work. Another branch of the USDA, the Agricultural Stabilization and Conservation Service (ASCS), controls the checkbook for federal cost sharing on an individual's land.

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Slip-sliding away

On one of his rounds last fall after harvest, Gill went out to talk to Doug Moser of Genesee, Idaho. Moser, in his late twenties, returned home two years ago to help with the harvest when his father came up short-handed. Now it looks like he'll take over the family farm. Gill said it is a good time to approach the "new decision maker" with some new conservation methods.

The two men are about the same age, both topped by farm company caps. They meet at the kitchen table and talk first about ideas and experiences with different practices. Moser says he thinks the increased costs of herbicides to fight the extra weeds under no-till planting isn't worth the savings in time and fuel. They discuss minimum tillage, where the soil is lightly worked over with a chisel plow and much of the stubble remains. Both men agree that one of the most useful methods is to turn the furrows uphill with the standard moldboard plow. The new powerful tractors can pull the big nine-bottom plows and throw the dirt uphill, making a barrier and reversing the downward slump. "It makes big clods, randomly, with holes that catch the water and it takes a lot to break up those clods," Moser said.

Gill suggests Moser agree to a five-year plan where the entire farm is treated with the appropriate conservation practice. If Moser agrees, he would be eligible for a maximum \$3,500 assistance a year from the ASCS, working on the most critical areas first. This won't cover all his out-of-pocket expenses, such as new equipment, but the money is an incentive and he gets the SCS expertise at no extra cost.

If Moser puts some fields into a divided slope rotation, then it is possible to get cost sharing of \$9 an acre from the ASCS, if it is done for three years. In divided slopes, the field has a fall planted crop on one side and a spring crop on the other. On the upper, steeper side it is usually a high residue crop like barley. They also talk about the payments for planting grass in some of the draws.

This spring Moser signed up on a cost share for divided slopes. Other farmers are reluctant to be committed for several years and opposed to following government specifications, which is not always the simplest or the cheapest way to go. Farmers who do put erosion control into practice on their own tend to have long range goals.

There are eight Zenner families listed in the Genesee, Idaho phone book. They are farmers, spread out over the southeast edge of the Palouse before it drops off into the Clearwater River breaks. On a rainy fall day last year, three of the Zenner cousins met in the shelter of their metal shop where they repair their equipment, typical winter work for farmers in this area. Russ Zenner has been named the Idaho Young Farmer of the Year, partially because of his concern and efforts with erosion control.

"With a lot of erosion control practices there is no way you can justify it in the short-term," Russ said. "Five, ten years down the road it's going to start paying off. I don't know for sure when, but if we can hold the soil, I know damn well it's going to pay off some day."

Russ and his cousins are in their thirties, the generation in charge of the large family farm. Russ, by virtue of his new title, is the spokesman for the group. They bought a no-till drill last



A tread tractor discs a pea field in the fall. Discing can pulverize the surface soil, leaving a highly erosive smooth surface if the upper clods are broken up.

Nationwide, almost four billion tons of topsoil are lost every year to water erosion. About half that loss is on cropland.



Palouse area wheatfield erosion, Idaho

year and seeded 550 acres of fall wheat on acres that were previously planted in peas.

That the cousins work together and that their sons play basketball at the other side of the shop, may be as significant a factor as anything in their willingness to adopt new techniques. As the rain chatters on the tin roof, the guys hang out in the shop with the tools and the work, while the next generation learns to work as a team shooting lay-ups.

John Carlson is a University of Idaho rural sociologist and agricultural economist whose work has much to do with the Zenners hanging out in the shop. "Relatives who farm together have a long-term commitment to the land," he said. "They don't see the farm as terminating when they leave. And they also tend to communicate more." This aspect of kinship, Carlson has found,

plays a strong role in farmers' willingness to adopt new practices.

Carlson is examining preliminary findings of a comparative survey. It reveals a more positive attitude for new erosion control practices and greater current use in the 1980 survey than in 1976. "There is no attitude of 'we don't care, we're not interested in the land.' If it's proven that, say, no-till is economically practical, then people will try it, but it takes time."

Carlson is seeing change. "Ten years ago everywhere there were manicured, smooth fields. The nicer it looked, the better farmer you were. Now when you drive down the road, you see more rough fields than manicured ones."

He has also been looking at the erosion control costs. Changing tillage technique while using the same equipment is more likely than capital investment in new equipment. The 1976

study showed that the more acres farmed, the more education and the higher a farmer's gross income, the more probable it is that a farmer will use erosion control practices.

Neil Sampson, executive director of the National Association of Conservation Districts, is also concerned with where farmers and soil are going. His book, *Farmland or Wasteland: A Time to Choose*, chronicles the rash of pressures pushing farmland to the other extreme, not the least of which is erosion. "A farmer is a businessman," he said discussing the economics of conservation. "When he's losing money he'll try to make it up in the only two ways he can. One way is from the fertility of his soil, the other is from his line of credit." Both are stretching thin.

There is fantastic interest in conservation, Sampson said, but farmers' immediate need is to cut costs. Soil conservation is a problem that takes decades to solve and short term problems take the forefront. If farmers do get a good price for crops, the tax code does not encourage soil conservation. Tractors and traditional equipment go into the write-off column but not conservation.

Higher prices for crops does not answer everything, Sampson added. "If wheat would go up to \$6 a bushel, they'd plow every piece of Idaho that isn't moving." He mentioned a recent advertisement in the *Great Falls* (Montana) *Tribune*. Someone needed eight tractors to plow 30,000 acres of new land in eastern Montana. "The net result is that the land is catching hell and so is the wheat market."

Back at his shop, Gary Morris talked about how farmers may keep going. "We may have to cut down some of our intensive management. It may cut into our production but it'll also cut costs," Morris said, confounding some of the agri-biz rules of get bigger, produce more. "I'd have to say that saving the most critical resource we have, the soil, is most important. And if I'm going to stay in business, I have to make a profit. If it takes less production to make a profit, I still have to do it."

"I'm not even sure if it's patriotic, with the energy costs it takes to produce a bushel of wheat, to work for high yields. If there is enough grain to sell to other countries, fine. But if there is only enough for here, then that's too bad but I don't know what can be done about it."

Morris is a farmer others watch. He is a former Latah County Commissioner, a former Soil Conservation District chairman and one of the biggest farmers in the region. But he is not alone in considering the mix of problems in fertilizer, fuel and conservation costs.

"If we don't take some positive steps," he said, "our erosion is such that in 50 years it's not going to make any difference what the export market is."

Less fertilizer and less fuel may mean less production, but also less erosion and less cost. Even with fewer dollars going through their hands, Morris said farmers may be able to sustain a greater long range return from the land. And if less production drives up the price per bushel of wheat, all the better.

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John McCarthy is a reporter for the *Lewiston Morning Tribune* and a freelance writer living in Kendrick, Idaho. This article was paid for by the HCN Research Fund.



Geranium

David Sumner

Wild plant

by Susan Tweit

"A traditional Mexican remedy still in use for colds is to drink a tea made from willow leaves. Any unconsumed tea is poured over the head."

— — Mexican Folk Medicine

"In New England, the skin of a black cat is considered a good remedy for sore throat, tied round the neck."

— — American Folk Medicine

Traditional folk remedies range from practical cures to bizarre, mystical rituals. However, while black cat pelts slung around the neck have not made noticeable medical inroads of late, herbal medicine is experiencing a renaissance, particularly among people looking for a more self-sufficient life style.

Some medical researchers studying herbal lore accumulated through history are finding a scientific base for many folk remedies. Chemical analysis of plants used for herbal cures has shown that a number of them contain substances similar to synthetic drugs currently in use. Their vitamin content is also often useful in prevention and treatment of diseases.

Herbal remedies traditionally rely on teas, tonics or salves made from dried plants of one or more species, carefully chosen for their particular effects.

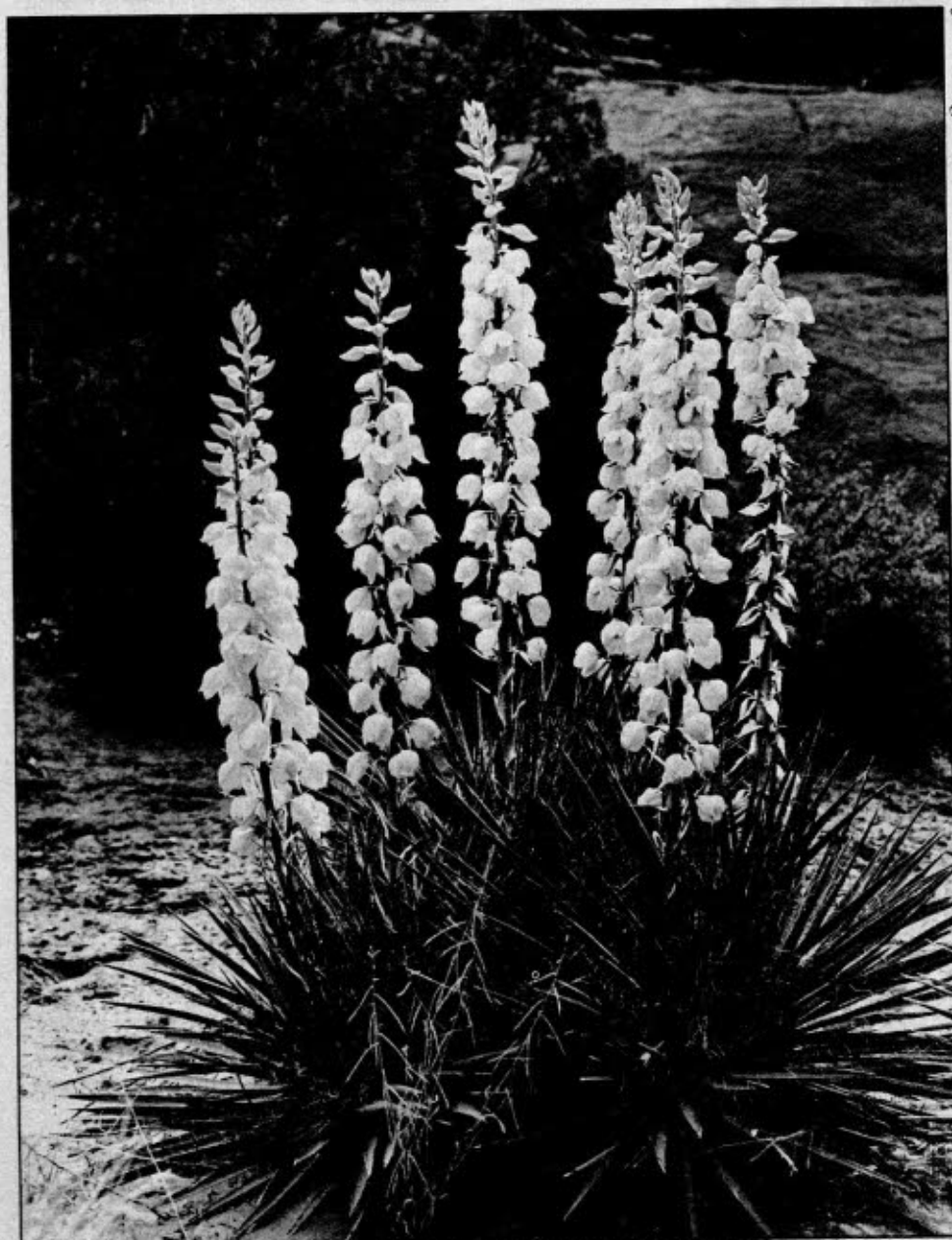
Numerous plants native to the Rocky Mountain region have recognized medicinal uses. Some, such as sagebrush, juniper and quaking aspen, are familiar symbols of the West. Others, like yarrow, mullein and horsetail, though less familiar, are veritable cure-alls, with a wide variety of medicinal applications. Still others are better known for their ornamental or economic uses than for their curative powers.

Sagebrush, the familiar aromatic grey-green shrub of the western rangelands, has a number of medicinal applications, particularly for treating respiratory ailments. Its leaves and flower stalks yield an essential oil (the source of the sage aroma) which is a good source of camphor and eucalyptol, soothing for coughs, sore throats, colds and other respiratory problems. Additionally, Indians used a tea brewed from the dried leaves to treat tuberculosis and menstrual problems. They also burned the plant during religious ceremonies; the fragrant smoke produced was believed to purify the air and drive away evil spirits.

Juniper trees or shrubs are found throughout arid places in the West. All are evergreen, with spiny or scale-like needles and bluish, pea-size berries. Though juniper berries may be best known for the flavor they impart to gin, they also contain stimulants and diuretics (substances which increase the discharge and flow of urine).

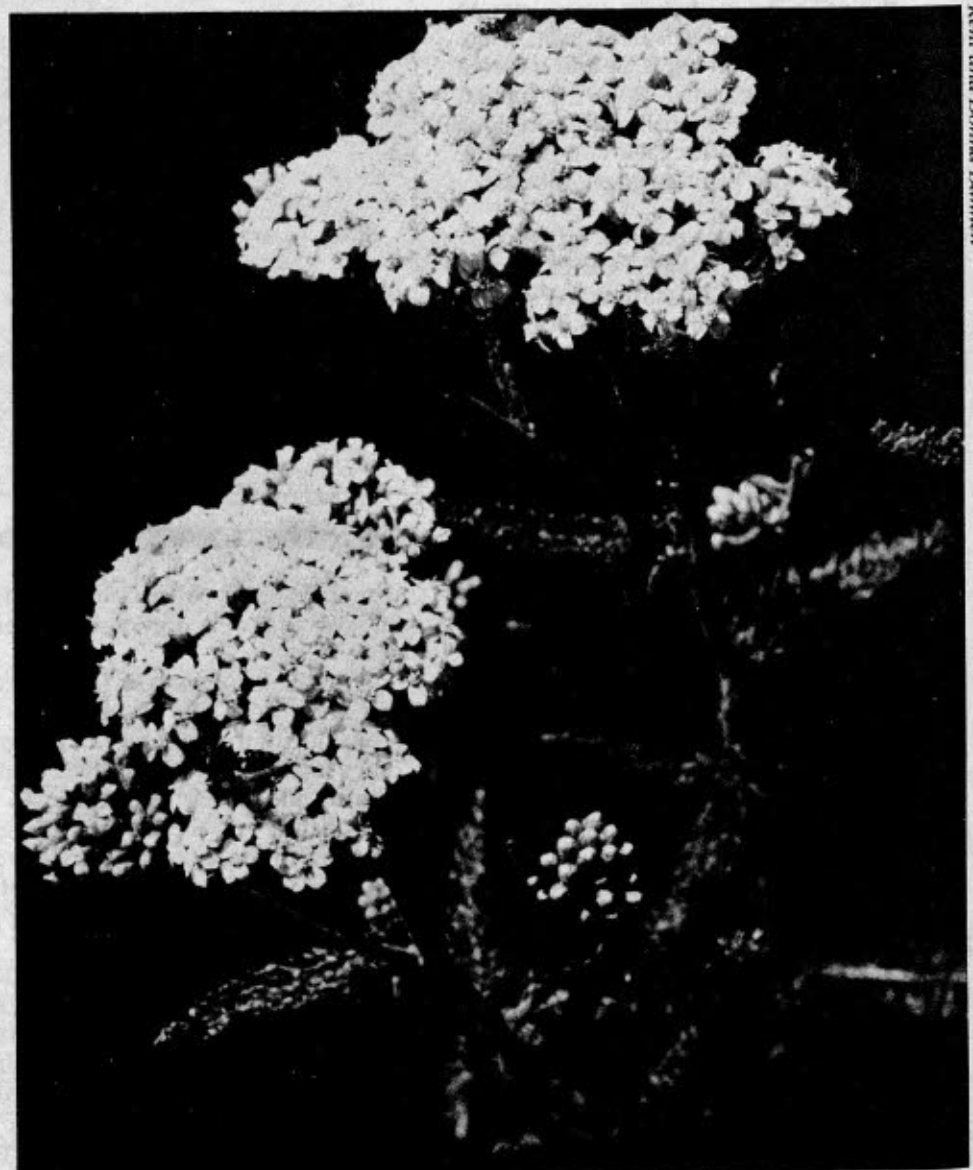
According to one medieval herbal, juniper berries are useful in treating a number of bladder, kidney and other internal problems, as well as arthritis, rheumatism and venereal diseases. Some Indian tribes believed a tea brewed from the berries worked as a contraceptive. In Europe the berries were eaten to produce abortions.

Quaking aspen, valued primarily for its beauty, is also a medicinal plant. Aspen and its close relatives, the willows, contain salicin, an unrefined form of aspirin, in the inner bark of their young branches and roots. Tea made from the dried inner bark has been used throughout human history to alleviate pain, fever, chills, influenza and stomach



Yucca

John George



Yarrow

Kent and Donna Danner

Plants and folk remedies

disorders. The Indians also used the bark in steam baths to relieve rheumatic pains. An old English herbal suggested use in "all cases of debility, indigestion, faintness and hysteria."

Yarrow, or milfoil, a common herb of roadsides, fields and meadows, has long been recognized as a cure-all. The Latin name of yarrow is *Achillea*, in reference to a myth that the Greek god Achilles first revealed the many medicinal uses of this plant. Historical uses include treatment of anorexia (loss of appetite), flatulence, indigestion, diarrhea, colic, hemorrhoids, menstrual pain, wounds and ulcers. Indians also extracted an oil from the plant. Applied externally, the oil soothed burns. It was taken internally as a contraceptive and to produce abortions.

Modern chemical research supports many of these applications — yarrow contains chemical compounds with antiseptic, anti-inflammatory, antispasmodic, astringent and expectorant properties, as well as compounds which stimulate glandular secretions. Yarrow should be used with caution, however, since it may be toxic when taken in large amounts.

Flannel plant, or mullein, gets its name from the large grey leaves clustered at its base. These contain substances useful in soothing all types of respiratory problems. Some Indian tribes smoked the leaves to relieve sore throats, coughs, congestion, inflammation of the lungs, and asthma, as well as to cure "bad thoughts and mental disturbances," according to one herbal. The dried leaves may also be used to produce a soothing herbal brew by boiling them in sweetened milk. Cough drops can also be made by steeping the leaves in hot water and molasses. The resultant thick syrup is dried and shaped into lozenges.

Mullein leaves were commonly used to alleviate skin problems, especially sunburn, because they contain substances which soften and protect the skin. Pioneer women reportedly rubbed the dried leaves on their cheeks for blush.

Horsetail, or scouring rush, a primitive relic of prehistoric forests, has been used for various folk cures. Early herbals recommended it as a diuretic for treating edema and kidney disorders; a strong extract was used to increase menstrual flow; and the plant's astringent properties were used to treat mouth and skin sores. Some Indian tribes also fed horsetail to their horses to treat coughs.

Many plants known for their decorative or economic uses also have healing properties. Yucca, or Spanish bayonet, once a source of many commodities — from soap and

fiber to food for the southwestern peoples — also had some medicinal uses. A preparation of dried yucca root was used to treat various complaints, including rheumatism and gonorrhea.

Wild geranium, or cranesbill, a native plant often domesticated as a garden ornamental, was valued by the Indians for its astringent properties. The roots were boiled with wild fruits to produce a gargle for mouth and throat sores, or were dried and ground to produce powder to check the flow of blood from wounds.

Salsify, or oyster plant, a wild biennial resembling a large dandelion, is sought by wild food enthusiasts for its oyster-flavored root. However, the milky sap of salsify was also used as a remedy for indigestion by the Indians.

Wild onions are another food plant with medicinal uses. The Plains Indians rubbed cut onion bulbs over their skin for an insect repellent. Old herbals recommend cooking the bulbs with honey or molasses to cure colds, coughs and influenza.

Plants should never be collected for herbal or other uses unless they are positively identified. Since some plants are poisonous, misidentification can have uncomfortable, or even deadly, effects. A good book on plant identification and medicinal uses of plants is a necessity before attempting to collect and use plants for herbal medicine.

Some recommended titles on folk medicine in general, and Rocky Mountain plant uses in particular, are:

Folk Medicine: Fact and Fiction, Frances Kennett, 1976. Marshall Cavendish Publications, Ltd., London.

Native Harvests: Recipes and Botanicals of the American Indian, Barrie Kavasch, 1979. Vantage Books, Random House, New York.

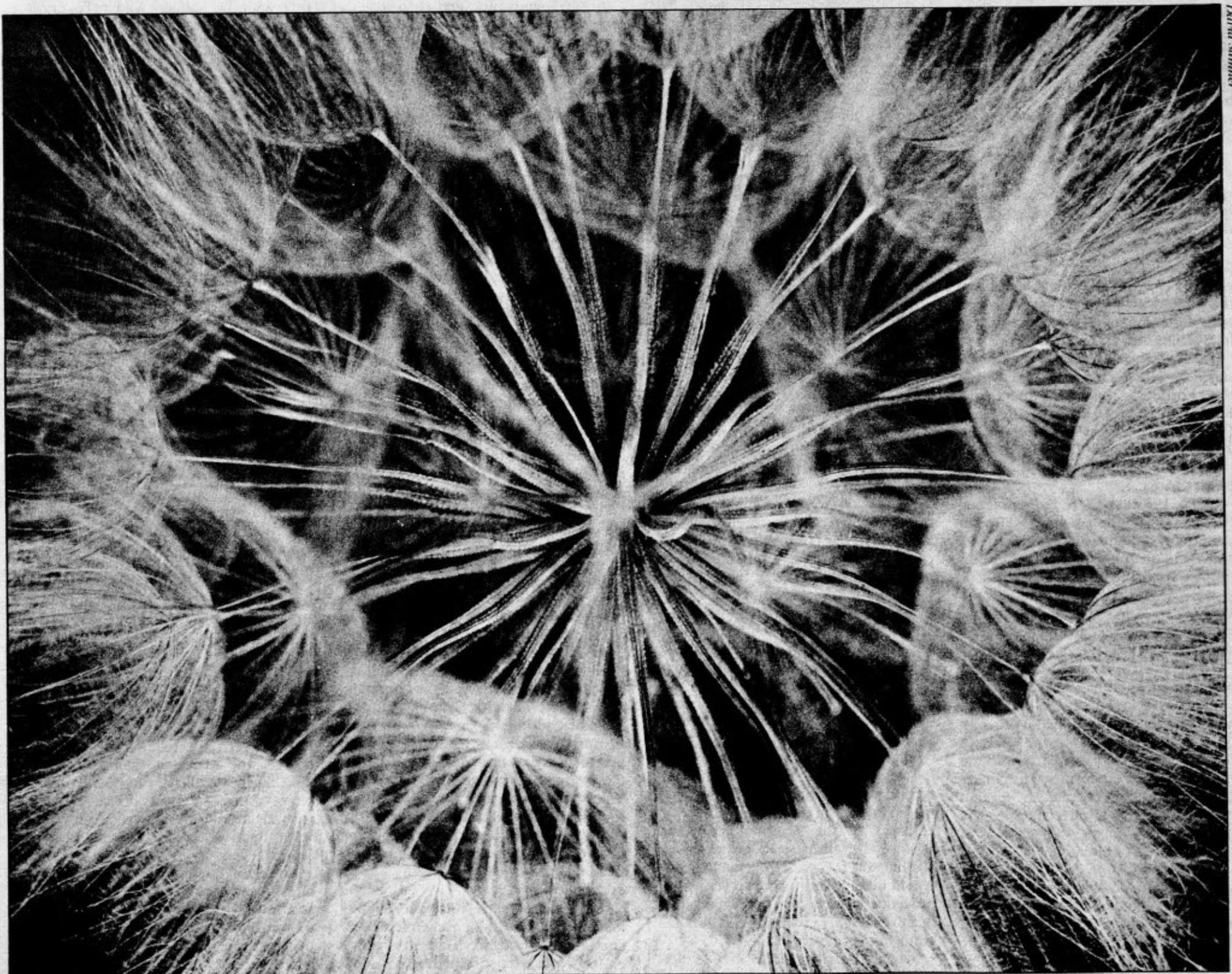
Using Plants for Healing, Nelson Coon, 1979. Rodale Press, Emmaus, Penn.

Edible & Useful Wild Plants of the Urban West, Alan and Sue McPherson, 1979. Pruett Publishing Co., Boulder, Colo.

Edible Native Plants of the Rocky Mountains, H.D. Harrington, 1967. University of New Mexico Press, Albuquerque, N.M.

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Susan Tweit has just completed an internship at *High Country News*.



Salsify

David Summer

Kent and Donna Danner

Toxics...

(continued from page 1)

descendents, endrin is a lethal toxic which managed to slip through the net of pesticide regulators and health authorities. To boosters of chemical farming, it is a million dollar savior to agriculture, which can be safely, if carefully, used.

According to the Montana Department of Agriculture, cutworm attacks on winter wheat cost Montana farmers an average of \$2 million a year. But farmers were especially worried in 1981, after several dry years, when army cutworms began appearing in March. Their fears were exacerbated by comments from entomologists at the Montana Agricultural Experiment Station in Bozeman. It appeared a major outbreak, at a cost of millions, might be about to take place.

The farmers turned to endrin, which is highly recommended for cutworms. Chemical alternatives, such as toxaphene, Lorsban and Sevin, were hurriedly considered and approved; they saw considerably less use, for various reasons. None costs less than endrin, first of all. The effectiveness of others was questioned; and one, Lorsban, which is recommended by the more strict Canadian pesticide authorities, had not gotten approval from the U.S. Environmental Protection Agency.

Biological controls for cutworm are being experimented with, but none was considered reliable enough for use in the panic atmosphere of Montana's 1981 outbreak.

The National Audubon Society, the Environmental Defense fund and the Izaak Walton League of America asked the Environmental Protection Agency to ban endrin in 1975, a request they recently renewed. In 1976, the EPA issued a notice of rebuttable presumption — initiating a process in which a

chemical manufacturer must demonstrate to EPA's satisfaction that its chemical can be used safely, or stop marketing it.

The process culminated in 1979 when the EPA ruled that endrin could be used only in the West, and only to control army cutworm and pale western cutworm in small grains, to control grasshoppers in small grains, to control sugarcane beetles and to keep the pine vole out of apple orchards. Canadian officials drew a different conclusion and banned the chemical entirely.

Still, the support documents in the EPA's files on that decision are not reassuring. "The risks of significant population reductions of non-target organisms, acute toxicity to wildlife, and teratogenicity (causing abnormal growths) posed by endrin are of sufficient concern to require the agency to consider whether offsetting economic, social or environmental benefits exist," said the EPA 1979 decision document. But the economic benefits to wheat growers using endrin were considerable — it cost them only \$3.75 an acre, and cutworms can devastate a crop — so the EPA okayed its use, with restrictions on how it could be done.

Endrin is "highly toxic to fish and other aquatic organisms," reported the EPA. In the early 1960s, endrin applied to cotton fields in the lower Mississippi River killed thousands of fish over a four year period, and government scientists found that "such minute concentrations as 0.1 parts per billion of endrin could be acutely toxic to fish." Endrin was also linked to the deaths of brown pelicans, an endangered species, in Louisiana.

For many people, imagining just how toxic some pesticides are is difficult. Less than half an ounce of endrin ingested could kill an averaged sized man. It can be absorbed easily through the skin. Like other pesticides in this family, it accumulates in fatty tissues and can be passed on and concentrated in

"There's a difference between wild game and what you buy in the supermarket. In the supermarket you're entitled to protection. When you go out and shoot a deer you're making your own decision."

— Gordon McOmber
Montana Department of Agriculture

the tissue of predators. Endrin has also been demonstrated to augment the carcinogenic effects of other chemicals beyond their singular powers, an important property in an environment riddled with long-lasting chemicals.

In some animals, such as rats, endrin metabolizes into 12-ketoendrin, an even more toxic chemical. This has not been demonstrated in birds. Whether it would happen in people, there is no way of knowing.

A 1967 study of several chlorinated hydrocarbon insecticides showed that endrin was one of the most persistent in soils; 41 percent of the sample remained in a test plot after 14 years.

Various studies, from a 1969 special commission report on pesticides by the U.S. Department of Health, Education and Welfare to a 1979 study by U.S. Fish and Wildlife Service scientists, have concluded that endrin should be kept out of the food chain. That decision, however, is up to the EPA.

While such studies seem alarming, they can also be misleading. The method of application, the environment and other properties of endrin may mitigate the dangers of the chemical. EPA toxicologist James Baker is quick to warn laypersons against hasty interpretations of the data, which is both overwhelming in its volume, and, many agree, inadequate in some key areas.

Indeed, there are some findings that favor endrin. One study indicates that ducks contaminated with endrin eliminate half of it in three days and 90 percent within a month if given an endrin-free diet, though low levels endure. And the molecular structure of endrin, with an oxygen "ring" around it, allows it to metabolize out of the ecosystem more easily than relatives like DDT, scientists say.

Baker and the manufacturers of endrin point out that the media may have unintentionally exaggerated the actual danger to humans of the contaminated game last year. The concentrations of endrin found in Montana birds — ranging as high as 1.2 parts per million — were compared in the press to the .3 ppm federal health standard for "allowable daily intake" (ADI). But the ADI is not the level at which an ingestor of endrin would begin to show symptoms of poisoning, which might include headaches, sweating, dizziness or convulsions.

Toxicologists first establish a "no effect level" (NEL) for a chemical, the amount an organism can take in regular exposure over a period of time without suffering adverse effects. That figure is then multiplied by a safety margin of 100 to set an ADI for humans.

So the ADI is 100 times what federal health officials feel could be taken as a percentage of one's complete daily diet on an ongoing basis without producing adverse effects.

For all the confidence with which such positions are put forth, however, there is still disagreement about long-term effects of low-level chemical exposure and even short-term dangers. Dr. Jorge Manring, a toxicologist from North Carolina State University affiliated with the National Wildlife Federation, accused the EPA of "oversimplifying." "People can concentrate endrin over several hunting seasons and from different sources," Manring told the *Missoulian* last September. "What if they eat a duck that has more endrin than the average levels? Or what if, for example, a person ingests another type of pollutant, and it has a synergistic effect?"

In Montana, the two agencies with the biggest ears for these arguments are the departments of Agriculture and Fish, Wildlife and Parks. They clashed repeatedly last year, often not in the public eye, as the former tried to protect the agriculture industry and the latter tried to figure out what it should tell hunters.

Endrin had been used in past years, but the 1981 cutworm emergency meant a big increase in spraying. Still, the Department of Fish, Wildlife and Parks didn't get wind of the potential problem until April, when it was notified of a fish kill in a creek in Custer County, one of the most heavily sprayed counties, which was caused by improper application of endrin.

The wildlife agency knew then it had work to do, but "we couldn't find out where they were spraying," said Tom Musschl, a department biologist. "We called everywhere, and I think we got the run-around."

Biologists wanted to check sprayed areas immediately after spraying, to see how field animals like rabbits and rodents were affected. But they could not get the necessary information in time. So they collected big game samples — antelope, mule deer — from sprayed areas well after spraying and tested them for endrin. They found no serious levels.

Not until fall did they start testing birds — and that was when "it all hit us," said Musschl. Some sharp tail grouse showed endrin contamination, and then they got some high readings from waterfowl found in a sprayed area near Great Falls. By this time it was September, and the hunting season was practically upon them.

Companies challenge federal disclosure law

The effort to keep information on pesticides "private" in company and government files takes place not only at the state level: An effort that may prove even more significant is now underway in Washington, D.C.

The underpinning which empowers states to restrict chemical use within their borders is the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). It began as a labelling law in 1947 and became, in the 1970s, the vehicle for regulating and restricting pesticide use.

Since 1972, the U.S. Environmental Protection Agency has, under FIFRA, set minimum standards for regulating pesticides, and given the states broad authority to enforce and amend those standards. The chemical industry is trying now to stop states from setting any standards stricter than the federal standards.

The chemical companies, led by the National Agricultural Chemicals Association, are also concerned about the mass of data they give the EPA to support their arguments for the safety of their chemicals. If that data fell into the hands of other companies, particularly companies that operate in foreign markets, the chemical companies say they would be giving away millions of dollars worth of research.

It's hard to know how correct the companies are about this, because so far they have locked up much of the health and safety data in EPA's files through litigation. The courts have recently rejected the arguments of the chemical manufacturers, and now the manufacturers are turning to the Congress.

On the opposite side of the issue are environmental groups and farmworker groups, which want to know as much as possible about the properties of toxic chemicals that might come into contact with fieldworkers or the general public. State government and the American Farm Bureau have also opposed the attempt to restrict states' ability to regulate pesticides.

Nicholas Reding, chairman of the National Agricultural Chemicals Association, told a congressional committee last year, "We believe that the 1978 amendments (to FIFRA) made these data (on chemicals) so freely available as to afford our companies little or no protections from potential competitive harm by the disclosure of these data to domestic or foreign competitors."

A recent meeting of the House Agriculture Subcommittee on Department Operations, Research and Foreign Agriculture deadlocked on the issue of the states' role in pesticide regulation. On a 6-6 vote, the FIFRA amendments were held in subcommittee, and no further hearings have been scheduled.

The subcommittee was also considering amendments that would limit the release of information on "innovative methodology" in new pesticides. Jay Feldman of the National Coalition Against the Misuse of Pesticides in Washington, D.C., said the amendments would make it impossible to verify test procedures used to determine the health effects of new chemicals by independent peer review.

Senate hearings on FIFRA are expected next month.

— GOG



Near Asbland, Montana, an area allegedly sprayed with endrin.

FWP officials were not toxicologists, and they did not know quite what to do with their information. The EPA sent a toxicologist to advise them, but pulled him back to Washington, D.C., in the midst of the crisis. Contamination tests on birds run by the Department of Agriculture in Bozeman were redone in the U.S. Fish and Wildlife Service labs in Patuxent, Maryland, where they found even higher levels.

The big question for FWP was whether to close hunting seasons, and Montana briefly became a focus of national attention as the state Fish and Game Commission wrestled with the issue. With the EPA now minimizing the danger, and a lack of toxicological expertise in state agencies, the commission decided to allow the seasons for upland birds and waterfowl to open. The commission postponed the goose-hunting season in endrin-sprayed areas for six weeks and cautioned all bird hunters to remove skin, internal organs, fat, the lower part of the breast and other parts of game birds before cooking them. Hunters were told not to make stuffing in the birds, or gravy, and not to eat too much. Pregnant women were told to abstain completely.

It was a confusing decision, made by admittedly confused officials. They had learned two basic lessons about pesticides: first, there is disagreement about the properties and dangers of the most toxic pesticides among the experts who regulate them; and second, it is nearly impossible to obtain information about where, and in what quantities, those pesticides are being used.

Gordon McOmber is a folksy, cigarette-smoking former farmer who is now in charge of the Department of Agriculture. He tries not to be controversial, and his staff, especially environmental management administrator Gary Gingham, is respected. But on the wall of his office is a bumper sticker: "One good reason for pesticides — HUNGER!"

McOmber trusts the farmers, and he trusts the EPA to make the rules about chemical use, so the endrin controversy upset him mightily. He does not want to pry into the pesticide business.

For the time being, nobody does. The Montana Department of Agriculture gets no regular reports from commercial pesticide applicators — it has the power to look at their records when it feels a need, but that information is only officially assembled every five years. As for the applications made by "private applicators" — the farmers themselves — the Agriculture Department takes a stab at the amounts applied by checking on how much pesticide has been sold. About one-third of the acreage in Mon-

tana sprayed in 1981 was covered by private applicators — in other words, one-third of the spraying remains a mystery, and information on the rest must be sought from the records of the commercial applicators. In an emergency, there is no ready record to turn to that would show where highly toxic chemicals have been used.

Almost as surprising as this paucity of information is the public's lack of interest in knowing. Every five years, McOmber said, his department assembles a report on pesticide use. The last, almost five years old, has never been printed because no one asked to look at it, he said.

Poor reporting is not the only hindrance to getting accurate information on pesticide use. The Department of Agriculture refuses to divulge any information that it has on particular pesticide applications, citing a state law which prohibits disclosure of information on "selling, production or use of pesticides by any person." In other words, Montanans have no right to know what chemical is being sprayed on a neighbor's field.

That privacy provision has, in the wake of the endrin scare, caused some hair-pulling at the state Attorney General's office. A recent AG opinion declared that the Agriculture Department couldn't publish such information, but should in fact allow public access when the public's right to know outweighs the right to privacy of the pesticide users or sellers. Now Agriculture Department attorney Tim Meloy is trying to establish standards for balancing those rights.

But who objects to the public knowing where chemicals are being used, and why? The agri-business community, according to Gary Gingham. And the reason, apparently, is that they feel their business will be damaged if anyone knows how much chemical is being used, and where.

"It goes back to the industry's concern for private, confidential marketing information," said Robert Hunt, a Monsanto employee, president of the Montana Agribusiness Association, and a member of the state Pesticides Advisory Council. "We like to keep the amount of (a particular pesticide) we sell in Montana a secret. If, for example, the Shell research people see Monsanto's got a big business going there, then they're going to crank up."

Gary Dyer, a rancher from Brady, Montana, who also serves on the state's Pesticides Advisory Council, said objections to reporting specific spraying were "just a matter of despising paperwork" and came mainly from commercial applicators, the professionals who put the chemicals on the fields for

farmers who don't do their own spraying. He defended privacy in this area, saying applicators preferred not to have their competitors know which farmers had hired them. Dyer said farmers would be "kind of negative" about making specific pesticide uses public record, but he said it was not a big issue to them.

Skeptics suggest that both farmers and applicators fear that environmentalists or their neighbors will harass them if they have access to records that show what chemicals they use on their fields.

Whether it is the state's business to provide this sort of protection is disputed by some chemical critics, and even a spokesman for the Velsicol Chemical Corporation, the manufacturer of endrin, expressed surprise at the law. But secrecy is a valued component of the pesticide trade. In Washington, D.C., this month, chemical company representatives are arguing that present laws require them to reveal too much toxicological information to the EPA, allowing their competitors to discover their secrets (see related story on page 10).

Montana FWP officials, whose relationships with farmers and state agriculture officials were decidedly strained last year, were also stymied by this privacy rule.

But McOmber thinks it's asking too much to expect the state to provide absolute protection for wildlife, especially at the cost of the agriculture industry. "The fact of the matter is, the wild game is a trespasser (on farmers' fields)," said McOmber. "There's a difference between wild game and what you buy in the supermarket. In the supermarket you're entitled to protection. When you go out and shoot a deer you're making your own decision."

Not only is the specific information on pesticide use not available, even the general information is hard to find. Federal reporting on pesticide use, by the U.S. Bureau of Census and the Department of Agriculture's Economics, Statistics and Cooperatives Service has been reduced by budget cuts at the federal level. Other states do even less than Montana.

Robert Sullivan, director of the Colorado Division of Plant Industry, said, "I don't know of anybody who would have any indication on the amounts of pesticides used by private applicators." Colorado includes a listing of commercial applications of pesticides in its annual report from the division but does not specify where the pesticides were used.

Information on Wyoming pesticide use has been gathered by the University of Wyoming Agricultural Experiment Station and published, again with no

specific locations, most recently in 1979. The survey is voluntary — in 1979, 3,969 questionnaires were mailed to farmers, of which 1,183 were returned. Al Gale, who conducted the 1979 study, said another is planned next fall. State agriculture officials say they do not compile complete information on where and how much pesticides are being used in Wyoming.

As a result of the endrin controversy, Montana is now attempting to rewrite its pesticide regulations. If the proposed regulations survive attacks by the agri-business sector, the use of endrin would be further restricted and applicators and farmers would have to report monthly when and where restricted chemicals are used.

Montana environmental and hunting groups are pleased with the proposed rules, but there is still some question when regulations specifically affecting endrin will take effect, in part because the Department of Agriculture will have to write an environmental impact statement that may delay implementation for another year.

Whatever the final form, it seems likely that Montana will have a better reporting system than any other state in the region. Endrin will still be applied for cutworms, but the state regulators should have a clear idea of where, when and how much.

But who will have access to that information? These regulations, too, are still in the works. Agriculture Department attorney Tim Meloy said, "I'm going to recommend that we have a system that requires a little more than somebody wandering into the office wanting to look at the file." He could not say whether that would exclude people like Richard Fichtler, Lewis and Clark County officials or the press.

For the moment, information on pesticide use is one aspect of a national issue that is only beginning to get attention. What can we know about the properties and uses of these chemicals? "It's hard right now to even get a sense of what the dimensions of the problem are," said Jay Feldman of the National Coalition Against Misuse of Pesticides in Washington, D.C. The efforts of his group presently go primarily toward fighting agri-business efforts to further restrict access to data collected on pesticides by the EPA. Because information is not collected, "this whole problem isn't quantified," said Feldman.

The same is true, perhaps even more so, at the state level. "We're at the very beginning stages of gathering information and trying to find out what's going on," said Stan Walthall of Lewis and Clark County. "And it's been how many years since *Silent Spring*?"

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This article was paid for by a grant from the Fund for Investigative Journalism and the HCN Research Fund.

Book review...

(continued from page 16)

on the various issues at stake in land use management through Sampson's somewhat technical — but easily understood — book. Conservation issues and ethics, energy consumption and future energy demands, housing industry growth, pollution and economic factors combine with the author's own expertise in soil maintenance to produce a comprehensive study of the problem.

The author also includes a chapter of suggestions on measures which could be followed to encourage farmland and soil conservation. At stake in his recommendations are the future of the farming community, and the potential of the U.S. to feed itself and other nations in the future.

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Diane Donovan is a writer and editor based in San Francisco. This article was paid for by the HCN Research Fund.

The agriculture economic squeeze

by Carol Jones and Marty Priest

The economic state of ranching and farming in the United States today is so gloomy that any reasonable businessperson would ask, "Why the hell is anyone in agriculture?" said Bob Carver, Wyoming Agriculture Extension Service livestock marketing economist.

Astronomical interest rates of 18 to 21 percent are virtually wiping out the farmer's profit. Income levels have dropped drastically in the last three years and 1982 income is predicted to be at the lowest level in decades. Production costs rise each year, while inflation boosts the costs of equipment above a rancher's buying ability. Although production is at a high, national and international markets are in a slump and returns don't begin to cover costs. Local economies are being pinched also, as farmers are caught in a cost-price squeeze. And more and more ranchers and farmers find themselves "voluntarily liquidating" their entire operations.

Rocky Mountain agriculture is important in the nation's overall agriculture production. Montana ranks among the top 10 states in production of wheat and sheep. Wyoming ranks among the top in sheep also, along with dry beans and sugar beets. Colorado ranks among the top 10 in cattle production. However, the distance from this region to major markets and to major transportation facilities, adds to the already overwhelming financial burden. Rocky Mountain farmers must also contend with competition for land and water from energy producers and urban developers.

Worldwide economic recession, spiraling interest rates and overproduction of both crops and livestock are the culprits for the agriculture gloom, according to most agricultural economists.

In the December 1981 issue of *Economic Review*, Marvin Duncan, assistant vice president and economist at the Federal Reserve Bank of Kansas City, detailed problems facing the nation's farmers:

"Prices received for crops (in November 1981) were off about 14.3 percent...while prices received for livestock were off 7.4 percent compared to a year ago.

"Prices paid by farmers during the same period, however, increased 4.9 percent."

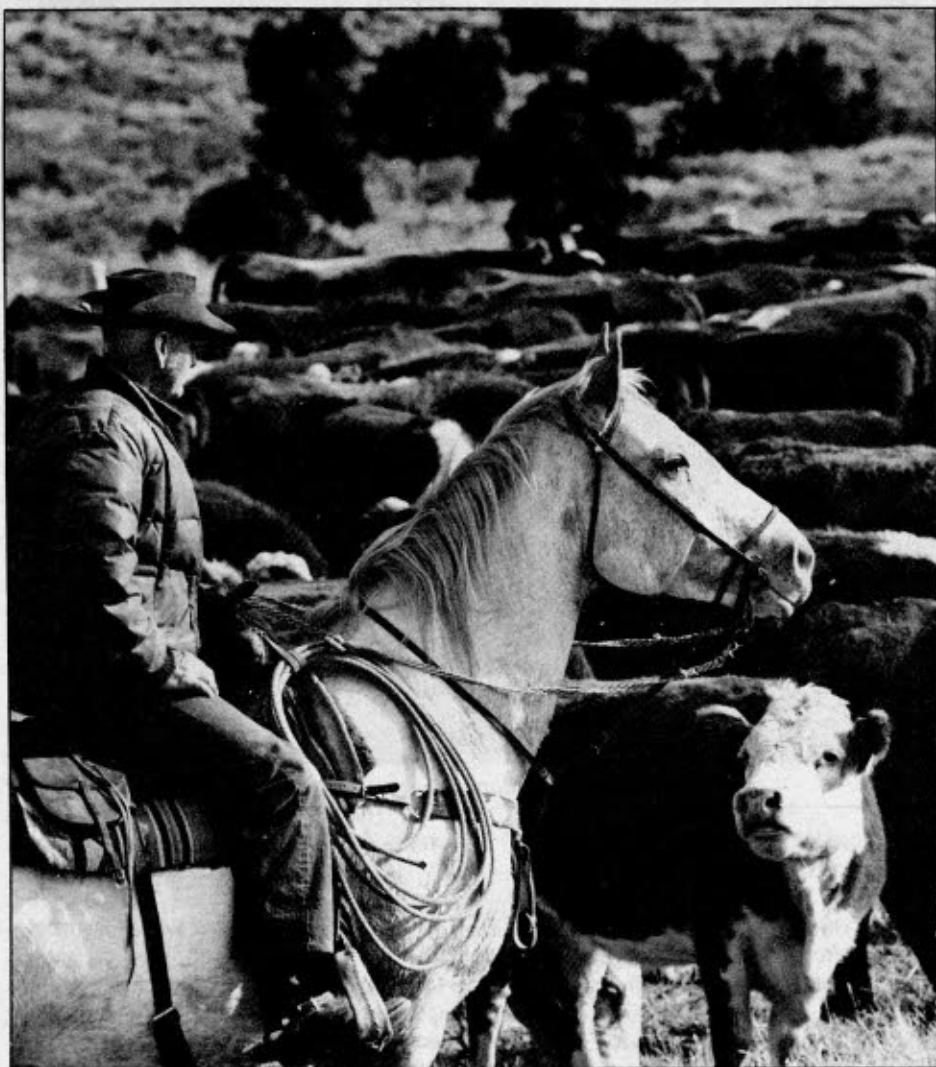
A \$2,000 tractor bought in 1952, costs \$25,000 to replace today. Wheat, selling for \$2.10 a bushel in 1952, sold for \$3 a bushel in 1980.

According to U.S. Department of Agriculture projections for 1981, beef cow-calf operations will have averaged \$451 per cow in total costs, while generating only \$317 per cow in gross returns, leaving the operation \$134 in the hole per cow. Actual figures and 1982 figures may be worse.

According to Erwyn Witte, markets director for the Colorado Department of Agriculture, 1982 will be even gloomier for the state's ranchers and farmers. An expected 5.3 percent drop in gross agricultural income is predicted for Colorado this year, along with a three percent increase in production costs.

The Rocky Mountain Farmers Union in Denver reported net farm income in 1973 was \$486 million. It dropped to \$88 million in 1981 and is expected to drop to \$81 million in 1982. The union reported that if current trends continue, "the average Colorado farm and ranch family will earn a net income of only \$3,056 this year."

Following the same gloomy trend, Wyoming's net farm income has dropped from \$97.7 million in 1979 to \$15.5 million in 1980. Wyoming Crop



Mike McClure

and Livestock Reporting Service reported average net income was \$2,163 per farm family in 1980.

Lyle Pratt, a statistician with the Montana Crop and Livestock Reporting Service, said income is at the lowest it has been since 1949, dropping from \$159.5 million in 1979 to \$102.1 million in 1980. Utah dropped from \$83.7 million in 1979 to \$46.4 million in 1980, and Idaho from \$361 million in 1979 to \$347.2 million in 1980.

Similar trends are seen in major agricultural states such as California, Texas, Nebraska, Kansas and Iowa, and things are predicted to be worse this year.

"The average cost of everything the rancher must buy has gone up by eight to 10 percent every year for the last four to five years," said Wyoming rancher Digger Moravek. "The prices he receives are the lowest they've been in five or six years. Coupled with inflation, the buying power of the rancher is equivalent to what it was in 1933."

Dave Carter, director of communications with the Rocky Mountain Farmers Union, said the Rockies area is a very productive agricultural region. However, farmers and ranchers here are hit harder by the economic plague for three major reasons. One is the soaring cost of irrigation. One farmer told the *Denver Post* that the cost of running an irrigation pump all day jumped from \$300 to \$4,200 in one month.

Another reason is high transportation costs to major agricultural markets. This region's ranchers transport most of their livestock to major feedlots in other parts of the country and most of their crops to major markets eastward. USDA figures show the number of feedlots declining, adding to the problem.

The third reason, according to Carter, is that the average age of farmers in the Rockies is below the national average. Average farmer age in this region is 42, while the national norm is 59. The younger farmer, said Carter, is highly leveraged, making him the most vulnerable to rising interest rates. Because the younger farmer hasn't been in business as long, he doesn't have as much equity, and ends up borrowing more.

Carter said despite these added problems for Rocky Mountain farmers, he does not want to see agriculture centralized to certain areas of the country.

Centralization is susceptible to disasters, such as California's Mediterranean fruit fly, he said.

Across all types of farming operations, the farmer's long-term debt level and the ability to reduce it and borrow less money now will determine, more than any other factor, the ability to survive the current recession.

In March, USDA's figures showed farm debts total nearly \$2 billion, triple the amount of just 10 years ago. Vernon Franke, a wheat farmer from northeastern Colorado, told the Rocky Mountain Farmers Union that his 1981 interest rate bill of \$114,000 equalled his gross income for 1978. His farm had a net loss of \$70,000 last year.

Farmers and ranchers depend on loans to see them through, from planting to harvest; from calving to market. Large loans are strapped with enormous interest rates of 18 to 21 percent. Farmers and ranchers are forced to borrow to stay in business. But with low returns, more and more farmers are finding it impossible to obtain loans or to keep them, and they find themselves selling out, urged by lending institutions to "voluntarily liquidate."

USDA figures show the country is losing 1,100 farms per week, due to economic difficulties. However, the major agricultural lenders — Farmers Home Administration, Federal Land Bank and the Production Credit Association — all say there has not been an increase in foreclosures. Mike Ormsby, Wyoming director of FmHA, said the agency is aware of the current agriculture situation and is being lenient in its collection procedures.

John Lesmeister, manager of the Casper, Wyoming, branch of the PCA, agreed there is no increase in foreclosures, but said there was a slight increase in number of voluntary liquidations and decisions to decrease operation size. However, 1982 could prove worse.

"We are beginning the third year of difficult economic times in agriculture," Lesmeister said. "If prices of livestock and crops are not better in the fall of 1982, we will have a crisis in Wyoming agriculture."

Farmers, ranchers and agriculture economists see a crisis now. Wyoming's Bob Carver said he talked with two different lenders in the last month; one had

liquidated six farms in a week's time, the other three. "Expand that to all lending institutions statewide," Carver said, "and you see the trend."

Dave Carter with the Farmers Union also sees the trend toward selling out. "If they (lending institutions) don't know there are more foreclosures going on (than in the past), they aren't looking past their own window," he said. "We're hearing that over half of their borrowers are in trouble. If things don't improve, they'll have to discontinue their loans."

The *Denver Post* reported Federal Land Bank Association foreclosures jumped from 50 in 1980 to 120 in 1981 in the four state area of Colorado, New Mexico, Oklahoma and Kansas.

Digger Moravek a rancher for 10 years near Sheridan, Wyoming, had an operation of about 100 cattle last year. "We thought we had an advanced operation here," Moravek said. "We bred with artificial insemination, synchronized the breeding so calving would be within 30 to 45 days. We had a 98 percent calf crop and the cattle were highly regarded both in care and production by the neighbors. Still it was a losing proposition. I sold all the cattle."

Moravek said he is thinking about starting over, despite his explanation of how economically impossible the operation can be. "Unless there is a break in the interest rates, you just can't make it," he said. "It costs about \$350 to keep a cow per year. If she should wean a 500 pound calf, you can expect to get 60 cents a pound at going rates. That means you'll get \$300, a loss of \$50. If you're borrowing half of the cost (of raising the cow) at 20 percent, that's \$60 a head just for interest. Then your loss is \$100."

Wally McRae, a lifetime rancher, whose cow-calf operation of 550-600 head is located 10 miles southeast of Colstrip, Montana, said he won't be selling out because he has learned to limp by. "I don't buy a lot of things, I run an extremely cheap operation," McRae said. "The trend held that to be progressive, you borrowed a lot of money to get bigger and bigger. Now that trend is coming back to haunt us. A lot of people are in trouble."

"I can't remember a time in my life when every agriculture commodity is low like it is now," McRae said. "And yet the depressed agriculture prices are not seen by the consumer. The consumer is not getting the benefit of the agriculture slump. That is odd in a free-market system, if that's what we have here. I don't know where the money is going."

McRae also feels ranchers have been too production-oriented and not aware of the market. Henry Bohn, extension marketing economist with Montana State University, agreed.

"There is too much supply and not enough demand in agri-business," Bohn said. "Farmers and ranchers have done a reasonably good job of production, but a lousy job of marketing. I'm telling farmers they have to look at the whole process and see who is buying, where the market is and what the product will turn into. We're seeing more interest in studying marketing options. We've reached a teachable moment with farmers and ranchers."

Bohn, who said all other businesses pay much more attention to marketing options than farmers, said the current recession has forced agri-business to play a waiting game. He explained that the farmer is at the beginning of the production chain, where it is difficult to react quickly to changes in demand. For example, customers react to higher food prices by simply not buying. The grocer responds by ordering less. That reaction carries through all the middlemen in the agriculture chain until, at last, the farmer hears about it. It takes

the farmer time to alter his production to meet such demands. Bohn believes it is the farmer who learns to read markets that will survive this current economic crisis.

Markets include international trade as well as domestic and some economists feel the international market is one way to help farmers out of trouble and back to profits.

Ross Korves, research economist with the American Farm Bureau Federation in Park Ridge, Illinois, said the U.S. needs to expand exports, particularly to developing countries.

Korves explained there was an export rush in the 70s. Farmers overproduced because they "got false signals" about the demand for exports. The United States ended up with a surplus of crops, the whole world entered a recession and farmers were faced with declining prices for unpurchased crops.

The American Farm Bureau is supporting an export revolving fund to provide credit for foreign buyers, particularly developing countries, to finance their agricultural purchases. The Bureau believes this would stimulate exports and increase farm income.

Dave Carter agreed loaning developing countries money to purchase produce from the United States is a reasonable gamble. Even though third world countries may be a credit risk, Carter gave the example of South Korea. "They got started as customers as a developing country," he said. "We took a chance with them, and as soon as their economy progressed, they became good customers."

Carter feels the United States is exporting food at too low prices. He said there is need for stability in the export business and sound policy to assure farmers of a given price for a given period of time. If prices fall below the floor price, farmers should be able to store their crops and be eligible for subsidies, he said.

However, Carter explained that even though the present administration has shown interest in increasing exports, they are cutting credit aid to eastern European countries like Poland, Czechoslovakia and Hungary. These are countries Carter sees as good customers if credit is available.

On Colorado's Western Slope, where coal and oil shale projects are picking up steam, energy development is beginning to have profound effects on area agriculture.

Besides developing the energy resources of the land, some ranches and farms are being purchased by develop-

and one just like it, except three years older, sold for \$850."

If there is any brightness in the farmers' future, it may come with the 1981 Economic Recovery Tax Act that will affect farmers in three major areas: individual income tax rates, estate tax reform and capital cost recovery.

According to Marvin Duncan, with the Federal Reserve Bank, marginal income tax rates will be reduced by 25 percent over two years, with tax brackets indexed for inflation starting in 1985.

Maximum capital gains tax rates affecting land and breeding stock sales will be reduced from 28 to 20 percent. And, estate tax reforms include changes that permit estates as much as \$600,000 to be passed to heirs with no federal inheritance tax liability.

Even though the act may help some, very few in the business see any reason to get their hopes up. So, why the hell is anyone in agri-business?

"A lot of people farm and ranch because they love it," Montana's Bohn said. "It's the value of the lifestyle. They make a personal choice and they pay the price."

Bob Carver said that even though people enter a business to make a profit, studies show the number one reason people stay in farming and ranching is to "maintain a way of life."

"You know, (Secretary of Agriculture John) Block and every other secretary of agriculture in office during a recession has said, 'Things are bad now, but prosperity may be right around the corner,' Dave Carter reflected. "That may be — I don't know. But, even if it is, who is going to be around to enjoy it?"

+++

Marty Priest is a freelance writer living in Bailey, Colorado. Renee Guillerie, a freelance writer in Boise, Idaho, contributed research for this article. It was paid for by the HCN Research Fund.

"The average Colorado farm and ranch family will earn a net income of only \$3,056 this year."

While export policies are debated, the cost-price squeeze and high interest rates continue to destroy farmers and ranchers. And adding to their burden is the competition for farmland, making business even more uneconomical.

Wyoming rancher Moravek said there is tremendous pressure to sell out for energy, urban and water development. "Lots of cities are buying ranches just to obtain water rights," he said.

Montana rancher McRae's part of the region and Colorado's Western Slope have a common problem of competition with energy developers for agricultural land.

McRae said energy development has created an enormous demand for land, resulting in skyrocketing prices. "If an energy company wants a ranch (for development), they will buy it, one way or another," he said. In addition, the ranching operation must compete for labor with neighboring energy companies.

ers and chopped up to provide housing for the increasing, energy-related populations.

Energy activity in the region is a two-edged sword. Although higher wages offered by energy companies are attracting farm and ranch labor away from agriculture, jobs created by energy development are allowing ranch families to supplement their incomes, thereby keeping ranches operating despite the cost-price squeeze.

Farmers and ranchers are not the only ones suffering from declining incomes. Many rural communities depend upon agri-business and they too are losing out. "It's the ripple effect," Carter said. "The low income in farming affects the rest of the area."

One Sterling, Colorado agricultural implement dealer gave an example of the problem: "I've got a corn picker on my lot for \$14,000. I went to an auction (farm liquidation sale) the other day,

STATE OF WYOMING PUBLIC NOTICE

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 (35-11-101 et. seq., WYOMING STATUTES 1957, CLIMULATIVE SUPPLEMENT 1973).

IT IS THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER DISCHARGE PERMITS TO (1) INDUSTRIAL FACILITY, (1) COMMERCIAL FACILITY, AND (3) OIL TREATER FACILITIES, TO MODIFY (2) INDUSTRIAL PERMITS, (2) COMMERCIAL PERMITS, AND (1) FEDERAL GOVERNMENT PERMIT, AND TO RENEW (2) INDUSTRIAL PERMIT, AND (2) COMMERCIAL PERMITS.

APPLICANT INFORMATION

(1) APPLICANT NAME: Empire Sand and Gravel Company, Inc.
MAILING ADDRESS: P.O. Box 1215
Billings, Montana 59103
FACILITY LOCATION: Natrona County, Wyoming
PERMIT NUMBER: Wy-0031194

The Empire Sand and Gravel Company intends to open a gravel pit located in the NW¼, SW¼, Section 2, T22N, R78W, of Natrona County, Wyoming which is immediately west of the City of Casper. Groundwater which enters the pit will be pumped out and discharged to the North Platte River (Class II Water).

The proposed permit requires compliance with effluent limitations which are considered by the State of Wyoming to represent "best available" treatment technology. Periodic self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The permit is scheduled to expire March 31, 1987.

(2) APPLICANT NAME: Dick Shanor
MAILING ADDRESS: Box 340
Dayton, WY 82836
FACILITY LOCATION: Sheridan County, Wyoming
PERMIT NUMBER: Wy-0031224

Mr. Dick Shanor is the developer of a 485 unit sub-division located approximately 20 miles west of the City of Sheridan which will be known as the Country Club of the Big Horns. Wastewater treatment will be provided by an aerated lagoon which will discharge to Frisbie Ditch (Class IV Water).

The proposed permit requires immediate compliance with effluent limitations based upon 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 proposed permit is scheduled to expire April 30, 1987.

(3) APPLICANT NAME: The Marathon Oil Company
MAILING ADDRESS: P.O. Box 120
Casper, Wyoming 82602
FACILITY LOCATION: Carbon County, Wyoming
PERMIT NUMBER: Wy-0031186

Marathon Oil Company's Harrison and Cooper Section 2-3-35 Battery and Cretaceous Sand Injection Plant is located in the NE¼, Section 3, T18N, R78W, Carbon County, Wyoming. The facility is used to inject water into oil bearing formations to enhance recovery. Under normal circumstances there is no discharge surface waters, however, if a discharge did occur it would flow to Dixon Creek (Class IV Water).

The proposed permit requires no discharge from this facility except under emergency conditions. If an emergency occurs the effluent can not have oil and grease concentration in excess of 10 mg/l and the permittee must immediately contact the Department. A written description of the discharge including proposed actions to prevent future discharges must be sent to the Department within five days of any discharge. The permit is scheduled to expire December 31, 1982.

(4) APPLICANT NAME: Corinad Oil Company
MAILING ADDRESS: 1500 Security Life Building
1616 Glenarm Place
Denver, Co 80202
FACILITY LOCATION: Buck Creek-Government Lease, SW¼, Section 8
T36N, R65W, Niobrara County, Wyoming
PERMIT NUMBER: Wy-0031208

Facility is a typical oil treater located in Niobrara County, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The discharge is to Crazy Woman Creek (Class IV) via an unnamed drainage.

The discharge must meet Wyoming's Produced Water Criteria effective immediately. Chapter VII of the Wyoming Water Quality Rules and Regulations infers that as long as the Produced Water Criteria is met, the water is suitable for beneficial use. There is no evidence to indicate that limitations more stringent than the Produced Water Criteria are needed to meet Wyoming's Water Quality Standards. The Department will continue to evaluate the discharge and, if necessary, will modify the permit if evidence indicates that more stringent limitations are needed.

Semi-annual self-monitoring is required for all parameters with the exception of oil and grease, which must be monitored quarterly. The proposed expiration date for the permit is December 31, 1982.

(5) APPLICANT NAME: Hanson Oil Company
MAILING ADDRESS: P.O. Box 1515
Roswell, NM 88201
FACILITY LOCATION: Little Butte Federal #2, NW¼, NW¼, Section 2,
T50N, R92W, Big Horn County, Wyoming

PERMIT NUMBER:

Wy-0031216

Facility is a typical oil treater located in Big Horn County, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The discharge is to Coyote Coulee (Class IV).

The discharge must meet Wyoming's Produced Water Criteria effective immediately. Chapter VII of the Wyoming Water Quality Rules and Regulations infers that as long as the Produced Water Criteria is met, the water is suitable for beneficial use. There is no evidence to indicate that limitations more stringent than the Produced Water Criteria are needed to meet Wyoming's Water Quality Standards. The Department will continue to evaluate the discharge and, if necessary, will modify the permit if evidence indicates that more stringent limitations are needed.

Semi-annual self-monitoring is required for all parameters with the exception of oil and grease, which must be monitored quarterly. The proposed expiration date for the permit is December 31, 1984.

(6) APPLICANT NAME: Antelope Coal Company
MAILING ADDRESS: 111 S.W. Columbia, Suite 800
Portland, OR 97201
FACILITY LOCATION: Converse County, Wyoming
PERMIT NUMBER: Wy-0030198

The Antelope Coal Company plans to construct an open-pit coal mine in Converse County, Wyoming approximately 45 miles north of the Town of Douglas, Wyoming. A discharge permit for the mine was issued in December of 1981, however, the company has now requested that the permit be modified to allow the discharges from two separate sewage treatment plants into settling ponds SPF-1 (discharge point 001) and SPF-2 (discharge point 002).

The proposed permit authorizes the requested discharges but includes effluent limitation and self-monitoring modifications to reflect the inclusion of sanitary wastewaters into the ponds. All other permit limitations and requirements remain unchanged with the exception of the expiration date which is advanced from December 31, 1986 to April 30, 1987.

(7) APPLICANT NAME: Mobil Coal Producing
MAILING ADDRESS: Box 5021
Gillette, Wyoming 82716
FACILITY LOCATION: Caballos Rojo Mine, Campbell County, Wyoming
PERMIT NUMBER: Wy-0030376

Mobil Oil Producing, Inc. operates a large open pit coal mine approximately 15 miles south of Gillette, Wyoming. The company has requested that an additional discharge point be added to the permit to store, treat and discharge water from Sediment Pond No. 1.

The proposed permit specifically identifies the new discharge point as 002 and allows discharge into Stockpile Draw (Class IV Water). The other discharge is identified as 001 and enters Les Draw (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 May 31, 1987.

(8) APPLICANT NAME: Mr. Pat Self
MAILING ADDRESS: Old Corral Motor Hotel
P.O. Box 217
Centennial, Wyoming 82055
FACILITY LOCATION: Albany County, Wyoming
PERMIT NUMBER: Wy-0026361

The Old Corral consists of a restaurant, bar, 16 motel units, and one single family residence and is located in Centennial, Wyoming. Wastewater from the facility is treated by a package plant which discharges to the North Fork of the Little Laramie River (Class II Water) after flowing in an unnamed drainage (Class IV Water) for approximately 1.5 miles.

The proposed permit requires compliance with National Secondary Treatment Standards and effluent limitations based on Wyoming's In-stream Water Quality Standards. The existing permit requires monitoring of most parameters on a weekly basis, however, the permittee has requested that the self-monitoring frequency be modified due to the relatively small size of the operation. The Division believes that because of the small volume of the discharge and because the discharge enters a Class IV Water, there are legitimate reasons to modify the self-monitoring requirements. Therefore, it is proposed that the self-monitoring frequency for all parameters except total residual chlorine (which shall continue to be required daily) be changed from weekly to monthly with reporting of results quarterly. The permit will be scheduled to expire March 31, 1987.

(9) APPLICANT NAME: Medicine Bow Recreation, Inc.
MAILING ADDRESS: P.O. Box 138
Centennial, Wyoming 82002
FACILITY LOCATION: Albany County, Wyoming
PERMIT NUMBER: Wy-0021549

The Medicine Bow Ski Area is a relatively small ski area located approximately thirty miles west of the city of Laramie in the Snowy Range Mountains. There are no overnight lodging facilities at the area and the facility is open only during the winter. Wastewater treatment facilities consist of two small package plants followed by a polishing pond. The polishing pond discharges into the Nash Fork of the North Fork of the Little Laramie River (Class II Water).

(continued on next page)

BULLETIN BOARD

ARIZONA WATER EIS

The Bureau of Reclamation has issued its final EIS on water allocations and water service contracting for the Central Arizona Project (CAP). The statement describes the affected environment and impacts of six alternatives for allocating Arizona's remaining entitlement of Colorado River water to be supplied through the CAP. Copies of the EIS are available from the Lower Colorado regional office of the Bureau, Box 427, Boulder City, Nev. 89005.

ENERGY CONSERVATION PUBLICATIONS

Four new publications are now available from the Colo. Office of Energy Conservation. "Renewable Resources in Colorado: Opportunities for Local Governments" (\$5) explores possible new energy sources for municipalities and details steps some communities are already taking toward self-sufficiency. "Energy You Can Bank On" (\$5) is a do-it-yourself energy conservation manual for businesses. "The Solar Handbook" (\$5), featuring interviews with owners of solar installations, is designed to help Colorado homeowners make solar decisions wisely. Finally, a free pamphlet available in single copies or in bulk answers the question, "How much can you save by investing \$50 on energy-conserving measures?" All four items are available from the OEC, 1525 Sherman St., Denver, Colo. 80203.

TAYLOR DRAW EIS

A draft environmental impact statement on the Taylor Draw Reservoir Project near Rangely, Colo., is now available for public review. The project would place an earthfill dam on the White River about five miles upstream of Rangely, creating a 13,800 acre-foot reservoir for municipal and industrial water supply, flood control and recreation. The dam's outlet would be designed to accommodate future addition of a 2,000 kilowatt hydroelectric power plant. Copies of the draft are available from the Army Corps of Engineers, Sacramento District, Regulatory Section, 650 Capitol Mall, Sacramento, Calif. 95814. Comments should be sent to the same address by May 10.

REVIEWING OUTFITTING SERVICES

The National Forest Service is reviewing its policies on commercial guiding and outfitting services in national forests and is seeking public comments on an analysis of the present policies. Issues reviewed in the document include special use permit fees, permit transfers, award of permits and speculation on permit privileges. Copies of the analysis are available at National Forest offices around the region and comments should be sent by May 31 to the Forest Service, South Bldg., 12th and Independence Ave., S.W., Box 2417, Washington, D.C. 20013.

GLEN CANYON COMMENTS SOUGHT

The deadline for public comments on the environmental assessment of the Bureau of Reclamation's proposed uprating of the generators at the Glen Canyon Dam has been extended to May 3, due to the overwhelming response on the subject. Comments may be sent to the Bureau of Reclamation, Upper Colo. Regional Office, Box 11568, Salt Lake City, Utah 84147.

HISTORIC PRESERVATION IN WYO.

Wyoming's first conference and workshop on historic preservation will be held May 21-22 in Cody, culminating a week-long observance of National Historic Preservation Week, May 16-22. The two-day meeting, jointly sponsored by the Buffalo Bill Historical Center and the National Trust for Historic Preservation, will include workshop sessions on the new tax incentives for the rehabilitation of older properties, the revitalization of downtown areas, completion of National Register nominations and practical guidelines for adaptive use restoration, among other topics. For more information, contact Sheila Bricher-Wade at (307) 777-6306.

WATER PROJECT GUIDELINES

The federal government is seeking public comment on the Reagan administration's proposed new "Economic and Environmental Principles and Guidelines" for planning water projects. The new rules, which would govern water planning by the Army Corps of Engineers, Bureau of Reclamation, Soil Conservation Service and the Tennessee Valley Authority, "seek to enhance the viability of water projects by making the chief planning objective national economic development," according to the Interior Department. The rules appeared in the March 22 *Federal Register*. Comments should be sent to the Water Resources Council, 2120 L Street, N.W., Washington, D.C. 20037.

LIVING HISTORY VOLUNTEERS

Utah's Pioneer Trail State Park needs volunteers to guide tours through the park's pioneer homes, demonstrate pioneer crafts, work with antiques, research pioneer life, catalog museum pieces, sew costumes and perform other interesting "living history" activities at the Old Deseret Village. For details, contact Tricia Smith or Ann Brest van Kempen at the park, 2601 Sunnyside Ave., Salt Lake City, Utah 84108.

AUDUBON SOCIETY TRIPS

A brochure featuring five 1982-83 field seminars of the National Audubon Society's Rocky Mountain Regional Office is now available. Offerings include a nature photography workshop in Yellowstone National Park and the Wind River Mountains, a seminar on "Our Environment and the American Legal System," a natural history backpack in the Winds, an ornithology field tour in Mexico and a winter ecology ski tour in Yellowstone. For a copy of the brochure, write the regional office at 4150 Darley Ave. #5, Boulder, Colo. 80303.

WIND ENERGY CONFERENCE

The Colorado Council of Local Energy Officials is sponsoring a wind energy conference for local government officials on May 7 in Denver. The conference will provide public and private planners, community development specialists, municipal attorneys and elected officials with basic information on wind turbines and their potential impacts, suggestions for safety and environmental regulations and ideas for linking alternative energy development with community development. For more information, contact Bob Odland at (303) 233-0992 or write the council at 8101 Ralston Road, Arvada, Colo. 80002.

FARM AID AGENDA

A model agenda for state legislators on farm and agricultural issues has just been released by the Conference on Alternative State and Local Policies. Prepared for state legislators, farm groups, and rural organizations, the model agenda consists of point-by-point recommendations for state legislators to help America's farmers. Copies are available for \$2 from the conference at 2000 Florida Ave., N.W., Washington, D.C. 20009.

BLM RELEASES WILDERNESS EIS

The BLM has released a draft environmental impact statement on its recommendations for eight wilderness study areas in the Gunnison Basin and American Flats/Silverton planning areas in Colo. Of the 78,135 acres included in the study areas, the BLM recommends that 28,415 be designated as wilderness. Copies of the EIS are available from the Colo. state BLM Office, 1037 20th St., Denver, Colo. 80202. Written comments must be received by July 8, 1982.



This spring sow a different kind of seed. Plant High Country News in the hands of a friend and watch a growing awareness take root.



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(continued from previous page)

The discharge permit for this facility was renewed on August 24, 1981, however, in that permit the Department failed to note that fecal coliform limitations were to apply during the period May 1 - September 30 only. The proposed permit corrects that oversight.

The proposed permit requires compliance with National Secondary Treatment Standards and Wyoming's In-stream Water Quality Standards effective immediately. Periodic monitoring of effluent quality and quantity is required on a regular basis with reporting of results quarterly. The permit is scheduled to expire April 30, 1987.

(10) APPLICANT NAME:

MAILING ADDRESS:

FACILITY LOCATION:

PERMIT NUMBER:

U.S. Dept. of Interior,
Bureau of Indian Affairs
Saint Stephens Indian School
P.O. Box 1248
Albuquerque, New Mexico 87103
Fremont County, Wyoming
Wy-0028967

The U.S. Bureau of Indian Affairs intends to construct a school adjacent to the St. Stephens Indian Mission in Fremont County, Wyoming. Wastewater treatment facilities for the school were originally intended to consist of an aerated lagoon system. However, the plans have now been changed and a mechanical package treatment system will be installed instead.

Because National Secondary Treatment Standards are more restrictive for mechanical systems than for lagoon systems it is necessary to modify the permit to reflect these different requirements. In addition, the State of Wyoming requires more frequent self-monitoring of effluent quality and quantity when mechanical systems are used and the permit is modified to reflect these changes as well.

The discharge will be to the Little Wind River (Class II Water) and the permit is scheduled to expire March 31, 1987.

(11) APPLICANT NAME:

MAILING ADDRESS:

FACILITY LOCATION:

PERMIT NUMBER:

Minerals Exploration Company
Sweetwater Uranium Project
P.O. Box 1500
Rawlins, Wyoming 82301
Sweetwater County, Wyoming
Wy-0026689

The Minerals Exploration Company operates an open-pit uranium mine located in the Great Divide Basin area of Sweetwater County, Wyoming. Groundwater encountered in the mining operation is treated with barium chloride and routed to a settling pond which in turn discharges to Battle Springs Draw (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 control structures which are designed to completely contain the runoff resulting from a ten year - 24 hour precipitation event. Because these structures 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 May 31, 1987.

(12) APPLICANT NAME:

MAILING ADDRESS:

FACILITY LOCATION:

PERMIT NUMBER:

Wardwell Water and Sewer District
P.O. Box 728
Mills, WY 82644
Natrona County, Wyoming
Wy-0003441

The Wardwell Water and Sewer District operates a water softening plant located on the north bank of the North Platte River (Class II Stream) in

Mills, Wyoming. The discharge consists of zeolite resin regeneration water and backwash and occurs approximately twice per week at a volume of 5,000 gallons each time. The effluent is slightly mineralized (approximately 1,000 mg/l of total dissolved solids).

Because of the high quality of the discharge as well as its low total volume, it has been determined that the discharge is having no measurable effect upon the receiving stream. The permit sets no effluent quality limitations, however, self-monitoring for flow, total dissolved solids and pH is required quarterly. The permit will expire June 30, 1987.

(13) APPLICANT NAME:

MAILING ADDRESS:

FACILITY LOCATION:

PERMIT NUMBER:

Opal Ltd.
10020 E. Girard
Denver, CO 80231
Lincoln County, Wyoming
Wy-0026841

Opal Ltd. is the owner and operator of a housing development located at the Opal Townsite, Lincoln County, Wyoming. Wastewater treatment consists of an extended aeration package plant which discharges to the Hans Fork River (Class II Water) via discharge point 001 in the winter only. In the summer the plant discharges via discharge point 002 to an unnamed irrigation ditch (Class IV Water).

The proposed permit requires immediate compliance with effluent limitations based upon 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 proposed permit is scheduled to expire May 31, 1987.

(14) APPLICANT NAME:

MAILING ADDRESS:

FACILITY LOCATION:

PERMIT NUMBER:

Mr. Milton Coulter
Fox Park Improvement & Service District
Box 909
Gillette, WY 82716
Campbell County, Wyoming
Wy-0026905

The Fox Park Improvement and Service District is a mobile home development located southeast of the City of Gillette, Wyoming. The development is located outside of the service area defined in the Gillette 201 facilities plan and is therefore not required to look-up to the planned Gillette Regional Sewage Collection System.

Wastewater treatment is provided by an extended aeration package plant which discharges to Donkey Creek (Class II W.W. Stream) via an unnamed drainage.

The proposed permit requires immediate compliance with effluent limitations based upon 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 proposed permit is scheduled to expire May 31, 1987.

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 May 14, 1982. Comments may be directed to the Department of Wyoming Environmental Quality, Water Quality Division, Permits Section, 1111 East Lincolnway, Cheyenne, Wyoming 82002, or the U.S. Environmental Protection Agency, Region VIII, Enforcement Divisions, Permits Administration and Compliance Branch, 1860 Lincoln Street, Denver, Colorado 80295. All comments received prior to May 14, 1982 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-82-004

OPINION

Western chauvinism

by Glenn Oakley

At a hearing of the Idaho House of Representatives Resources and Conservation Committee this session, a biology professor took the podium to testify against a bill that would turn a stream bed over to a developer and allow this developer to build a dam and fish hatchery. To no one's surprise, the bill passed, but the hearing was interesting for another reason.

The biology professor explained the need to preserve such places for scientific study as well as recreation and so

GUEST EDITORIAL

on. His testimony was of a type often heard at public hearings dealing with environmental issues. But the question that followed his comments did not deal with his testimony; the question did not even deal with the matter of developing or not developing Box Canyon Creek. The question posed to the professor by Rep. Myron Jones (R-Malad) was: "How long have you lived in Idaho?"

The idea, of course, is that to discredit a person's testimony before a committee of the Idaho House of Representatives, all one need do is prove beyond a reasonable doubt that the witness was born in some other state. Presto — the testimony is null and void. If the witness is found to have come from California, then the other side gains extra points.

In this particular instance the professor confidently told the committee that he was not from Idaho but — and this was his salvation — had been born and raised on an eastern Oregon ranch.

Even foreigners such as the professor are partially redeemed if they come from western ranch families. This is because most of Idaho's legislators return to tilling and spraying the good earth themselves as soon as the legislature adjourns. Myron Jones, who seems especially fond of trial by geography, lists his occupation as "farmer-rancher." Provincial intimidation is not unique to Idaho. At hearings in Montana, speakers also realize the best way to begin their testimony concerning environmental issues is with: "My name is Cody Canyon and I am a second generation Montanan..."

The only thing that beats a second generation Montanan is a third or fourth generation Montanan. There are very few fifth and sixth generation Montanans except for Indians, and they go into a separate category altogether.

Provincialism is a characteristic of the friendly Western spirit. Everybody, after all, is now trying to get in on the Western "thing" — expensive pointed-toed boots, swooping cowboy hats, pickup trucks, Copenhagen and rodeo paraphernalia.

That these cowboyophiles will drop their oversized belt buckles in favor of the next fad officially sanctioned by Hollywood and *Playboy* does not seem to register with the authentic Westerner who plays the part of an aloof, even resentful, idol.

Provincialism is even separating people within the state according to what city, town or rural route they call home. It is one of the few cases where "small is beautiful" is an unwritten policy of lawmakers. For example, on a scale of one to ten — ten being the most valuable —

a Boise resident's testimony regarding wilderness is worth two. A Pocatello resident's testimony is worth three, a Salmon resident's, eight. The testimony of grizzled-faced characters who just happen to stop in at hearings while on their annual visit to civilization is worth ten.

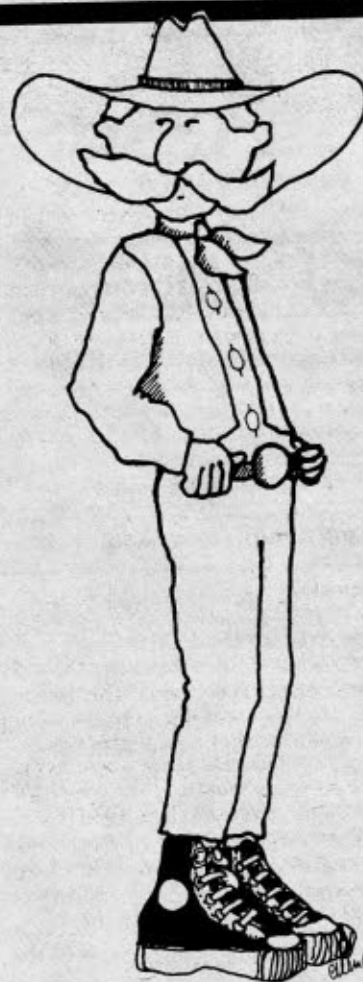
For a second or third generation Idahoan, testimony values double for each generation.

Most Idaho and Montana residents have come from other states. The registered native residents often develop the symptoms of severe righteous indignation when they find out that a bunch of Californians or New Yorkers are trying to tell them what to do with their land. It is my considered opinion that by pointing out that the federal lands in question belong to *everyone* in the United States, the imported Westerners precipitated the Sagebrush Rebellion.

Interior Secretary James Watt's trump card is that he is a native of Wyoming and he is fighting in Washington, D.C. to give power to the other native Westerners. The cowboy hat is mightier than the sword these days. If Watt were from New Jersey and spoke with a nasal inflection, his popularity would doubtless be diminished.

Imported Westerners are perhaps especially annoying because they can be so darn zealous. They have *seen* what can happen to the land, air and water without protection, and they fight and implore with a near-religious fervor to make sure the West does not look and smell like Elizabeth, New Jersey in a few years.

The imported Westerner has often come West to leave behind the crowds,



the pollution, the lack of space in favor of the wide-openness of the magical, mythical West. The magical West has blue skies that sparkle, lakes and rivers a person can drink from and mountains and plains wild and free. The magical West also has tough but friendly folks who judge people by what they are, not who they are — or where they come from.

+++

Glenn Oakley, a frequent contributor to *High Country News*, was born in Missouri. He has lived in Montana, Alaska, Ohio, Illinois and England. He currently resides in Boise, Idaho.

LETTERS

RECOGNIZING SKILLS

Dear HCN,

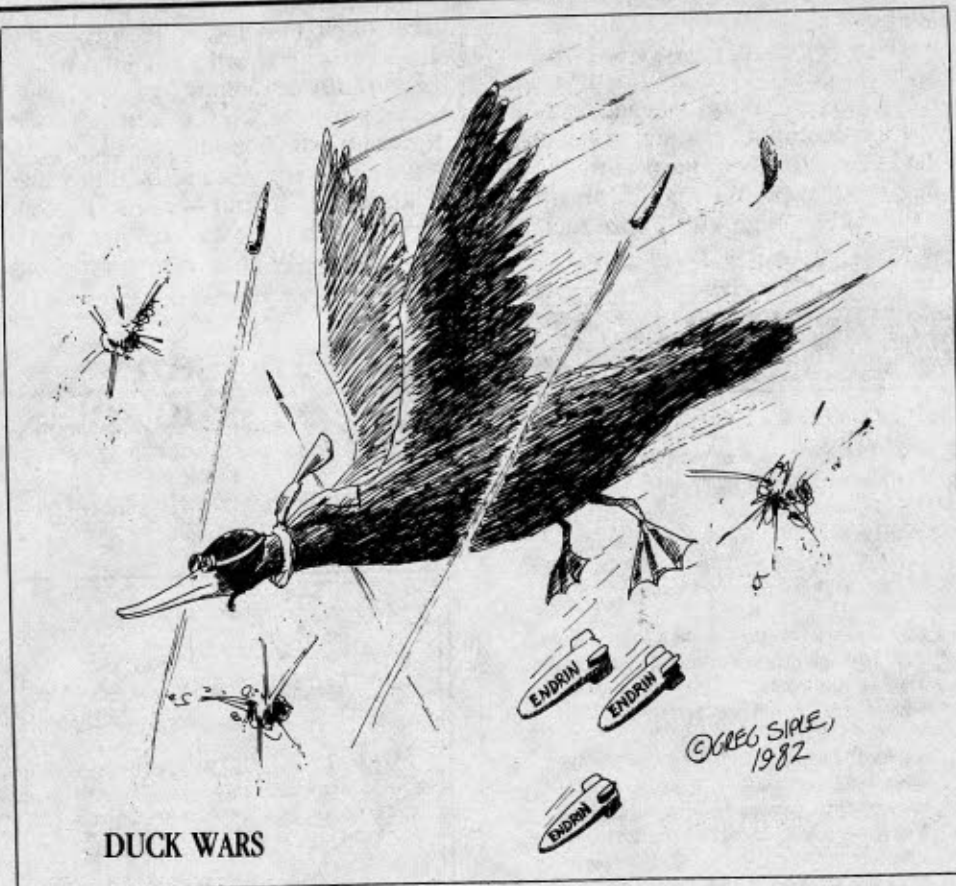
Being a "bureaucratic goose," it was with riveted attention I read your column "Chasing the wild (bureaucratic) goose" (HCN, 3/19/82). Considering some of the criticisms commonly heard about public information officers, I took your evaluation of us as "skilled at deliberately obfuscating information" to be a compliment. Many feel our only skill is collecting a government paycheck, so it's nice to know our other abilities are occasionally recognized.

Actually, our somnambulant existence would be quite pleasant if it weren't for newspaper folks always messing things up. Like those who call needing a photo for a story whose deadline is tomorrow (ask Carol Jones about "Sleeping it off: animals in hibernation," HCN, 1/8/82). Or those who use photos without giving credit to the source (helicopter elk feeding, HCN, 2/19/82).

While I wholeheartedly agree with your contention that dealing with bureaucracies can be more frustrating than herding snails, there are individuals who try to facilitate, rather than impede, the flow of information. If one were to judge all newspapers by a casual perusal of the *National Enquirer*...

Geoff Tischbein
Information specialist (it does have an Orwellian ring, doesn't it?)
Colorado Division of Wildlife
Fort Collins, Colorado

(Ed. note: It was in a moment of frustration that managing editor Dan Whipple painted his too-broad characterization of public information officers. There are many, including Tischbein, who are knowledgeable and cooperative.)



DEMAND PUBLIC INPUT

Dear HCN,

Thank you for Susan Tweit's important guest opinion column on the environmental impact statement process and "NEPA." I have some clarifications, however.

Tweit said that public participation occurs with EISs, but if an agency proposes a mere environmental assessment (EA) and doesn't prepare an EIS, the public is not involved. She is correct as to what many agencies do. But excluding the public from EA preparation is illegal. It can form the basis for overturning the agency's planned action. Citizens should be aware of this and should demand their full rights to participate in the EA process as well as the EIS process. Otherwise the large loophole that Tweit describes will shut the

public out of many important decisions.

In two cases decided by the U.S. Court of Appeals for the Second Circuit in 1972, the court ruled that the decision *not* to prepare an EIS had to be accompanied by a "reviewable environmental record" (that is now the EA) and that "the responsible agency must give notice to the public" of the proposed action "and an opportunity to submit relevant facts." (*Hanly v. Kleindienst*). One judge even labeled the EA concept as a "mini-impact statement."

In 1978, the President's Council on Environmental Quality published regulations, binding on all federal agencies, that carry out the rulings of the Second Circuit and other courts. The regulations are found in Title 40 of the Code of Federal Regulations, and apply to EAs as well as EISs.

The regulations said an EA is to be a "public document." All agencies must "involve...the public, to the extent practicable, in preparing assessments." All agencies must "solicit appropriate information from the public," which obviously means during the preparation process.

Another section requires agencies to "provide public notice of...the availability of environmental documents," which are defined to include EAs. Furthermore, *public hearings* are mandatory whenever there is substantial interest in holding a hearing, substantial environmental controversy over the action or a request by another agency (including state agencies) with jurisdiction over the action. I have a letter from the Council on Environmental Quality that confirms that the regulations require public participation in the EA process, not only in the EIS process.

The fact that many agencies still do not abide by these public participation requirements for EAs simply shows that agency personnel are no more eager to sift through dry regulation books than the general public is. But such regulations often contain hidden gold.

While citizen groups should participate in the ways Tweit describes, they should never limit themselves to the rules of the game announced by the agency proposing the project. They should demand more and earlier participation.

Most importantly, citizen groups should realize that a decision is often already made by the time of the official EIS public participation process and an even better way to influence it is by personal, face-to-face lobbying of agency personnel in their offices, by telephone, and by inquiring letters before the official public comment period even opens. This includes the preparation of EAs.

John E. Bonine
Associate Professor of Law
University of Oregon
Eugene, Oregon

Assessing the threats to farmland

BOOKS

Farmland or Wasteland: A Time to Choose

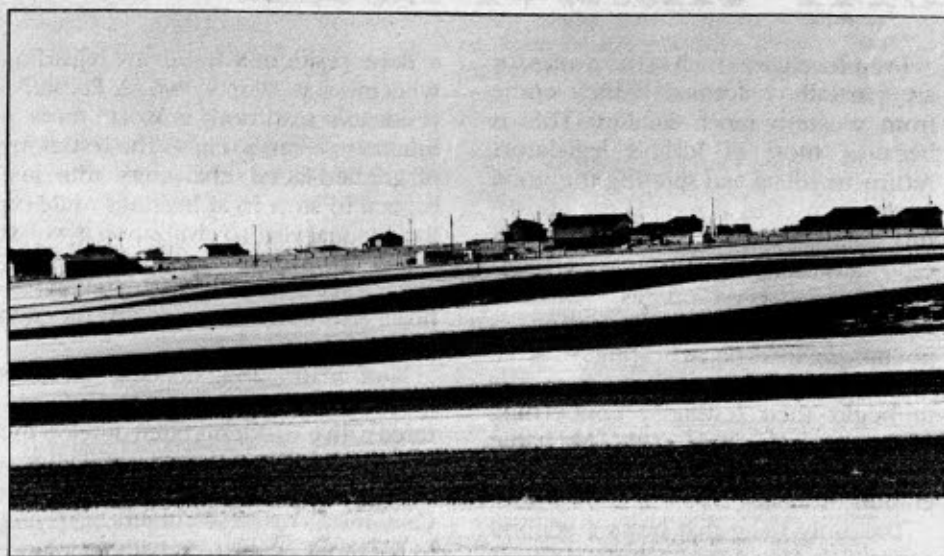
R. Neil Sampson, 1982. \$16.95. Rodale Press, Emmaus, Pennsylvania.

Review by Diane Donovan

Few Californians will remember that the Santa Clara Valley region of the state once held acres of thriving orchards, and was considered one of the breadbaskets of the world. They won't remember because today only a few acres of fertile cropland remain in the area; the rest have been converted to housing developments where only backyard soil attests to the richness of the land under the concrete roadways. The development and land conversion continues to this day. Other parts of the U.S. will soon report similar losses as prime farmland is plowed under to meet increasing demands for housing.

The issue of farmland preservation has only recently been seriously examined. In 1979, the National Agricultural Lands Study (NALS) was organized to gather and solicit opinions and studies on land management issues. Urban and rural responses were accumulated and assessed, and the result, NALS' final report of 1981, discussed the problems of farmland preservation from a variety of viewpoints, concluding, "Conversion of a small portion of a community's best agricultural land to nonagricultural uses may lower current development costs and appear insignificant in contrast to the nation's vast endowment of agricultural resources. Yet the effects of such conversions are cumulative, and contribute over time to significant and avoidable reductions in agricultural potential and environmental quality."

Now there is a comprehensive book on the subject which enlarges upon land use issues such as conservation ethics vs. costs, agricultural land quality and soil erosion, and demands upon



Mike McClure

farmers and agriculture to meet both increased housing needs and growing food production requirements.

Farmland or Wasteland: A Time to Choose takes the NALS results several steps further, expanding upon many of the basic issues raised in the earlier report.

Though many land conservation promoters may be aware of the problems caused by the pressures of development upon the farming community, few have considered other issues of equal importance, such as topsoil preservation. Author R. Neil Sampson, a farmer and a field technician with the Soil Conservation Service, is concerned with soil conditions and preservation. His "hands on" experiences have demonstrated the importance of topsoil to farmland preservation and have revealed those factors which are contributing to its erosion and misuse. This concern of Sampson's is reflected in his book, which uses the importance of topsoil as a basis for expanding into other land issues.

The connection between soil erosion and loss of productivity was hard for many farmers to understand at first. With agricultural production flourishing in the 1970s, few farmers were willing to accept the notion that an accelerated high-yield production demand on each acre of land would

ultimately result in erosion, leading to the breakdown of soil fertility. Even those who did realize they were eroding their land felt powerless to change their production methods, for the pressures causing them to waste land and water came from many sources: market demands, rising costs and conversion to mechanization, which effectively abolished the planting methods that encouraged erosion control.

When one stops to consider the economics of conservation, many idealistic land management suggestions suddenly seem impractical. Land conservation and proper soil management must present the farmer with financial and social incentives to use conservation techniques. Such incentives become all the more vital when one considers that even foresight and good intentions among more educated farmers are often abandoned when harsh economic realities and daily production demands are felt.

When economic demands become great, often the only avenue open to the small farmer is to sell some land which has, in the meantime, gained value because of inflated prices and increased demands for housing development. Unfortunately, the same qualities that make prime farmland — a smooth, rich surface clear of boulders and major obstructions — often assure potential

developers equal ease in planting new homes. California's Santa Clara Valley, for example, was as prime for housing as it was for farming. Developers found that the valley's proximity to major cities and its flat, rich soil required little effort to develop. Though surrounding hills could have been utilized for housing, leaving the prime agricultural acres intact, developers preferred the easier flatland development to struggling with untamed, hilly conditions. So the famed Santa Clara Valley orchards were demolished, and the barren, available hillsides remained relatively untouched.

Housing development is not the only threat to farmland, as Sampson points out. The energy crisis in the U.S. in the 1970s led to demands for increased domestic fuel production. Even before the end of the decade, surface coal mining was claiming large areas of farmland. Before 1965, only 3.2 million acres of agricultural land were mined. Though federal laws were established to require miners to restore cropland to its former productivity, mining companies have battled federal laws, and skeptical scientists question whether mined land can be fully restored.

Energy demands also deplete farmland resources when power plants utilize agricultural land for hydroelectric reservoirs, nuclear plant sites and power line corridors. It is obvious that future generations will face hard choices as they choose between farmland and energy requirements.

Though Sampson provides charts, statistical data and studies to back his statements on land issues, he does not assume that his data are perfect. Though the problem of farmland loss has been established as a fact, conflicts remain regarding the analysis of the data that have been gathered on the topic. While some would interpret the statistics to mean that a crisis looms on the horizon, others consider such statements exaggerations, and maintain that the general public is misinterpreting the information.

Readers will gain much knowledge

(continued on page 11)

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