

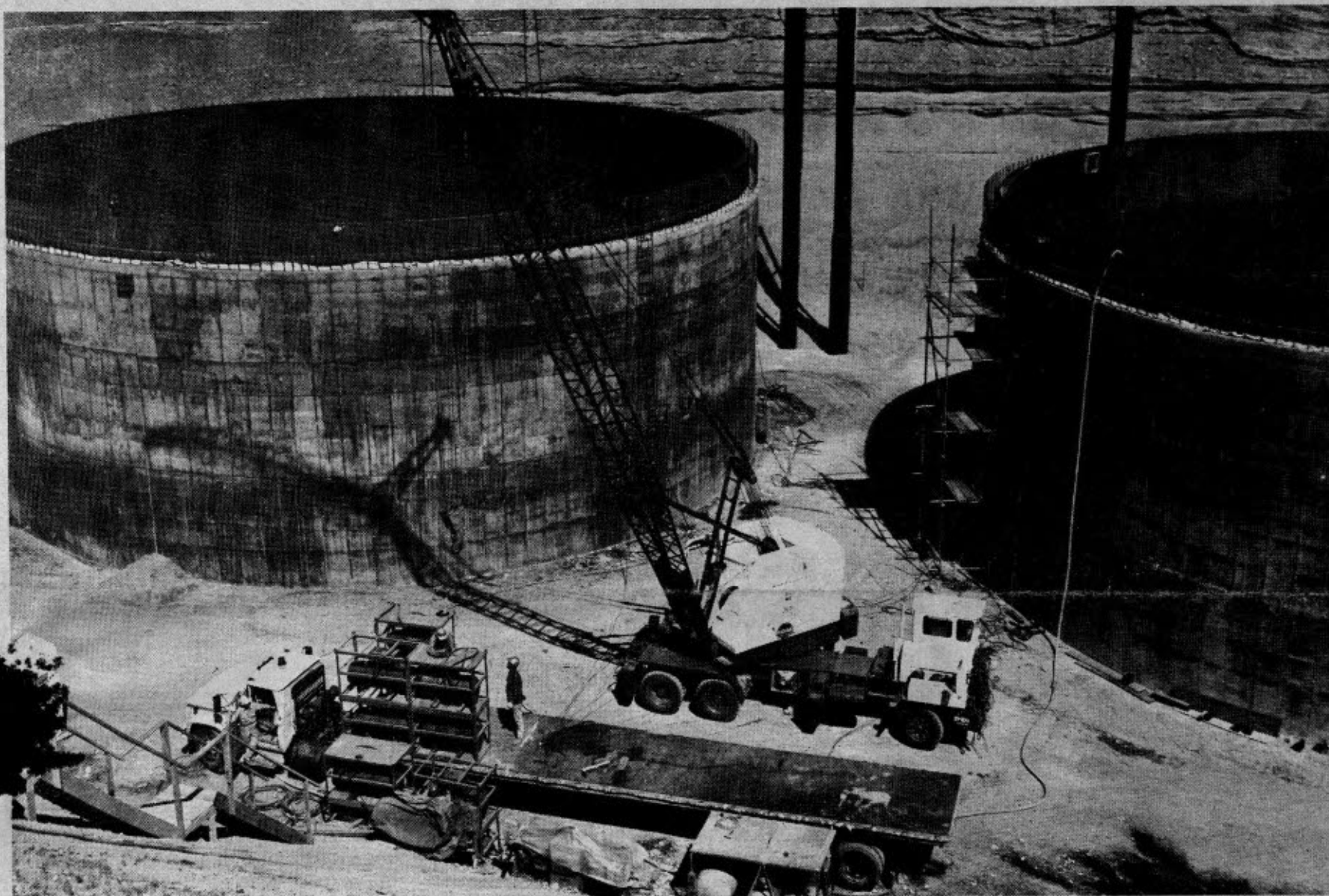
The Environmental Bi-Weekly

High Country News

Vol. 7 No. 1 35¢

Lander, Wyoming

Friday, January 3, 1975



The tanks shown above are built to hold radioactive wastes. Other tanks at this site in Hanford, Wash. made headlines in 1973 for leaking a record amount of dangerous waste material into the soil. The new tanks shown above are designed to eliminate dangerous spills, the Atomic Energy Commission has said. They hold one mil-

lion gallons, have two steel liners, and are equipped with "the latest development in monitoring and leak detection equipment." When complete, the tanks will be buried under 10 feet of earth. Hanford is one of the locations being considered for the nation's nuclear waste storage site. The other potential sites are in Idaho and Nevada.

Battelle-Northwest Photography

In lieu of ultimate dump

Western site sought for A-wastes

by Joan Nice

Nuclear waste disposal used to be a quiet topic of study. But now that hazardous radioactive leftovers are scheduled to move into some western state's backyard, the topic is making headlines in the Rockies.

At issue is what will be done with 75,000 canisters of highly radioactive wastes which may be produced by the nuclear power industry by the end of the century. An environmental impact statement lists sites in Nevada, Idaho, and Washington as potential nuclear dumps for this material.

The draft statement, which was published in September by the Atomic Energy Commission (AEC), proposes an above-ground, interim facility in one of

the three states. It offers speculation about the long-term concern: what should be done about permanent disposal. Although no assured long-term disposal plan exists yet, the AEC says safe methods for underground burial of the materials will be developed in "something like two to three decades."

Two national environmental groups have said that the AEC draft impact statement is inadequate. They call the effort a stop-gap solution, when what is needed is a full disclosure to the public "of the hazards and costs involved in permanently containing the wastes." The groups who made the joint critique are the Natural Resources Defense Council and the Sierra Club.

Speaking for them at AEC hearings held in Salt Lake City in December, Dr. Terry Lash said, "the

storage time considered in the draft statement is effectively limited to only a few decades instead of the thousands of years during which the wastes will have to be separated from the human environment."

Objections from state officials in Idaho, Utah, and Washington were also voiced at the hearings. In addition, at a separate meeting, the Western Interstate Nuclear Board called AEC's analysis insufficient.

NEVADA RESIDENTS BECKON

On the other side of the fence, at the Salt Lake hearings were representatives of industries using
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HIGH COUNTRY

By Jane Bell

It is a bright shiny day in the aftermath of Christmas. Not many creatures have been stirring in the newly fallen snow of last night. But bird life is abundant under the big ponderosa pine where juncos, quail and flickers vie for the grains, crumbs, and suet.

As a kid I used to like this time of Christmas vacation. It was a time of tramping through the snow into favored haunts of summer. There it was a game of getting reacquainted with the wild creatures in their own haunts. Now I can look forward to those times again and I will share the simple pleasures with Vic and the girls, Rachel and Chris.

I want them to know and enjoy such times for they may come to look upon them as the best times of their lives. Vic and I are just now reading *Where The Red Fern Grows* by Wilson Rawls. It is a story of an Ozark kid and his hunting dogs — the kind of story that fires the imagination of a nine-year-old boy as nothing has done before.

But more than a story of a kid and his passion for hunting with his dogs, it is also a story of a kid who didn't have much else. The story is of a time and era when country folk didn't have much. They couldn't give their kids much and the kids didn't expect much. In other words they were poor in the kind of material things which modern kids have come to expect. But they were rich in the spiritual blessings of a close-knit family living close to the land and provided with only the necessities.

It was so when I was a boy and we are returning to that kind of Christmas faster than most people realize. Far from bringing a country down, a return to only the essentials of life may reinstall the sense of God's providence and self-reliance which made this country great in its formative years.

My thoughts now have been led in this direction by several articles in *The Sunday Oregonian* (Dec. 29, 1974). The "Forum" page summed up the thoughts of three retiring members of Oregon's congressional delegation. They are Congresswoman Edith Green and Congressmen Wendell Wyatt and John Dellenback. Between them they have served 38 years in Congress. All were highly respected.

Each of these people are caught up in the fearsome worries of the future of this country. They obviously do not want to publicly express their worst fears of possible doom and gloom. Take Mrs. Green as an example. She says she seriously doubts if Americans are ready for the nationwide sacrifices that will be necessary as wave after wave of worldwide crisis washes over us. She says she is not gloomy, "just realistic."

As *The Oregonian* puts it, "They see energy as a potentially apocalyptic problem, possibly beyond government solutions. They see a lack of leadership and a country which badly needs to be led. They see national figures playing politics with matters of life and death."

Dellenback says, "Congress has not yet faced up to the urgency and breadth of the energy crisis."

Wyatt says, "I think energy is such a major problem that any other problem we've got is dwarfed by comparison." And he says, "We've got what I consider to be the probability of another Middle East war, which means an absolute certainty of a second Arab oil embargo, probably in six to twelve months." He thinks the American people "just have to be shocked into an acquaintance with how desperate our situation is."

If my kids have already been exposed to wants and have become used to a life of simple spiritual pleasures, they will be somewhat prepared. I can't do much more for them. My inadequate insights and my love is all I have to give them. But I have a feeling their world won't be so full of doom and gloom if I can prepare them.



"HERE IT IS, BOYS, A GREENBELT THAT WILL GLOW GREEN FOR 240,000 YEARS."

Letters

Dear HCN,

As Wyoming's congressman teamed up with Idaho's Steve Symms to defeat the Hell's Canyon Recreation Area legislation, I wrote Congressman Roncalio on December 11, 1974 as follows:

"Dear Congressman Roncalio: I am taking the liberty of sending you a copy of the June 30, 1974 table compiled by the Bonneville Power Administration showing the specifications of the various projects in the B.P.A. system.

"You will note the total kilowatt capacity of the existing units is 10,691,900 kilowatts, and the kilowatt capacity of the total number of units in the 34 projects in the B.P.A. system, minus the Asotin Dam in Hells Canyon, would be 27,402,580 kilowatts minus the 540,000 or a net of 26,862,580 kilowatts for the remaining 33 units.

"In percentages, only 40% minus, of the total capacity of the B.P.A. is on the line now, consequently No more dams are needed in Hells Canyon.

"The people of Idaho have expressed their desire on several occasions to have Hells Canyon, this 100 mile stretch of the middle Snake River Canyon, preserved, and Congressman Steve Symms' activities to thwart these desires are disgraceful.

"I am sure the people of Wyoming would not want a dam in the Grand Canyon of the Yellowstone in Yellowstone National Park. I believe you would rather be remembered as a key Congressman who saved Hells Canyon for the people than as a Congressman who helped ruin it."

Respectfully,
Harold C. Miles
Nampa, Idaho

Editors' Note: Due to delaying action by the subcommittee on parks and recreation, the Hell's Canyon protection bill never made it to the House floor for a vote. Dec. 11 the House Interior Committee voted 22 to 7 to advance the bill from the subcommittee, where it was stymied, to the full committee. But the action came too late in the session to save the bill.

* * *

Dear HCN:

I like your whole publication. It's right down our alley, of course. You resist the temptation to extremism and "spouting off the top of the head" that flaws the efforts of so many environmental spokesmen and antagonizes even the reasonable, responsible members of the business and industrial community.

I am sending you a few of the "religious tracts" we distribute along with a complimentary copy of *GRASS LAND*, which we published a few years ago and which has been largely instrumental in the spread of the prairie restoration movement. It has sold over 30,000 copies, with no commercial advertising or promotion, and still sells as briskly as ever.

Alice and I are now working on another book on the theme of environmental protection and improvement — a fantasy, with such engaging characters as a squirrel who audits courses at the University, a mouse who hoards tinfoil gum wrappers against inflation, a skunk who is an attorney at law with the specialty of issuing injunctions, and an owl who is a psychiatrist and solves his patients' problems by eating them. A different kind of approach from *GRASS LAND*, but we think it may be even

Guest Editorials

Beware of intoxicating music

by Bart Koehler

Malcolm Wallop, making a speech in Buffalo, Wyo., spoke of the piano players of the world. I'm sure that he won't mind me repeating his tale:

"There was a great concert about to begin in a great concert hall. Suddenly the curtain burst into flames, throwing the audience into a mass panic. People rushed out of the building, running for their lives. At the same time, a well dressed piano player calmly sat down at the grand piano in center stage and began to play. His melody soothed the frenzied crowd, and the people regained their senses, returned to their seats, and listened to the music. All was at peace. Shortly thereafter, they all burned to death."

Wallop warned us about the piano players of today — the energy corporations' P.R. men who constantly reassure us that "everything is gonna be alright." It is our important job as concerned citizens to burst their bubble of reassurance.

Is everything alright in Wyoming? Certainly not in Rock Springs and Gillette. The social problems there are well known. The boom for energy development and the export of power has clearly made its mark. Yet the piano players play on.

Wheatland is a very pretty town, a clean town that's a nice place to call home. It probably won't be for much longer when Basin Electric arrives with a work force that (along with workers' families) will probably double the population of Platte County. Everything won't be alright with the proposed power plant going in.

How about Buffalo? Texaco's piano players are telling folks that there's nothing to worry about: people shouldn't fret about raising the level of Lake

DeSmet, nor about the two new draglines that Texaco has recently ordered. Texaco even gave the mayor of Buffalo a check for \$25,000 for both a sewage study (\$15,000) and for city-county planning (\$10,000) with an agreement that one of Texaco's piano players could be on the planning committee to say "everything's gonna be alright." Yet, Texaco won't let us know what their real plans are!

Is everything gonna be alright? Certainly not if we listen to the piano players. Our way of life is filled with tremendous threats. It is time to throw the piano players of the world off the stage. It is time for the people of Wyoming to listen to the special music of their homeland. The people of Story and Meeteetse are listening to this music, and realizing that there is a great deal to worry about with the cloud of development and "progress" looming overhead.

Editors' Note: Bart Koehler is the executive director of the Wyoming Outdoor Council and coordinator of the Citizens' Lobby, a coalition of Wyoming groups and individuals interested in linking the citizens of the state with their legislators in Cheyenne.

Idaho needs power plant siting law

Reprinted from the IDAHO STATESMAN
Friday, Oct. 11, 1974.

The people of Idaho need power plant siting legislation to help assure them that these decisions will be made only after the most thorough evaluation of proposals and possible alternatives.

This need is illustrated by the current proposal for a large coal plant in Southern Idaho, near Boise, near Mountain Home or near Bliss.

Idaho Power Co. has decided that it needs another big plant, that it should be a coal plant, and that it should be located at one of those three sites. So far the people of Southern Idaho have not been consulted about the wisdom of this decision.

The Idaho Public Utilities Commission must issue a permit for any power plant, and would have to consider this one. PUC members have indicated they would take a broad look at the question.

Still the authority of the PUC is not broadly defined by statute. If the PUC should, for example, deny application for a site near Boise, based on air pollution concern, it is not at all clear that the decision would stick. It might be overturned in court.

Beyond that, the PUC does not have all the resources it needs to consider the wide spectrum of economic, environmental and social issues involved.

Power plant siting legislation could require a broad, thorough review by a larger board, perhaps with consumer representatives. The legislation can specifically require a thorough review of environmental and social impact, and of alternatives. It can spell out requirements for public hearings or other involvement.

There is some irony in the fact that while the last legislature bowed to industry pressure to defeat

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Skiing in Colorado. Friday, Jan. 3, 1975



land use legislation, it passed measures to 1) make it easier to locate power plants and 2) provide low-cost financing for pollution control.

Power companies were given the authority to condemn private property (subject to PUC approval of a plant) for power plants. The legislature voted to put on the ballot SJR114, which if the voters approve it in November, would allow county revenue bonds to reduce industry costs for pollution control equipment.

While approving these inducements for industrial growth, the legislature failed to pass the land use legislation that would give the people and their representatives more say in directing such growth, to limit adverse impacts.

Even the land use legislation, however, would not be adequate to deal with the power plant issue. The proposed procedure for considering developments of regional impact was cumbersome. It would not allow the far-reaching kind of evaluation needed for a power plant decision.

Because of Idaho's proximity to Wyoming and Montana coal, we could be ripe for a rash of coal plant proposals—to provide power to other states as well as to Idaho. We don't have the laws or the review machinery to adequately represent the public's interest in such decisions.

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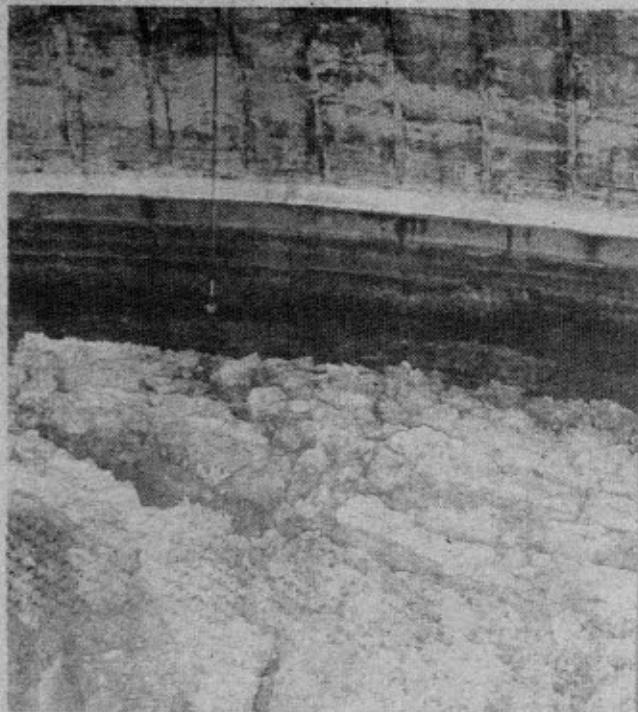
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Sincerely yours,
Jim Wilson
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Polk, Neb. 68654

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Battelle-Northwest Photography

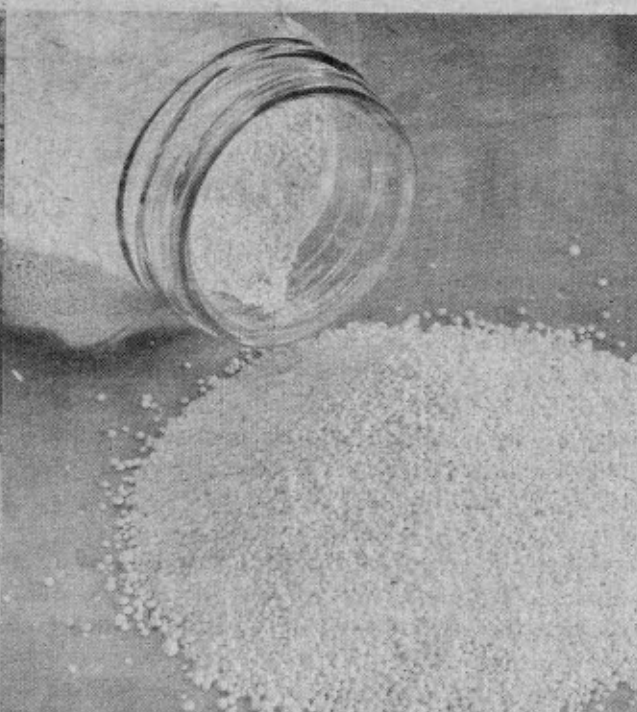


Photo courtesy of INEL

The safest way to store deadly radioactive wastes is in solid form, researchers say. The Atomic Energy Commission regulation passed in 1971 requires that all wastes be solidified within 15 years of their generation.

The AEC's Hanford, Wash., facility has begun mixing the radioactive salt cake shown at left with iron oxide, silicon, and sand to form a rock-like product as insoluble as glass. The salt cake is formed by evaporation.

Another approach to solidification has been in operation at the Idaho National Engineering Laboratory for about 10 years — calcination. This process converts high level liquid waste to a dry, granular solid. The result is shown in the photo at right.

A-wastes...

(Continued from page 1)

nuclear fuels and some Nevada residents. Jack R. Pettitt, a member of the Clark County, Nev., Board of Commissioners pushed for selection of his state as the site for radioactive waste disposal. He said choosing Nevada would be "an economic benefit."

"That's the main thing. We have one of the few states in this nation that has the area for it," Pettitt said.

Nevada State Planning Coordinator Bruce Arkell was more cautious. He told the AEC that the governor believes Nevada should retain veto power over the selection.

The AEC's Nevada Test Site northeast of Las Vegas has been suggested as a possible disposal site. Also being considered are the Idaho National Engineering Laboratory (formerly the National Reactor Testing Station) near Idaho Falls and the AEC's Hanford Reservation near Richland, Wash.

Some of the wastes produced will have to be kept out of the natural environment for more than 300,000 years, according to Dr. Frank Pittman, who was chief of the AEC's waste management branch. (Since the AEC was disbanded by Congress this fall, the waste management problem has been handed over to the newly created Energy Research and Development Administration, ERDA.)

VAULT V. STONEHENGE

The facility for interim storage would be either a large vault cooled by air or water, or smaller casks set outside for cooling — a set-up which has been described as a "nuclear stonehenge." A facility big enough to handle wastes generated by the year 2010 would require anywhere from 350 to 2,130 acres. The water needed to cool the facility could amount to anywhere from 70 million gallons to 1,500 million gallons per year by the year 2010, according to the AEC statement.

An Idaho blue ribbon commission on atomic waste found the AEC report incomplete. "Based on

the limited information contained in the draft environmental statement, Wash-1593, we cannot endorse an expansion of activities at the Idaho Nuclear Engineering Laboratory to include the storage of commercial wastes," the commission said.

EMPHATIC NO — MAYBE

At the Salt Lake City hearing, Idaho Gov. Cecil Andrus' representative backed up the commission with an "emphatic no" to any plans for storage of

Radioactive leaks

Waste spills wake up U.S.

In July of 1973 *Los Angeles Times* readers awoke to a six column banner headline across the front page which declared "Thousands Periled by Nuclear Waste."

The occasion was a large leak of radioactive materials at the Atomic Energy Commission's Hanford facility near Richland, Wash. The *Times* article detailed this incident and a history of mishandling of nuclear wastes at other AEC facilities.

Whether or not thousands of people have been and will be endangered by nuclear wastes is now a matter of intense debate. Whatever the outcome of that national argument, *Times* staff writer Lee Dye's indisputable points remain — that nuclear wastes have deadly potential and that their caretaker needs to be scrupulously watched.

In a report written on the causes of the June 1973 Hanford leak, an AEC committee attributed the accident to both problems with equipment and with people. The accident happened because of an aging tank and primitive monitoring technology, but mostly because of poor management and human error on the part of Atlantic Richfield, the AEC says. Atlantic Richfield runs the Hanford facility for the AEC. In their report, the committee also admitted that AEC supervisors were partially to

wastes at the Idaho National Engineering Laboratory (INEL). In addition, the governor's spokesman asked the AEC to give Idaho a definitive timetable for the removal of transuranic atomic wastes which are already in the state.

The INEL currently holds most of the nation's transuranic wastes. The transuranic elements are neptunium, plutonium, americium, and curium. They remain dangerously radioactive for hundreds of thousands of years, while other wastes remain so for about 800 years.

Later Andrus claimed his "emphatic no" had been misinterpreted. One page of his prepared remarks were not given at the Salt Lake hearing, says Chris Carlson, Andrus' press secretary. A text of Andrus' comments published in eastern Idaho also dropped a key paragraph of the same section, Carlson said.

The key paragraph said that Andrus would be willing to listen if the AEC wants to build an Idaho plant to process nuclear waste, and won't store anything near ground water, according to the Idaho Statesman.

UTAH ENROUTE TO ALL SITES

The Utah League of Woman Voters warned at the hearing that while Utahns do not have a potential waste disposal site, their state could be endangered by its location along the waste transportation route — no matter which of the three proposed sites is chosen. She said human error and blackmail would be serious and dangerous problems. Plans call for shipping wastes to the storage site by rail or truck.

A science advisor for the state of Utah mentioned the hazard posed by radioactive tailings still at the site of the old Vitro chemical mill. He asked at the hearing how the public could expect the AEC to be responsible for highly radioactive wastes through the hundreds of thousands of years that they would be dangerous, when AEC still hasn't cleaned up the Vitro tailings.

WASHINGTON OBJECTS, TOO

Fred Adair, director of the state of Washington's office of Nuclear Energy Development, said his state is not satisfied with the AEC's distribution of planned monitoring activities for the site. He was disturbed by "the light treatment of contamination" in the AEC's draft statement.

blame for failing to detect obvious signs of bad management.

In a *Science* magazine article on the leak, Robert Gillette called the bungling "unbecoming for a municipal sewage plant, to say nothing of the nation's main repository for nuclear waste."

The spill was the largest single accidental release of radioactive waste in the commission's history. Radioactive wastes seeped out of a steel-and-concrete tank for 51 days before officials noticed the leak. By that time, 115,000 gallons of high-level nuclear wastes had dribbled out, including cesium-137, strontium-90, and a small amount of the most deadly poison on earth, plutonium.

High level waste tanks have leaked before at Hanford. Between August 1958 and June 1973, 422,000 gallons of wastes had seeped out of 15 other tanks, according to the AEC.

The *Times* story detailed "perils" inflicted by other waste storage facilities in the country:

—"Plutonium, the most carcinogenic (cancer-causing) agent known to man, was buried in ordinary steel drums at the National Reactor Testing Station (now called the Idaho National Engineering Lab — INEL) near Idaho Falls, Idaho, despite warnings that the drums would leak.

—"Other leaks have occurred at a similar facility moved through the formation for hundreds of thousands of years. Geologists say. But at the site

at Savannah River, S.C. And in at least one case some of the radioactive elements entered the water table there."

This November, nuclear waste problems moved closer to the homes of Idahoans. Early in the month the *Idaho Statesman* reported a pipe failure at the AEC's Idaho National Engineering Laboratory which leaked strontium 90 and cesium 137 into the subsoil. A few days later the *Twin Falls Times* reported that highly radioactive waste was buried in pasteboard boxes at the facility. "A relatively small amount" of that buried material was contaminated by plutonium, which has a half-life of 24,000 years, according to INEL spokesman Dick Blackledge.

Blackledge said the low rainfall in the area is one reason why the radioactive materials will not contaminate the Snake River.

Despite these problems, the AEC claims that since the start of Idaho's program in 1953 "there have been no leaks of high level radioactive liquid wastes from the large stainless steel storage tanks."

"These waste tanks are monitored routinely a minimum of three times a day to detect any possible leaks. In the unlikely event a waste tank should ever leak, the wastes would be transferred to an empty tank always kept on standby," according to an AEC spokesman.

The AEC claims in its draft environmental impact statement on the management of high level wastes that the situation has improved. The impact statement, which was published in September, says that new designs and improved construction methods have resulted in tanks from which "no high

level waste has been lost into the soil."

The agency also points to a process developed at its Idaho facility which converts liquid wastes to dry, granular solids. Several other solidification methods have been developed through the "pilot plant" stage at Hanford, according to the AEC.

Separate environmental statements on the management of wastes in Washington, Idaho, and South Carolina facilities have been recently drafted by the AEC in addition to the general waste management statement.

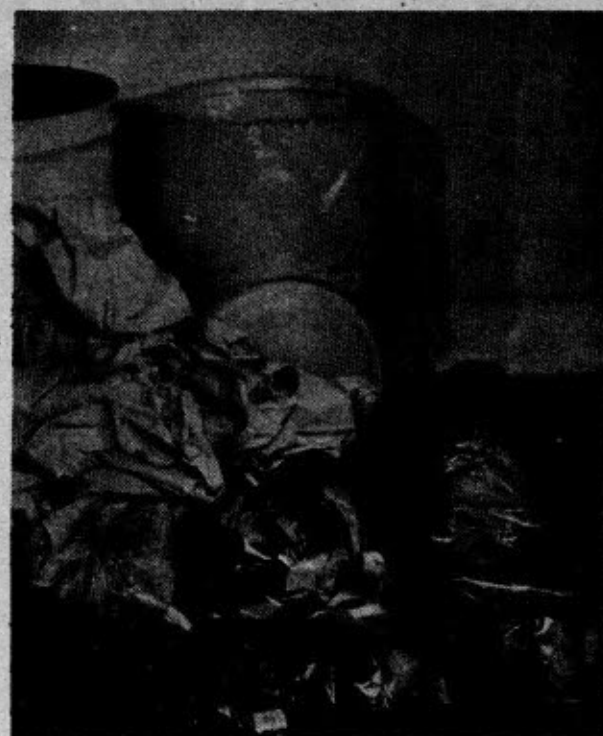
What about wastes already leaked from accidents of the past? The Natural Resources Defense Council, an environmental law organization, is challenging waste management practices at Hanford through a lawsuit.

The AEC admits that mistakes have been made, but they insist that no harm has been done. The total exposure of the population to radiation from Hanford sources is "imperceptible when compared to the normal 10 to 15% fluctuation which occurs annually in the natural background levels," according to the Hanford impact statement.

The AEC also disputes any claims of contamination of groundwater in the vicinity of Richland, Wash. Radioactivity in the Columbia River, downstream from Hanford, is less than half that present naturally in the Potomac River, according to AEC Commissioner Clarence E. Larson.

AEC's general manager at Hanford, Thomas A. Nemzek, claims that even if all the waste stored at Hanford escaped to the groundwater somehow, radioactivity in the Columbia River would still remain within drinking water standards.

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Above is a pile of plutonium contaminated coveralls, gloves, mops, shoe covers, laboratory glass, and wipe rags. These wastes are packed in the polyethylene liner at right, which is placed in the steel drum at the left. Watertight lids keep the materials safe for 20 years, the Idaho National Engineering Laboratory (INEL) says. Photo courtesy of INEL

Those in charge still don't know

Where the wastes will finally go

The problem is to reach a spot in the universe, removed from living things, where we can be sure to change for hundreds of thousands of years. That place, and if we can reach it, we can bury nuclear wastes there and breathe

easy. The U.S. is settling for waste management methods which are somewhat less secure. According to the Atomic Energy Commission's environmental statement on waste management, for the next two or three decades we will depend upon above-ground storage — and human vigilance.

A number of independent experts are disturbed by the Atomic Energy Commission's interim storage approach to the problem. The commission anticipates the discovery of a permanent solution — a way to dispose of long-lived wastes like plutonium, which can remain toxic for 240,000 years. But no assured methods exist today. The proposed facilities will be built to last for a century — just in case we have to wait longer than expected for the discovery of a permanent solution.

Dr. George Kennedy, a geologist at the University of California at Los Angeles believes the research time and money spent on an interim plan "is insane." He believes it is possible to store wastes safely, but the solution lies in geological formations from which escape would be impossible, not in above-ground vaults.

PROJECT SALT VAULT

The AEC says disposal in geological formations at depths reachable by conventional mining methods is the technique "closest to readiness for use." In fact a few years ago AEC scientists expected to have facilities for permanent disposal available in a salt bed in Kansas, a plan they called Project Salt Vault. But those hopes were dashed when experts in Kansas pointed out the need for further study.

The existence of salt proves that no water has moved through the formation for hundreds of thousands of years, geologists say. But at the site

near Lyons, Kansas, local people pointed out that there were numerous adjacent oil and gas wells to be plugged. Someone also mentioned that a salt mine a few miles away had lost 175,000 gallons of water during the mining operation. If that much water could disappear, the AEC decided, the salt bed was not as safe as had once been thought.

A critique of the AEC plan written by the Sierra Club and the Natural Resources Defense Council (NRDC) points out that after 20 years the agency has been unable to locate "even one suitable bedded salt deposit for a geological disposal pilot plant." The critique concludes: "The available information indicates that pessimism about finding a suitable geological formation and site is more in order than the AEC's unsubstantiated optimism. . . ."

NRDC and Sierra Club also criticize the AEC for ignoring other types of formations which might be explored as disposal sites. In their draft impact statement, the AEC names, but does not explore, other possibilities: salt domes, granite, and limestone.

Salt domes tend to be thicker and larger than salt beds. Some of the domes in the U.S. are 10 miles across and four or five miles deep. France has been disposing of radioactive wastes in salt domes for years, George Kennedy says, and has had no serious problems. The AEC says it is studying salt domes, but offered no details about their knowledge in their draft environmental statement.

DRY DISPOSAL

A U.S. Geological Survey scientist thinks that researchers should look at burying wastes at depths of 10 to 100 feet beneath mesas and plateaus of the Southwest. The geologist, Isaac J. Winograd, says that shallow burial would permit relative ease of placement and retrieval, with only nominal surveillance.

"One of the main difficulties," Winograd admits, "would be in predicting climatic changes and erosion rates over the time interval — hundreds of

thousands of years — needed for decay of the isotopes of plutonium and americium." The climate of the Southwest may be arid and semi-arid today, he says, but it has been considerably wetter in the geologic past and may become so in the future.

EXOTIC WASTE DISPOSAL

Certain exotic plans for disposal of wastes which have been suggested provide even less assurance of safe permanent disposal. In the alternatives section, the AEC environmental statement mentions and discounts placement of the wastes within polar ice sheets, in the bed of the sea, in volcanoes, and in outer space.

Ice disposal is "not a viable alternative to retrievable storage," the AEC statement points out, because "rates of movement within the ice sheet, its long-term stability, and physical conditions at the ice-bedrock interface are essentially unknown."

More information is needed on seabed disposal, too. The AEC says the research and development might cost \$2 to \$5 billion and take 20 to 25 years.

Volcanoes present both formidable technical and public relations hurdles, the AEC says. As for outer space "The stability of the high-earth orbit cannot currently be assured for times greater than a few thousand years," agency researchers say.

TRANSMUTATION

The AEC does see promise in one item listed under alternatives in the environmental statement, a method for changing long-lived wastes into elements with shorter periods of toxicity. Long-term hazards could be reduced by bombarding long-lived atoms in fission or fusion reactors. Thus transuranic elements, which require containment for hundreds of thousands of years, could be broken down into fission products, which are dangerous for about 800 years.

"The AEC plans to increase its efforts along this line," the environmental statement says.



Sagebrush



Shall we praise or eradicate it?

Dear High Country News,

Perhaps I am not seeing an inconsistency in your publication, but please — Is sagebrush good or bad, better or worse than grass? Much of your November 8 publication is devoted to the evils of overgrazing and the attendant invasion of sagebrush into areas once dominated by grass. Thus you say, "sagebrush invasion and erosion seem to go hand in hand." Yet in your October 25 issue, you say, "Sagebrush, which can be vital winter sustenance for antelope and deer, but not for cows is treated with herbicides so that it will be succeeded by grasses which grow cattle."

Perhaps I am missing something here, but it would seem to me that the program of sagebrush control listed in the October 25 edition might go hand in hand with your concern with erosion in the November 8 edition. Please unconfuse me.

Sincerely,
David, Hoyt, Director
Southwest Environmental Services
Tucson, Ariz.

RANGELAND VALUES

The only reason for our confusing inconsistency is that we can't answer David Hoyt's question: "Is sagebrush good or bad, better or worse than grass?"

Sage is neither good nor bad. There are no values assigned to nature other than the values man chooses to assign for a specific purpose.

If the man assigning the values is a cattle rancher, he's very likely to place a high value on grass and a low value on sage. This may lead him to attempt to alter the vegetation on his range by eradicating sage and planting grass.

If the value assessment is put in the hands of a deer hunter or a sage grouse hunter, sage would most likely be preferred over grass. On the other



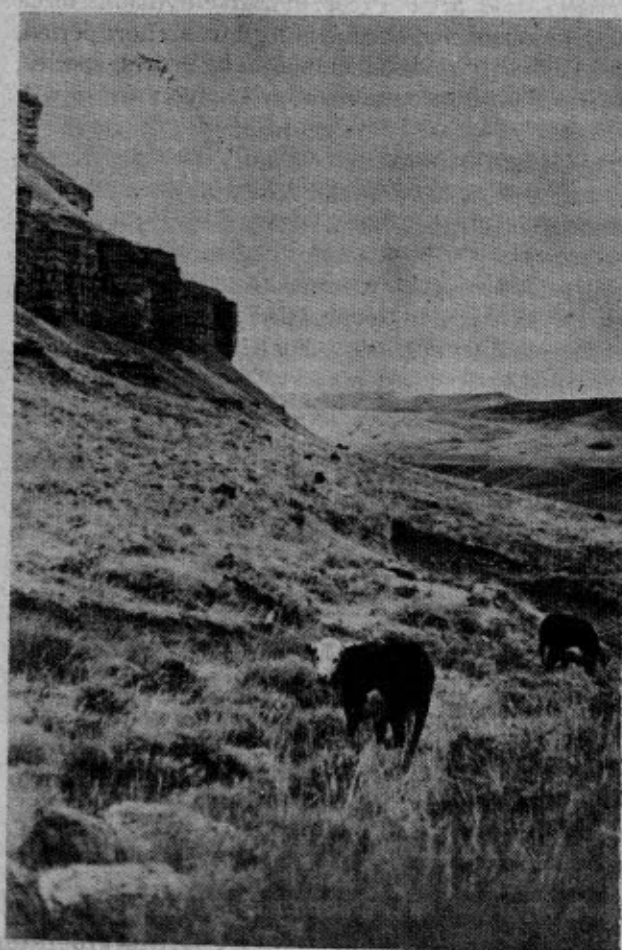
Sagebrush — is its presence the result of disturbed eroded soils or has it always been dominant? This picture was taken on the North Fork in Park County, Wyo.

hand, an elk hunter or wild horse fancier would most likely prefer grass to sage.

But single-minded range management is sure to draw fire from other range users with different objectives — and it often backfires. For instance, when livestock overgrazing destroys a stable grass community, often browse which is highly acceptable to deer replaces the preferred livestock forages. Wildlife authority Starker Leopold believes this to have been a major factor in the irruption of deer herds throughout the West.

This is not to say that overgrazing is a blessing in disguise. Soil erosion usually accompanies overgrazing; and loss of topsoil is to no one's benefit. The final result could be a range that supports very little life of any kind — a condition that might persist for hundreds of years.

As one can quickly see, the problems and complex decisions facing a range manager have no easy solutions. The range manager is in the same position as was writer-conservationist Aldo Leopold when he took axe in hand and went about thinning his wood lot in Wisconsin. Leopold wrote in his *Sand County Almanac*, "I have read many definitions of what is a conservationist, and written not a few myself, but I suspect that the best one is written not with the pen, but with an axe. It is a matter of what a man thinks about while chopping, or while deciding what to chop. A conservationist is one who is humbly aware that with each stroke he is writing his signature on the face of his land."



Dear High Country News,

I am aroused, perhaps belatedly, to respond to your allegation (*High Country News*, November 8, 1974) that overgrazing has transformed the Intermountain West from a grassland to a brushland of sagebrush. The very day that your article was called to my attention, I was checking the proofs of a forthcoming article in the *Journal of Range Management* in which I argue that woody shrubs, not grass, dominated most of the intermountain country before the introduction of domestic livestock.

Although some observers do believe that vast areas of the semi-arid West were grasslands, most envision a pre-grazing vegetation cover that contained both grasses and shrubs. Undoubtedly, grazing has caused a general increase in shrub density at the expense of grasses and forbs, but this is not equivalent to saying that shrubs have taken over formerly pure grasslands.

In 1833, the naturalist Townsend found the sagebrush country of Wyoming anything but a verdant grassland: "The country has now become more level, but the prairie is barren and inhospitable looking to the last degree. The twisted, aromatic wormwood covers and extracts the strength from the burnt and arid soil. The grass is dry and brown, and our horses are suffering extremely for want of food."

Early travelers and explorers repeated similar comments in most areas of the Intermountain West. Wet valley bottoms, mountain canyons, and upland slopes supported much grass, but the rolling plains and valleys, constituting most of the Intermountain West, was covered by thick brush long before the introduction of cattle and sheep.

The contrary view, which envisions a vast grassland prior to grazing, probably stems from nostalgic views of "the good old days" and from the effort to find dramatic environmental changes, instead of subtle ones, at the hands of man.

Yours truly,
Thomas R. Vale
Assistant Professor
Madison, Wisc.

Nothing but the fear of Indians could prevent the settlement of all these valleys. There are no finer ranges of grazing land in all the West, and the bottoms are capable of raising the best wheat, vegetables, and fruit. Very little labor is required to irrigate the great expanses of land now covered with bunch grass and sagebrush. The water of the stream could be brought to the foot hills almost at any point, while upon the higher ranges stock can fatten all the winter. Last December a man passed through the mines with some cattle nearly starved and as lean as Pharaoh's lean kine. In February one of them was killed at the camp — a good fat ox. Two months in the valley had fattened him.

James Chrisholm speaking of the Wind River drainage in western Wyoming in his journal, SOUTH PASS, 1868.

SAGEBRUSH INVASION AND ERADICATION — AGENCY VIEWPOINT

ate receiving Thomas R. Vale's critique article "Sagebrush invades western Wyoming." His letter points out that there is a problem in the circles over the roles of sagebrush and grass in the Intermountain West. While we cannot argue one way or the other about what vegetational cover was here in the past (historical accounts may be colored by the observer's love or distaste for the scenery), we do feel that recent work by the Bureau of Land Management (BLM) sheds some light on the present-day competition between sage and grass.

In early November of this year, *High Country News* was invited to participate in a three-day state-wide range management workshop sponsored by the BLM in Lander, Wyo. The intent of the workshop was to introduce range users and managers in Wyoming to the rest-rotation principle. The project undertaken was to attempt to restore a predominantly sagebrush grazing unit showing signs of overuse to a grassland community — in this case predominantly blue-bunch wheatgrass.

During the workshop, time sequence slides were shown by the BLM's top range specialist, Dr. August L. Hormay of Berkeley, Calif., to illustrate how rest-rotation management in other demonstration projects around the West had restored deteriorated sagebrush rangeland to thriving grassland communities.

Hormay maintains that originally sagebrush was largely restricted to rocky ridgetops and other areas where shallow soils could not support thick stands of grass. Tap-rooted plants like sage and juniper can better exploit habitats with a minimal amount of topsoil, Hormay says. He explains that thick, healthy grass stands on well-developed soils could out-compete sage and would prevent sage reproduction and invasion. It is only when the grassland is misused — when the grass is killed by overgrazing and

the soil is eroded away because there is no longer grass to hold it in place — that sage can successfully invade.

The soil dictates what plant species will be present, Hormay says. Once the original grass cover is destroyed and the topsoil is lost, tap-rooted plants like sage are better suited to survive in the area, and they quickly take over. It is only when the topsoil is built up again — a process which may take thousands of years in some cases — that the land will return to its original grassland status, says Hormay. This is why protecting topsoil should be one of our top priorities, he says.

Hormay has directed sage control work throughout the West during his career. His experiences with sage spraying and chaining (uprooting sage by



August L. Hormay, BLM Range Conservationist

dragging a ground level chain over the range) were largely failures. Whenever he sprayed or chained a sagebrush flat and planted grass seed to take its place, he would get a showplace grass stand in a short period of time. But the grass stand was just as short-lived as it was impressive. In less than a decade the sprayed or chained areas had returned to a predominant sage cover. Some areas he alternately chained and sprayed three and four times to keep out the sage, but it always returned. This is because the deteriorated soil could not support a vigorous grass stand — the soil dictated sage cover, Hormay says.

Hormay says the BLM has wasted millions of dollars measured in equipment, seed, and labor in a futile effort to eradicate sage on livestock ranges. Hormay feels it will do no good to manipulate vegetation — instead the agency should focus on conserving and restoring the soil.

SAGEBRUSH OR GRASS — THE ANIMALS' PREFERENCE

Any attempt to flatly state a range animals' forage preference is doomed to failure. What an animal feeds upon varies depending upon the plants available to it, the season, the weather, competition with other members of the same species, and competition with different species. With this notion of variability in mind, the following broad generalizations on forage preference are offered to serve as guidelines in predicting the value of sagebrush and grass for

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Friday, Jan. 3, 1975

various domestic and wild range animals. This information is quoted from *Range Management* (1955) by Laurence A. Stoddart and Arthur D. Smith.

Cattle— "Cattle are chiefly grass grazers, although they consume many shrubby species readily and obtain some forage from broad-leaved herbs. Grass, browse, and forbs are preferred by cattle in the order named, the volume of the last two being small in relation to that of the grass."

Browse includes twigs, leaves, and young shoots of woody trees and shrubs. Forbs are non-woody herbaceous plants other than grass (for example wild flowers).

Sheep and goats— "Browse ranges are best adapted to sheep and goats. Of the two, perhaps goats can make the better use of shrubs. Since browse often grows in thick stands, larger animals may be prevented from working through and fully utilizing the forage present. Furthermore, sheep and goats prefer the forage produced on shrubby plants more than do cattle or horses. Though sheep eat grass in large quantities, most grasses must be young and green to be fully used. . . . Sheep utilize forbs more fully than any other kind of livestock. Not only do they consume larger quantities of these species, but they also consume a greater number of species."

Horses— "Horses are the most selective of the domestic animals. They are primarily grass eaters and utilize relatively small amounts of other forage. The horse has an ability to utilize coarse grass unsurpassed by any other kind of stock."

Elk— "Elk are essentially grass eaters, especially during the summer months and perhaps by preference during the winter also. Other plants are grazed, however, during all seasons, browse forming a large part of the diet during the winter. In Montana, grass was found to make up over 56% of the diet and, when available, as much as 85%. In Arizona, where snow does not prevent its being reached during the winter, grass is believed to be even more important."

Deer— "Considerable work has been devoted to discovering the forage preferences of deer. These generally have revealed that forbs and browse are the most important. During the early period of plant growth, forbs may rank first in the diet. Since on most western areas, except at high elevations, forbs remain green and succulent for but a short period, they are early replaced in the diet by browse species, which remain succulent after herbaceous growth has dried. Throughout the winter months (the critical months for deer survival), where a snow cover exists, browse plants form nearly the entire forage. . . . Grass, except in the absence of other desirable forage, probably does not enter strongly into the diet of the deer. . . . Deer on the Kiabab National Forest (in Arizona) secured less than three per cent of their diet from grass. . . . For a brief period in early spring, it (grass) may become of considerable importance. As other green herbage becomes available, grass is forsaken."

Pronghorn antelope— "Since they (pronghorns) were found on open plains and mesas, it was early assumed that they were grass-eating animals. Investigations have shown this to be false, grass being of minor importance. Throughout the northern parts of the antelope range, browse has been found to make up about two-thirds of the diet. Moreover, most of the browse plants were those low in palatability to livestock, sagebrush (*Artemisia*) often being the most important single genus. In the southern plains, forbs were found to be of greater importance than browse. Many of the species most heavily used were not important as livestock forage."

by Bruce Hamilton



PRAIRIE DOGS

Photo courtesy of North Dakota Travel Dept.



BLACK-FOOTED FERRET Photo by Luther Goldman of U.S. Fish and Wildlife Service



Non-hunters asked to h

Historically, hunters have borne the cost of managing the animals they are told to stay away from — the non-game species, which include many small mammals, owls, eagles, hawks, song birds, and all endangered species.

Recently, a few states have begun to recognize the inequity of this base of funding, since the wildlife population belongs to all the people of the state. Consequently, there have been several attempts, with varying degrees of success, to come up with new revenue sources.

In Colorado, the 1973 Legislature approved a conservation stamp program in which stamps are sold and the money put into non-game management. However, the program has met with little success because of the way the stamps have been promoted, according to Vim Wright, who is a member of the

Non-Game Advisory Council to the Colorado Director of the Division of Wildlife.

Ohio, which started the first stamp funding, has also had little success. Wright said the program could be improved if the stamps were available at several accessible locations and if the stamps stood for something specific. For example, she said when people buy stamps, they could buy land to be put aside for wildlife habitat. Or the individual could designate the money to go to a specific program such as reestablishing the

However, the state's game warden is a more sure source of funds. Wright said the Game Advisory Council is asking the division to ask for \$400,000 for a general fund. The administration of Governor Dick Lamm will recommend \$89,000, which Wright says is only status quo. The Division of Wildlife wants to stick by the program, Wright said, but has found out that federal matching funds will not be available until later, if at all. Therefore, the Division is asking for \$282,349, which Wright believes is still a conservative figure.

California also uses general fund monies for non-game, with \$500,000 budgeted in the 1974 Legislature, according to Wright.

Various other taxes and fees are being considered

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Wright since the consump ased once

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PIKA OR CONE

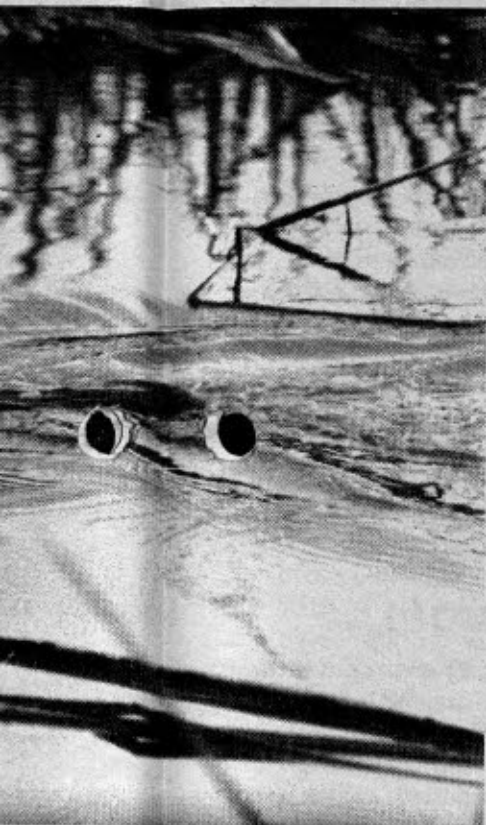
**MUSKRAT**

Photo by Tom Baugh

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consider how much money will be
who will be paying. The soft drink tax,
been criticized for only affecting a
or people. The camera tax, Wright
would only produce a small resource
since the items which would be taxed are non-
consumptive equipment and would only be purch-
ased once.

As a first step, Wright suggests that states con-
sider forming a council similar to Colorado's Non-
Game Advisory Council. She said it at least proves
that there are citizens ready to work without com-
pensation because of their dedication to wildlife.

Personally, Wright sees time or money put into
non-game management as an investment in the
future.

**PIKA OR CONEY****GREAT-HORNED OWL**

Photo by Verne Huser

**GOLDEN EAGLE**

Reckoning from Washington

Editors' note: The Sierra Club and other conservation organizations are suing the government on the grounds that there should be a comprehensive Environmental Impact Statement to cover coal development in the Northern Great Plains.)

by Lee Catterall

"Orr would be crazy to fly more missions and sane if he didn't, but if he was sane he had to fly them. If he flew them he was crazy and didn't have to; but if he didn't want to he was sane and had to. Yossarian was moved very deeply by the absolute simplicity of this clause of Catch-22 and let out a respectful whistle.

"That's some catch, that Catch-22," he observed.

"It's the best there is," Doc Daneeka agreed."

—Catch-22, by Joseph Heller.

"It has to be a proposal."

—Francis M. Shea, Montana Power Co. lawyer, in his argument before the U.S. Court of Appeals.

The government prepares environmental impact statements each time it proposes to do something big that could "significantly affect the environment." A 1969 law requires it.

So we can expect statements like that each time federal approval is needed for a strip mine, a power plant, water diversion, all sorts of things. Put together, those things will result, says Sierra Club attorney Bruce Terris, in "the largest development ever to occur in a rural area of this country in a short period of time."

In his court case against the government, Terris argues that a whole bunch of environmental statements on parts of the development fails to give us a clear prediction of the cumulative impact; they're trees in a forest. Terris says we should study the forest, the entire proposal.

"What proposal?" asked Francis M. Shea in his courtroom arguments backing the government's position. "There is not here any concrete government action."

That's the catch: Catch-22. The government's case is that it's not a proposal unless it has been organized into a proposal. If it's not organized, it's not a proposal, and no environmental statement is needed.

U.S. District Court Judge Barrington Parker ruled earlier this year in favor of the government position, perhaps moved by its absolute simplicity. "There is no existing or proposed federal regional program, plan, project, or other regional 'federal action' to develop coal, he wrote in his judgement.

A three-judge Court of Appeals panel heard the case in December.

Terris's argument is that a variety of what the government acknowledges are proposals are interrelated, using such things as "common dams, common reservoirs and common pipelines."

"These are not going to operate independently," he said. "They are obviously going to have to use the same facilities."

Shea and Justice Dept. lawyer Jacques Gelin countered that while all that might be interesting to "study," it's not a proposal. Also, they said, an environmental statement would take a lot of time to prepare.

"We have to be concerned about delay and we have to deal with what is practical," Shea said. "There has to be some common sense about this. If you're going to wait until all studies are over with, if you're going to consider alternatives and alternatives to alternatives, you're going to be stuck in the mud."

Concluded Shea: "You should let government action go forward."

And as the three judges were left to ponder the government's majestic syllogism, Shea departed the courtroom with the confident air of an elder barrister.

"I would be very surprised if we were to lose this one," he said.

Governors to name energy czar

Sawhill choice challenged by environmental groups

John C. Sawhill, former head of the Federal Energy Administration, is being considered for a position as Rocky Mountain-Great Plains regional energy coordinator. Spearheading Sawhill's selection are Montana Gov. Thomas L. Judge and Colorado Gov.-elect Richard D. Lamm.

Judge and Lamm asked Sawhill to prepare a proposal for the regional energy office. In Sawhill's response, he outlined three major functions of the office: 1) to develop an energy policy that reflects regional interests, 2) to propose specific programs for the states to consider in controlling energy development, and 3) to be a link with Congress and industry.

"The energy office would be created by the governors and meet regularly with a governors' committee," wrote Sawhill. "In addition, the office would attempt to create a coalition of Rocky Mountain congressmen and senators to focus on regional energy issues at the national level."

"With only three per cent of the population, the Rocky Mountain states must present a united front so that they can muster the political clout necessary to gain key legislation . . . and exert the pressure to effect federal regulatory action," Sawhill says.

Sawhill's likely appointment has aroused several conservation organizations already.

The Northern Plains Resource Council says that Sawhill favored accelerating western strip mining supported an Energy Facility Siting Act which allowed the federal government to override states in locating new facilities, and encouraged nuclear energy development as "environmentally the safest of energy resources."

"Regionalism can only benefit the Northern Great Plains and Southwest, and Montana in particular, if the coalition's policies firmly counter, rather than merely endorse, the broad proposals for federal and energy industry control of the West," said the NPRC newsletter, *The Plains Truth*.

The Environmental Defense Fund sent a letter to the governors of Rocky Mountain-Great Plains states, expressing "grave reservations" over the apparent choice of Sawhill.

While applauding the idea of a coordinated, regional energy program to protect the people and environment of the region, EDF told the governors that Sawhill's positions and policies as head of the Federal Energy Administration are "contradictory to the interests of the region."

The EDF letter critically reviews three Sawhill policy areas: 1) His promotion of a large-scale western energy development, including labeling the West as "the last real frontier for energy development in this country." 2) His efforts to prevent the passage of strong strip mine control legislation in Congress. And 3) His advocacy that clean air standards should be weakened, and that states should not be allowed to have air quality standards more stringent than the federal government's.

George W. Pring, Director of EDF's Rocky Mountain-Great Plains office in Denver, says: "The future of the West depends in large part on whether we can prevent the large-scale environmental degradation energy development will bring. The selection of John Sawhill as regional energy coordinator appears inconsistent with protection of the region's interests. Even if he were to modify his stands on these critical energy issues, it would seem difficult for him to be a credible spokesman for things he has for so long opposed."

The EDF letter stressed that time should be taken to consider alternative candidates. EDF also suggested that the public should be given a fuller understanding of what a regional energy office would entail.

One alternative candidate who is much more ac-

ceptable to conservationists is S. David Freeman, former head of the Ford Foundation Energy Policy Project. Freeman is a strong advocate of energy conservation before environmental sacrifices. Lamm told the *Rocky Mountain News* that the governors would like to discuss the position with Freeman before they make a final decision.

TIE calls

Coal lease report totally inadequate

The Interior Department's draft environmental impact statement on federal coal leasing is "totally inadequate," according to the Environmental Impact Assessment Project (EIAP) of the Institute of Ecology (TIE). Twenty-eight scientists and other experts contributed to the 246-page review which recommended preparation of a new draft statement rather than a final statement as is normally the procedure.

The reviewers pointed to the vast quantities of federal coal already under lease (enough to last 118 years at the production level projected for the year 2000) which indicates that the Department of Interior should be formulating policies to manage existing leases, rather than compounding the problems by issuing more. As the EIAP review states, "Rather than a coal leasing policy, the government needs a policy to control coal development."

Kathy Fletcher, staff scientist for the Environmental Defense Fund and editor of the review, states, "We found the Department's environmental impact statement deficient in all basic respects. Despite overwhelming evidence to the contrary, the EIS seems to conclude that further leasing is necessary in the near future. It fails to analyze alternative federal coal leasing schemes; the EIS relies on inaccurate information; and it fails adequately to discuss many disadvantages of western stripmining: low heat content, inability to meet sulfur pollution standards, high ash content, long distances from load centers, and the uncertain potential for strip mines land reclamation. The Interior Department has not made any progress which would justify lifting the moratorium on coal leasing established in 1973."

The review concludes that development of existing and future federal coal leases would create and aggravate many serious environmental problems — by releasing toxic and carcinogenic trace elements, degrading air quality, changing the region's climate, consuming large quantities of water in the water-short West, disrupting aquifers by strip mining, disturbing large areas of land, creating "boom and bust" towns, and destroying archaeological and other scientific and cultural resources.

The review recommends that the moratorium on federal coal leasing be continued, and that immediate attention be focused on the pressing problems associated with managing the many billions of tons of coal and hundreds of thousands of acres of federal coal lands already under lease in the West.

Copies are available for \$2.50 from:

Environmental Impact Assessment Project
1717 Massachusetts Avenue, N.W., Suite 300
Washington, D.C. 20036
202-462-5700



Emphasis ENERGY

in the Rockies and Great Plains

Tennessee Valley Authority (TVA) is extending its hold on energy development in the West. The latest announcement is TVA's purchase of half-interest in uranium properties in Wyoming and Colorado from the American Nuclear Corp. The agreement includes properties in the Powder River Basin and the Sweetwater areas of Wyoming. It also includes mineral rights for uranium and coal on the Brown Ranch in the Pumpkin Buttes area, one of the last extensive areas of fee minerals not previously leased. The same week, TVA signed a contract with Western Energy Co. for 450,000 tons of coal from a surface mine in southeastern Montana. (See HCN, Oct. 11, 1974). TVA is also considering buying the Peabody Coal Co. from Kennecott Copper Corp., although some Congressional leaders question the propriety of such a move. (See HCN, Dec. 6, 1974).

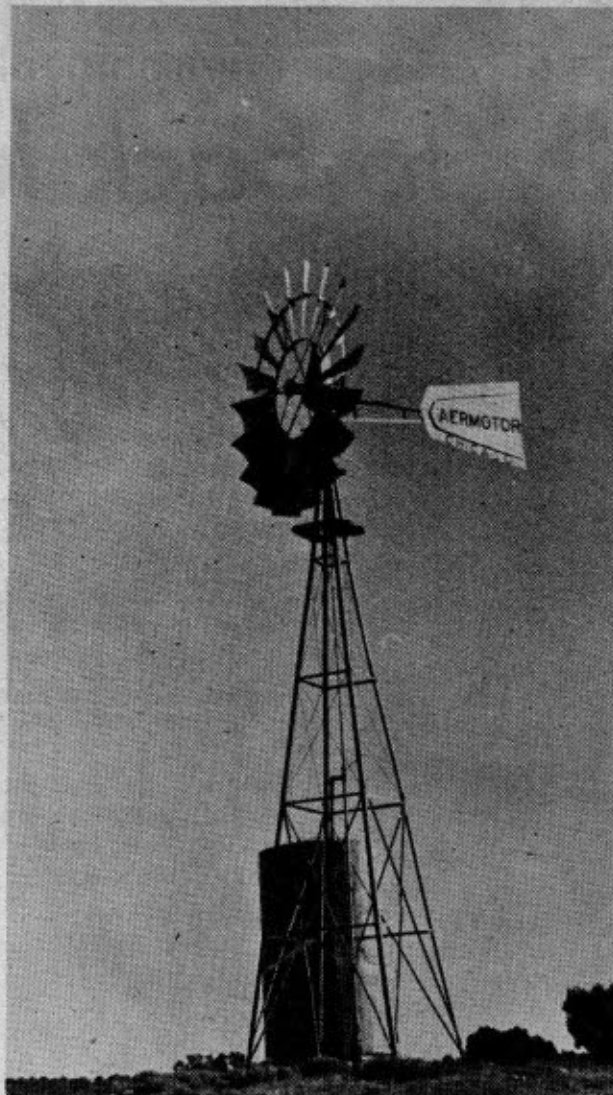
The first definite time schedule for a gasification plant in Wyoming have been announced by the Panhandle Eastern Pipeline Company. Design of the plant will begin in July, 1975. Construction should be completed by 1978, and the plant is slated to go into production in 1980. Panhandle will obtain 5,000 acre feet of water from the LaPrele Reservoir south of Douglas, Wyo., but the company says this won't be enough. It is also drilling water wells and has a permit for a 26,000 acre feet capacity reservoir to be constructed on the north side of the Platte River.

A National Petroleum Council survey of Western water supplies says energy development will need so much water that other uses — notably agriculture — beyond 1985 water availability in the West will be a damper on further "major" development of synthetic fuels and electricity, particularly in the Colorado and Missouri basins, the NPC

Montana Board of Natural Resources will soon be making a decision on whether or not to grant permits for construction of Colstrip units three and four. Besides relying on statewide public hearings, the board will examine results of a statewide survey to determine public opinion. The results of that survey are already in and they show: 52% don't favor construction of the power plants, 65% would object to living near a power plant, 70% object to power plants if most of the electricity is shipped out of state, and 60% favor shipping coal out of state rather than generating power within the state for out of state consumption.

The Michigan-Wisconsin Pipeline Company is considering a joint project with the Basin Electric Power Cooperative in North Dakota that would incorporate both coal gasification and electric generation plants. As a first step, according to the Plains Truth, Basin Electric has applied for 19,000 acre-feet of water from Lake Sakakawea on the Missouri River.

Public hearings were held in late December in Boise, Idaho on a proposed power plant siting bill. Under the bill, a six-member council appointed by the governor would decide on each application based on energy needs and environmental impacts. Idaho Power Company's proposed \$400 million Pioneer coal-fired power plant south of Boise would have to pay a \$1.5 million fee just to file under the proposed law, according to Land Use Planning Reports.



"Perhaps only a country boy who has learned to trust nature, to wait for the sun to ripen the corn, and for the wind to bring the spring rains, could turn his back on two hundred years of technological progress and begin a serious study of wind power. City boys cannot tell which way the wind is blowing, and put their trust in coal or oil."

John Walcott

"William Heronemus, Explorer of Wind Power"

COUNTRY JOURNAL, Nov., 1974

Basin Electric does not need to build a reservoir and inundate valuable bottom land to supply its proposed Laramie River Station, according to Paula Ward, a member of Basin's environmental advisory board. Ward says that if the 1,500 megawatt plant scheduled to be built near Wheatland, Wyo. were scaled down to 1,200 megawatts the reservoir would be unnecessary. With the smaller plant size, water could be taken directly from the river and from supplemental wells.

The controversial 3,000 megawatt Kaiparowits power plant should start up in the summer of 1980, according to Southern California Edison Vice-President William E. Gould. Gould says the only alternative to the southeastern Utah coal-fired plant is an oil-burning plant. Citing the benefits of the plant, Gould listed the upgrading of the standard of living through the production of additional electric power.

The Paraho Oil Shale Demonstration Project near Rifle, Colo. will begin a \$50 million expansion in 1975, according to the Denver Post. Construction of a \$25 million facility, producing 8,000-10,000 barrels a day of oil from shale, will begin soon. Paraho leases the Anvil Points facility on the Naval Oil Shale Reserves in northwest Colorado.

Pemberton Hutchinson, president of Westmoreland Resources, has been elected to the board of directors of Burlington Northern Railroad Inc. Westmoreland operates a strip mine at Sarpy Creek, Mont.

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The Hot Line

energy news from across the country

The National Coal Association board of directors endorsed President Gerald R. Ford's decision to veto the strip mining bill saying, "Your stand took political courage." The NCA urged the president "to follow the veto with a broad program to maximize coal use for the long term and also build a broad production base."

Congress has passed and President Gerald R. Ford is expected to sign a \$20 billion non-nuclear energy research bill. S.1283 gives guidance to the newly formed Energy Research and Development Administration. The bill calls on ERDA to: 1) give equal consideration to energy conservation, 2) take into account environmental and social consequences of a proposed technology, 3) consider water requirements of different technologies, 4) give heavy emphasis to technologies utilizing renewable energy resources, and 5) evaluate the potential net energy gain of different technologies.

The Atomic Energy Commission said last year that it was unable to account for thousands of pounds of nuclear materials that could be fashioned into crude bombs. While the AEC maintains there are now no unresolved cases of theft, it cannot guarantee that the missing highly enriched uranium and plutonium has not fallen into the hands of terrorists, according to David Burnham of the New York Times.

Rep. Les Aspin (D-Wis.) says he will seek a five year moratorium on plutonium recycling to allow time to develop safeguards to protect the materials. "We need to be dead certain that it is impossible to steal plutonium, not risky, not unlikely, but completely impossible," Aspin said.

Texas Gas Transmission Corp. plans to invest \$3 million in research to convert the hydrogen in water into methane utilizing a laser energy source. The research is being conducted by KMS Fusion, Inc. of Ann Arbor, Mich.

Dr. Harris B. Stewart Jr., director of the Atlantic Oceanographic and Meteorological Laboratories wants the harness the Gulf Stream off the Florida coast to generate electricity. "If only four per cent of that energy is tapped, some 1,000 to 2,000 megawatts of power--about equal in potential to a nuclear power plant--could be generated," he says. Stewart and his associates are looking at underwater windmill-like propellers and underwater parachutes on a conveyor belt to trap the energy in the ocean current. He thinks compressed air storage may be a good alternative once the power is generated, but funding for the project hasn't materialized. "To date we've been unable to locate any source within the federal government to help us," he says.

The U. S. should attempt to reduce the average rate of energy growth by 1980 from 4.5 per cent to two per cent annually, according to the House committees on Government Operations and on Science and Astronautics. Reps. Henry S. Reuss (D-Wis.) and Mike McCormack (D-Wash.), two members of the committees, said, "... Only through a national commitment to energy conservation--including mandatory measures--can we hope to have an immediate impact on cooling the energy crisis and its attendant national and international monetary implications."

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Friday, Jan. 3, 1975

Critical year for environment

Citizens rally to back legislation



Marilyn Miller Stokes

Colorado COSC at the capitol

The Colorado Open Space Council (COSC) makes available a weekly legislative reporting service on environmental legislation being considered by the Colorado General Assembly. The "Environmental Legislative Bulletin" summarizes and analyzes the environmental bills which have been introduced and the amendments to those measures. The "Bulletin" also lists the titles of the bills, the sponsors, and describes the importance of the issue. It is mailed first class every week during the session.

During the next legislative session, the solons are expected to consider land use, energy conservation, mining reclamation, transportation, and air quality measures.

The reporting service is available to non-members for a \$5.50 subscription fee, which is below production costs.

COSC also sponsors an environmental lobby and maintains a full-time lobbyist, Marilyn Miller Stokes, in the Colorado legislature. Those wishing to support the lobby effort may do so by taking a membership in COSC for \$10, in which case the "Bulletin" price is \$3.75 additional.

Call the Colorado Open Space Council for further information (1-303-573-9241) or send your check to 1325 Delaware Street, Denver, Colorado 80204.

Wyoming

Biggest lobby effort yet

Water, energy policies, land use planning, mined land reclamation, strengthening the state Department of Environmental Quality, industrial siting and repeal of the anti-wilderness memorial are the major areas of legislation the Wyoming Citizens' Lobby will be concerned with this session.

Lobby coordinator Bart Koehler will be assisted by seven full time workers — mostly volunteers. During the session, the Citizens' Lobby will operate out of a rented house at 3010 Pioneer in Cheyenne — just six blocks from the capitol. Citizens are urged to come to Cheyenne, stay in the house, and meet with their legislators, according to Koehler.

For those citizens unable to come to Cheyenne, the Citizens' Lobby is purchasing a WATS telephone line which will allow free telephone contact from anywhere in the state. The WATS line number is not available at press time, but can be obtained from the Cheyenne operator by the time the session starts Jan. 14.

The WATS line will also be used to send calls on vital legislation out from Cheyenne to keep the

citizenry informed. The Citizens' Lobby has set up a telephone tree that reaches most of the major communities in the state.

To get more information, have your name included on the phone tree, volunteer help, or send donations contact: The Wyoming Citizens' Lobby, 1603 Central Ave., Room 205, Cheyenne, Wyo. 82001. Telephone 1-307-632-5106.

Industry has come to understand the profound impact of the environmental requirements upon business operations, and industry now makes certain that its needs are forcefully advocated throughout the political system. An effective balance of advocacy must be maintained. This means that environmental and public interest groups also must be well supported, so their position on vital national policy issues also can be strongly represented.

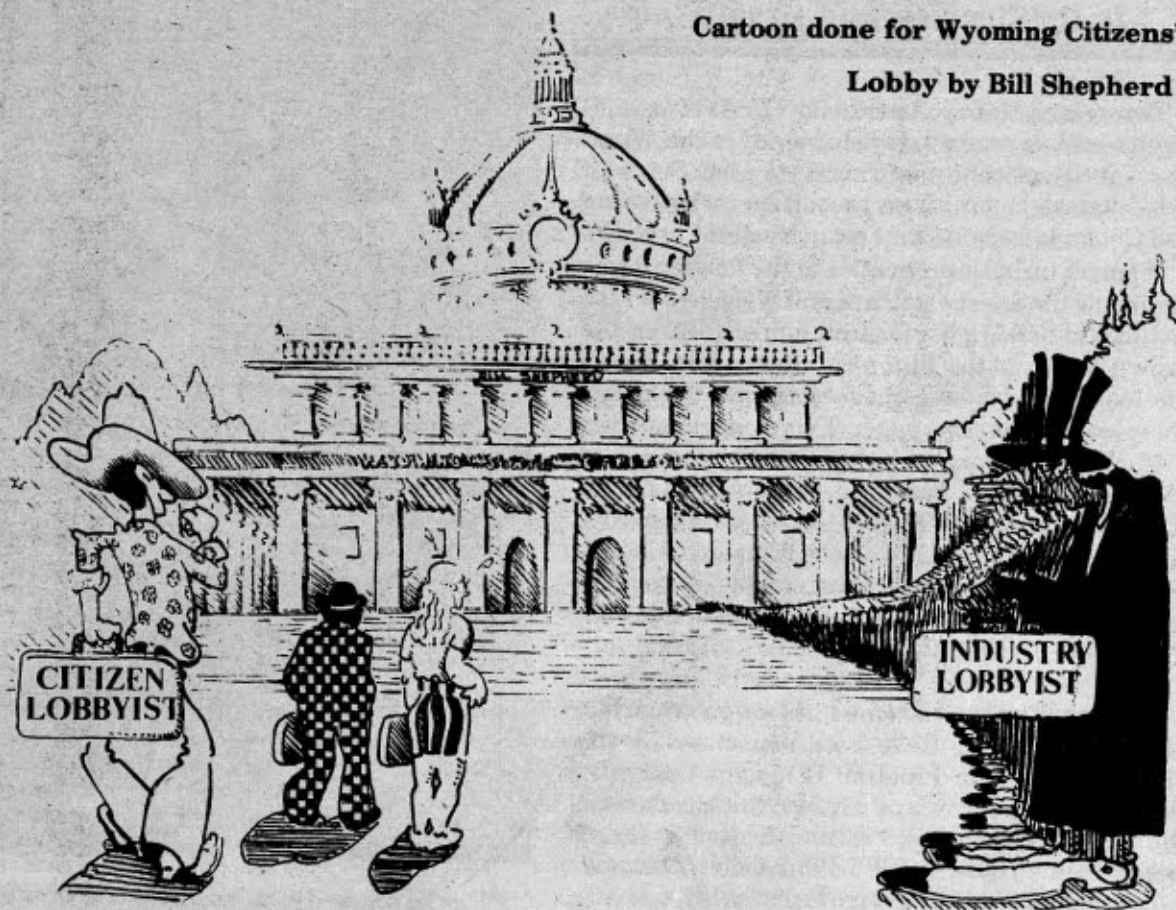
John Quarles, Deputy Administrator
U.S. Environmental Protection Agency
FIGHTING THE CORPORATE LOBBY
in ENVIRONMENTAL ACTION, Dec., 1974



Bart Koehler

Cartoon done for Wyoming Citizens'

Lobby by Bill Shepherd



North Dakota

Legislative Birdwatchers

There will be no formal environmental citizens' lobby effort in North Dakota this legislative session, but the "Legislative Birdwatchers" will be active in and around the capitol in Bismarck. The "Legislative Birdwatchers" will not lobby for public statements, but instead will provide information on environmental issues and organizations and individuals.

The key issues in North Dakota this session are the use of our surface and ground water, the deterioration of our air from proliferating energy production, the destruction of productive land from strip mining, the creation of a Department of Natural Resources, and the siting of energy conversion plants and transmission lines.

Conservation groups that have been invited to participate in "Legislative Birdwatchers" include the Sierra Club, the N. D. Wildlife Federation, the Audubon Society, the Citizens' Lobby (a small group headed by Father Robert Branconnier that was active in 1973 in opening up the legislative process for citizen involvement), the N. D. Wildlife Society, the N. D. Natural Science Society, the Izaak Walton League, the N. D. Action Committee for Environmental Education, the N. D. Citizens' Committee for Energy and Environment, and others. None of these organizations maintain paid lobbyists.

June Thompson is opening up her home in Bismarck to serve as Birdwatchers headquarters. She will maintain files, keep limited office hours, and call meetings to discuss issues and coordinate strategy. "The purpose is to involve ordinary people," says Thompson.

To get involved or to get more information contact June Thompson, Legislative Birdwatchers, 1208 Fourth St., Bismarck, N.D. 58501. Telephone 1-605-223-1145.

Editors' note: In this issue, we focus on citizen lobby efforts in Colorado, Wyoming, and North Dakota. Later this month, we hope to cover other lobby efforts in the region. If any reader has information to be included in the second article, please send it along to us.

Western Roundup

Photo by David Sumner

High Country News-13
Friday, Jan. 3, 1975

Illegal spraying ruled mistake

A Wyoming ranch's spraying of sagebrush on federal lands without a permit was declared an "innocent mistake" by U. S. District Judge Ewing T. Kerr Dec. 23. The ranch, the Diamond Ring, sprayed 3,600 acres of public lands in Wyoming with 2-4D, a chemical which kills sagebrush but not grasses. In his ruling Judge Kerr said the first knowledge ranch officers had that formal permission was required was when they received the violation and hearing notice. The Interior penalty, denial of grazing privileges for two years, was called "unduly harsh and oppressive" by the court and lifted.

Mass transit plan lacks funds

Denver's sophisticated regional transportation plan may never get off the drawing boards, due to a lack of funds, according to a Denver Post article. Denver Regional Transportation District planners counted on about two-thirds of the money for the \$1.56 billion system coming from the federal government. But a three month study by the Denver Post indicates that "federal fiscal support of the Denver proposal is wearing thin because of increased demand for federal mass-transit funds throughout the nation." Depending on the amount of money available, Denver may have to reduce the scale of its plan, the Post indicates.

Stripping stone in Capitol Reef

A Fruita, Utah, man has begun stripping ripple stone from land about a hundred yards from the Capitol Reef National Park headquarters. The mining operation was begun after the lessee, Clair Bird, and federal officials were unable to reach agreement on purchase of the land and lease by the government. Bird's mining lease was acquired from the state when the land was state-owned. When it became part of the national park, federal officials tried to break the lease, but lost in court.

Beefalo may substitute for coal

Beefalo ranching may replace massive coal development in the economic plans of the Northern Cheyenne Indians in Montana. A beefalo is a cross between a cow and a buffalo. The ranching project was suggested to the Cheyenne Landowners Association at an economic workshop in November. "The Association believes that the long-term future of the reservation does not lie in coal," says association chairman Dave [Name obscured]. "Once the coal is gone all we are left with is a hole in the ground. Other alternatives offered at the workshop were a commercial agricultural production cooperative, and timber development."

Suit may close phosphate plant

The Montana Department of Health and Environmental Sciences has filed suit to compel Rocky Mountain Phosphate Inc. of Garrison to quit polluting the air and water. In past years, the plant's fluoride emissions caused extensive damage to livestock in the Garrison area. The plant was shut down in 1968 to install pollution controls. Now the company says they are in compliance with state standards, but the state disagrees. A district court in Deer Lodge has asked the company to explain by Jan. 9 why the plant should not be shut down again.

Delay granted transpark road

The Montana Wilderness Association has won a delay in the progress of the controversial Big Horn Canyon National Recreation Area transpark road. District Judge Gordon R. Bennett issued a temporary restraining order Dec. 18 pending a show-cause hearing on Dec. 31. The order enjoins the Montana Land Board from issuing a right-of-way easement across state land for a portion of the road. The Wilderness Association is primarily concerned with potential destruction of archaeological sites and an over-load of people in the Big Horn Canyon area.

Land board calls moratorium

The Idaho State Land Board, headed by Gov. Cecil D. Andrus, has declared a moratorium on new mineral leasing and special permits, exclusive of geothermal resources, for six months. During the moratorium, filing fees and other costs will be increased to "fair market value," stipulations will be revised to provide improved protection of surface land, and the environmental effects of mining sand and gravel from river beds will be studied, according to the Idaho Statesman.



Despite environmental groups' claims to the contrary, the Teton Dam environmental impact statement is adequate, the U.S. Circuit Court of Appeals in San Francisco has ruled. The Idaho Environmental Council and other plaintiffs claimed that the 17-page statement didn't adequately discuss all of the impacts of the Bureau of Reclamation's dam on the Teton River in Idaho. Gerald A. Jayne, an IEC director, said that if a brief statement is all the courts require, "we're in for trouble."

The suit was first filed in U.S. District Court in Boise on Sept. 1971. Meanwhile the dam builders continued their work. By the time of the appeals court decision Dec. 26, the dam was three-quarters complete. Jayne says the IEC doesn't have the money to appeal the case to the U.S. Supreme Court.

The opinion of the three-judge panel stated that the dam, which will create a reservoir extending 17 miles up the river canyon, will cause "significant environmental damage."

Other plaintiffs in the case included the Sierra Club, Trout Unlimited, and Natural Resources Defense Council. Defendants in the action were officers of the Department of Interior and Bureau of Reclamation. The Fremont-Madison Irrigation District and Madison County, Idaho, were defendant-intervenors.

Briefly noted...

Five mills in Idaho closed down in December due to a low demand for wood products, according to the Boise Cascade Corp. Other lumber processors in the state have also had to make some production cuts, although not as great as Boise Cascade's. The slump is worse than the industry's usual winter downturn. Idaho has 11% fewer employed lumber workers now than a year ago.

One-third of Wyoming's 107 public water supplies fail to meet bacterial limits set by the U. S. Public Health Service. The figure is part of an Environmental Defense Fund evaluation based on an Environmental Protection Agency study.

The Department of Interior has signed a contract which will give Wyoming a second 60,000 acre feet of storage water in Fontenelle Reservoir on the Green River. Under the agreement, the state will pay \$11.4 million to the federal government over 40 years at 2.6% interest. The state's first 60,000 acre feet of Fontenelle water was sold to Sun Oil Co. and to Pacific Power and Light Co. for the Jim Bridger Power Plant.

14-High Country News

N. Great Plains report: preview of disaster?

by Marjane Ambler

Coal development in the Northern Great Plains already seems to be progressing at a level higher than anticipated when the Northern Great Plains Resource Program (NGPRP) completed its draft interim report in September. In December John Andrich, assistant program manager, told a group assembled in Billings that, based on state information and analyses of contracts to deliver coal, development is proceeding above the Coal Development Profile II (CDP II), the level which the report said was "most probable" according to regional energy supply projections performed by the Department of Interior.

Others in the region who have studied the situation believe that even CDP III—the "emergency" level of development—is below what is likely to occur.

Andrich's statement and some of the specifics of what development could mean prompted one man in the audience to ask, "Are you just giving us a preview of disaster? Do we have any chance to affect the future? What are our odds?"

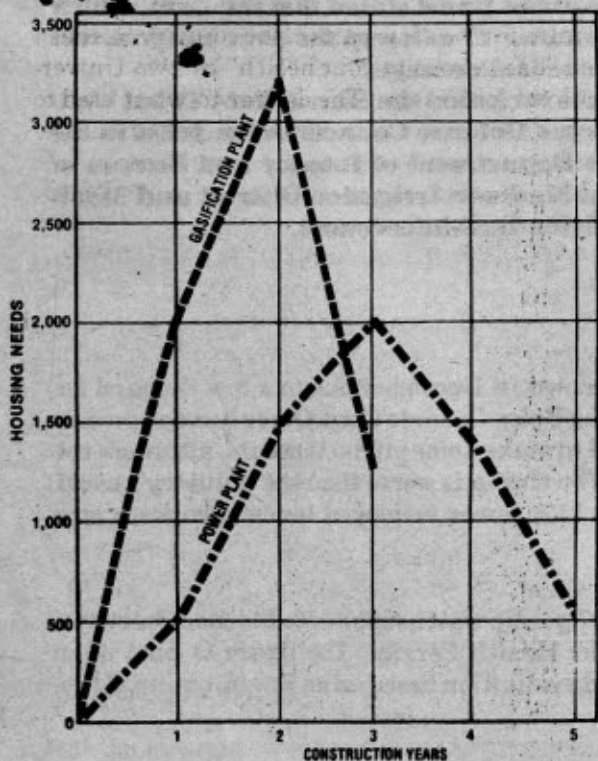
The projections outlined at the Rocky Mountain Center on the Environment (ROMCOE) meeting are part of the draft report of the two year NGPRP study. The study was designed to provide information and analysis so that decision makers in the five states will have some idea of the ramifications of their decisions. The states include Montana, Wyoming, and the Dakotas — which all have coal, and Nebraska — which is likely to have power plants. The study was a joint effort of federal and state governments, industry, environmental groups, and private individuals.

Some of the dramatic changes possible if coal development proceeds at the highest level projected are:

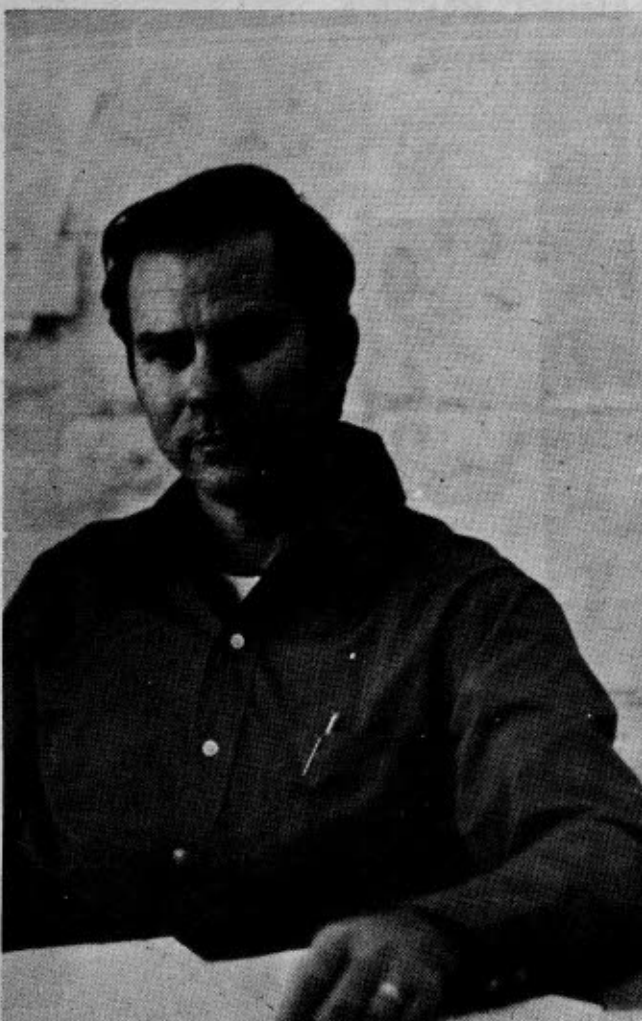
--the population of one Wyoming county (Campbell County) could increase by nearly 500% by the year 2000.

--with the increase in population, the demand for housing will rise. In Gillette, Wyo., for example, where 40 new homes were started in 1973, 330 homes would have to be built each year even if 70% of the needed homes were mobile homes.

--schools would suffer from fund deficits, usually



Housing requirements necessary to meet the needs of construction workers associated with a single gasification plant or power plant. This means that by the second year of construction, the area around a gasification plant would have to supply about 3200 homes.



John Andrich

only in the early years of development before tax revenues started coming in. However, in Sheridan County, Wyo., where tax sources would be across the state line in Montana, the cumulative school deficit by the year 2000 would be more than \$61 million.

--about 1.5 million acres in the region would be strip mined or would have coal facilities although "relatively little experimentation and research have been directed to the problem of rehabilitating lands being mined for coal in the NGP." This figure does not take into account secondary impacts on land such as roads, housing, satellite industries, or loss of production through loss of water.

--even at the medium level of development projected by the NGPRP loss to the region of the peregrine falcon is predicted along with a significant reduction in population levels of all raptors because of the magnitude of change.

The situation is made more ominous by Andrich's statement that the region holds two-thirds of the nation's strippable coal or about 24% of the nation's total mineable coal reserve.

PUBLIC CAN HAVE EFFECT

Andrich inserts a note of optimism into the outlook in his answer to the second half of the man's question, "Do we have any chance to affect the future? What are our odds?"

"It's wide open," Andrich insists. "The public can do anything it wants." He believes the first step should be for the people of the region to develop their own goals, including regional and local energy policies. He suggests one guideline to keep in mind at this stage is to preserve all possible options so that there can be alternate futures.

An example of one of the first decisions to be made would be whether or not to export the coal so that the power plants would be outside the region and closer to the people using the electricity produced.

One obstacle to the public retaining control over the future of the Northern Great Plains is that the key people making the necessary decisions are regional officials: state governments, city councils,

county commissioners. "These key people will determine the quality of the surroundings that people now and in the future will live in," Andrich says, "but these key people have the least money and the least technical help... What is confronting them is something completely foreign to them."

KEY DECISIONS

Decisions these key people could make to affect the level of development include standards set for reclamation and air quality, mineral leasing policies, taxes, plant siting acts, and allocation of water resources. For example, the study says that "stricter reclamation and rehabilitation standards for surface mining could shift preference from surface-mined coal to underground coal." Although there is coal in the West that can be mined by underground methods, it is more expensive to mine, and that expense added to the transportation costs could put it out of the market.

Similarly, anything which increases costs of mining Western coal could eliminate its advantage in economic terms over Eastern coal and thus slow the western coal rush.

To mitigate the impact of any development, the region also needs to plan land use. Andrich says the problem is not the amount of growth but, instead, how it is handled. He suggests new towns as a way to prevent undesirable impact. If power plants were sited farther than commuting distance from existing towns, new communities would be encouraged, he points out. "The existing communities would still grow, but at a rate that would be more manageable. ... He said it would be easier to direct the growth of the new towns.

He emphasized, however, that the NGPRP staff is not trying to sell anyone on any particular viewpoint. "We're in the business of trying to make information available to the decision makers," Andrich says.

One necessity for reducing impact of mining to areas where reclamation is possible. The study points out that "the rehabilitating surface-mined land is extremely site-specific." This means that studies must be conducted not only of soil and vegetation, but also of the climate of a particular site.

Presently, there are insufficient controls over reclamation and over siting mines and utilities throughout the region.

Tax laws are another example of the many legislative changes that could lessen impact of development. In the case of Sheridan County's potentially enormous school budget deficit, Andrich said that tax laws could be changed so that the Wyoming county could benefit from coal development across the state line in Montana.

If this can't be arranged, then perhaps Sheridan County should not allow these employees to live in their county, he suggests. The case of Sheridan County shows why having sufficient information prior to coal development is crucial for planning. However, the NGPRP doesn't completely bridge the information gap. The program has served the region by collecting the material and by providing a forum for state and federal officials.

Still there are two major weaknesses of the program which Andrich acknowledged: a lack of sufficient information and the difficulty getting the information that is available to the local officials—the key people Andrich refers to.

AND AFTER 2000?

Anne Williams, a professor at Montana State College and a speaker at the Billings meeting, pointed out that one of the major problems with the study is

that it doesn't go beyond the year 2000. Much of the development will only have begun by that time. "What happens after coal development?" she asked.

She also believes local officials will have to know more about the boom-bust cycles of the construction period if they are going to plan. She said that in peak construction years, three or four times as many construction workers will have to be served by the community services than the number of permanent employees.

Reiterating a criticism often made earlier in the program's history, Williams said the study didn't deal sufficiently with the question of what the region's future would be like without coal development. John VanDerwalker, program manager, told the HCN a year ago, "The program is going to be primarily a discussion of the impact of coal development—not saying it's going to be developed, but trying to understand what the impact of coal development is on all the other resources because the development of coal is so potentially disruptive. . . If irrigation were as disruptive to recreational uses as coal development would be, we'd probably be highlighting irrigation."

Other critics said the study didn't consider Indian claims on water rights and their potential impact on availability of water. Another said that it would be wise to mention that agricultural water needs legislation to protect it from further purchases by industry.

In addition, the study includes statements throughout saying that more research is essential before some of the major impacts can be forecast. These areas include: reclamation; the effects of trace elements on vegetation; the potential of long-wall mining, a form of underground mining now

being used in Europe; the visual impact of coal emissions even if they meet federal and state controls.

GETTING INFORMATION OUT

Reports by the NGPRP staff and work groups will be available throughout the region next week. Colleges and libraries as well as government offices have been designated as repositories, and their addresses can be obtained from the NGPRP office at Room 690, Building 67, Denver Federal Center, Denver, Colo. 80225.

Andrich said he hoped the final report will be ready by February. He said the staff hopes to have public meetings in the region to familiarize local people—especially the decision makers—with its findings and their implications for individual communities. The NGPRP will continue for another year or two with new involvement from all the five governors in the region and from the Federal Energy Administration and the federal Council of Environmental Quality. The federal agencies previously involved were the Department of Interior, the Environmental Protection Agency, and the Department of Agriculture. These will continue.

Andrich said NGPRP recognizes the necessity for public input but as of yet they haven't determined the format for increasing it.

Reiterating the public's role in affecting the future of the Northern Great Plains, Andrich said, "The people need to be aware that these options do exist . . . There's no question that the local people can't do it alone—it must be a cooperative effort of federal, state, and local government with the individuals."

BLM ordered to study grazing on public lands

A federal judge in Washington, D.C. has ordered the Department's Bureau of Land Management to evaluate the local environmental impact of grazing on over 150,000,000 domain lands in eleven western states.

District Judge Thomas A. Flannery said the National Environmental Policy Act of 1969 (NEPA) requires the BLM to prepare "geographically individualized" environmental impact statements in connection with the issuance of permits to private stockowners to graze livestock on these public lands. The court also ruled that a general "programmatic" assessment of grazing under preparation by the BLM "standing alone, is not sufficient" to comply with NEPA.

In a 21-page opinion, Judge Flannery found that "grazing clearly may have a severe impact on local environments," and that without a localized assessment of this grazing, "there is a serious threat of injury to the public lands."

The court was critical in its opinion of the BLM's lack of diligence in pursuing its role under NEPA, noting that the BLM "has delayed beyond reason." The court also found that "over the past four years BLM has shown relatively slow progress in implementing a thorough management planning system which would assist in protecting the environment" of these lands.

The ruling was made in a suit filed last year by the Natural Resources Defense Council, a national environmental defense organization. Other plaintiffs in the suit are the Ada County Fish and Game League of Boise, Idaho; the National Council of Public Land Users of Grand Junction, Colorado; the Nevada Outdoor Recreation Association in Carson City, Nevada; the Oregon Environmental Council; and James Morgan, a Montana wildlife biologist.

The environmental groups had charged the BLM with mismanagement of livestock grazing, which is the most extensive commercial use of these lands.

They alleged that the public lands are widely abused by over-grazing, and that the adverse effects of the grazing practices permitted by the BLM include the reduction of fish and wildlife populations, accelerating erosion, deterioration in water quantity and quality, and impairment of recreational uses.

The plaintiffs' attorney, Roger Beers, stated: "This decision will force the federal government finally to come to grips with its obligation to protect and preserve these public lands. These environmental assessments are long overdue. They are essential to environmentally-sound decisions in the BLM's districts, and should affect determinations of what numbers and kinds of livestock to permit on the public lands and at what times of the year, as well as the suitability of particular areas for grazing."

There is something here
I cannot see,
Something the stones and grass
Are listening to.
Over the water mosquitos and gnats
Move softly like buffalo grass,
And in the water rocks are silent
And beautiful as dead ponies.
I start the tractor and turn the radio
Loud as a train whistle.
In the river,
Under the axle of an old Ford,
The lonely Nez Perce sing their hymns.

— Dick Huffstodt

Classified Ads

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High Country News-15

Eavesdropper

environmental news from around the world

LOONEY LIMERICKS

by Zane E. Cology

He invented new tanks, indestructible baskets,
But the nuclear waste man just couldn't mask it—
He had terrible fears
As he stacked tanks in tiers
Where will it all go when I'm in may casket?

Reliance on artificial, rather than natural, pollution abatement systems may sometimes generate more waste than is reduced. This was recently illustrated by Dr. Joseph Ling in a speech before the National Association of Photographic Manufacturers. In one plant he described, 2,500 tons of suspended solids were removed in one year by using 1,350 tons of chemicals, 218 million kilowatt hours of electricity, and consuming 4,000 tons of natural resources, such as coal. The result was that for every ton of pollutants removed, 1.2 tons of waste pollutants were created and 1.6 tons of natural resources were used.

How much pollution does an outboard motor contribute to our nation's waterways? Last spring, a joint Environmental Protection Agency-Boating Industry Associations report concluded there is little if any adverse impact. This fall the National Marine Fisheries Service and the Oregon Fish Commission disputed the earlier report noting in a study of their own that outboard motors are indeed a significant source of pollution. Mussels and oysters were killed or damaged by outboard effluent, according to the latter study.

Entomologists in Idaho are working on bug sprays that would attract and nourish insects. The scientists hope to lure beneficial insects into Idaho's potato fields with sprays containing honey and other attractions. "We want to attract the helpful insects which prey on aphids and other insect pests," says Dr. Guy Bishop of the University of Idaho.

Eating snow in some parts of the world has been labeled "dangerous to you" by two University of Iowa professors. The danger, what used to be a traditional treat is added by pollution, the professors say, which can be in the form of acids or lead. "Snow tends to contain more pollution than rain," geologist Lon Drake says, "because a snow crystal has a greater amount of surface area than a raindrop." Meteorologist Arthur Vetter cites research showing that in some areas snow has almost as high an acidic value as sulfuric and hydrochloric acids.

A recent decision may bring a new tool to environmentalists interested in watchdogging corporate behavior. In December U.S. District Judge Charles R. Richey ruled that the Securities and Exchange Commission must find ways to expand the information which public corporations must disclose to investors on corporate environmental policies. Richey said the public could use the information to make socially responsible investment decisions.

The Interstate Commerce Commission will allow the railroads to increase freight rates on most recyclable materials by three per cent. The ICC says its "limited observation and analysis of the rate structures for transportation of recyclable materials did not reveal a pattern of rates and charges which operate to frustrate recycling efforts."

16-High Country News
Friday, Jan. 3, 1975

Burk at work

Preserving Montana as a state of mind

One of the most perplexing problems that environmentalists face is getting their message to the public. In Montana for the last several years, environmentalists — and other citizen groups — have known they at least have had access to the press through Dale Burk, an editor at the *Missoulian* in Missoula, Mont.

During the years that he has worked at the *Missoulian*, Burk has played a role in exposing timbering practices in the Bitterroot National Forest and in finally showing the powerful Anaconda Copper Co. that it couldn't get everything it wants. Many refer to him as the environmental reporter in Montana although a few young reporters in the state are slowly gaining a reputation in that area, too.

Yet Burk won't identify himself as an environmentalist, nor will he join any environmental organizations or any other group because he doesn't want to be in a position of owing allegiance to anyone. Instead, he identifies himself as a person who is "one, concerned with life and two, involved with the world."

His emphasis on providing access to environmentalists and others is based on his interpretation of his constitutional responsibility. "Under our Constitution, when a group of citizens perceives that there is an inadequacy in our political system, then they have the right to be heard. . . I don't believe that either the political process or the press, in the past, has given the citizen this right."

As an example, he pointed to a recent symposium on environmental reporting. All the media that cover Montana had been invited to attend and both industry and environmental groups spoke. However, the local television station covered the symposium by filming only the president of Montana Power Co. Burk said this is an example of the "purposeful manipulation" which sometimes occurs in the media to make it look like the industry side is the right side.

Burk was asked what he would advise others who feel they aren't getting proper access to the press. He said that he recognizes most environmental groups have neither the funds nor the training to match industry's public relations efforts. But he does believe environmental groups could make more use of press conferences, inviting the press to meetings where issues are going to be discussed, and strengthening their relationship with individuals of the press on an informal basis such as backpacking or fishing together.

The biggest hurdles to coverage of environmental issues, Burk believes, are time and complexity. "It's not so much opposition from the sources of the news. The story is there if we only go after it." He said he knows from his own experience that reporters or editors work a full week on regular assignments, and if they want to do any in-depth environmental reporting, it must be on their own time.

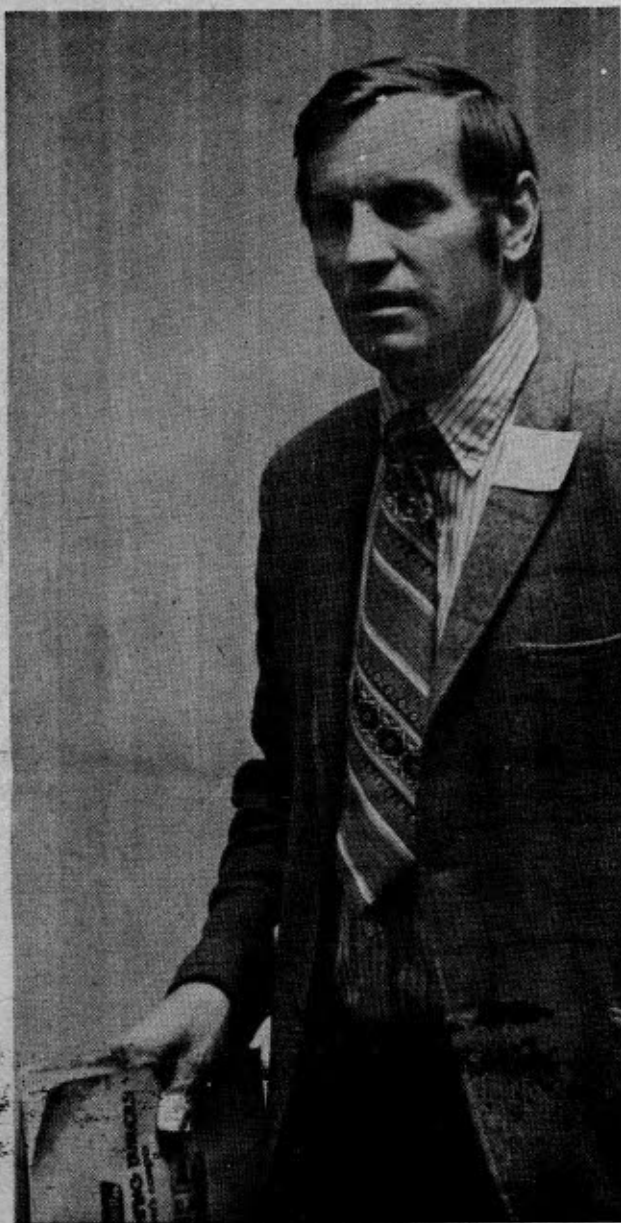
A third obstacle, he said, is the reporter's "unwillingness to take abuse." "Anytime you ask a question about anything on which two people disagree, you're into a controversial issue. It's just very unpleasant to have someone tell you to your face that they don't like you or challenge you on everything you write. . . The *Missoulian* editorial page editor jokes that he has a permanent headline for letters to the editor that he uses often, 'Burk stinks.'"

The series on timbering practices in the Bitterroot National Forest was a controversial one. "By the time two articles were published, they tried to get me fired. They questioned my credibility, my ethics, my integrity. . . However, his

Asked if he was in the timbering industry or the forest service, Burk said, "I was in the same time they were the same thing."

As is often the case with environmental issues, many people also saw the Bitterroot series as a threat to employment in the area.

Time, complexity, and unwillingness to take abuse are the three biggest hurdles to environmental reporting.



DALE BURK

People would call the office and tell Burk they were going to beat him up and sometimes resorted to personal slander.

However, Burk believes he is actually working for a strong economy for the region. He explained that he believes timber cutting is a legitimate use of the national forest — if done on a sustained yield, multiple use basis. "I see the conservationists as doing a poor public relations job because they don't show that when they argue for a sustained yield, they're also arguing for a strong timber economy based on the continued resource — not on board feet per year."

Although many aspects of environmental reporting are unpleasant for Burk, he finds his work gratifying. He recalls when Anaconda Copper Co. wanted to open a copper pit mine in Lincoln, Mont. "For the first time in the history of the state, the people of Montana realized they could stand up to Anaconda and not get clobbered. . . The people saw that even though Anaconda controlled the power structure of the state, they couldn't always get what they want," Burk said. Prior to the 1950s, Anaconda had also controlled the news media of the state.

Burk's main involvement was through his column where he tried to interpret the issues in terms of their political and social significance. "Mainly about all you do is force discussion of the issues in public," he said.

The spiritual aspects of his writing are very important to Burk. "I am a Christian, and I write as a Christian. That tells me that I deal with issues and not with destroying personalities." However, he also believes when people are involved, they should be named. "They bear personal responsibility. But I think we have to deal with these things above and beyond the material — the job, if you will — and deal with the whole man."

Asked what personal satisfaction he gets out of his work, Burk, who once received a degree in philosophy, said "In one of my first columns I said that I perceive Montana as a state of mind. I have the strong conviction that there are aspects of that that I feel are worth retaining for my kids or my grandkids or kids not related to me. Now grizzly bears seem to me to be one of those things which reflects that state of mind. Cutthroat trout, Wilderness areas, Population densities crowded. I feel we are not asking the question of the continuance of these values."



Dear Friends

John Sawhill, the country's old energy czar and possibly our region's new one (see page 10), has called nuclear energy "environmentally the safest of energy resources."

Even if you believe that living near a nuclear plant is harmless, what about nuclear waste disposal? We somewhat regret having dived into the topic on this first issue of the new year (see page 1). Can we never have that feeling of a fresh start again? Are we forever to be plagued with maintenance of leftovers? Things to be contained, sealed, monitored, patched up, shrouded, and guarded? Energies poured into a fearful vigil of preventing catastrophe?

Not even a newborn child can be a symbol of hope in that world which is hooked on nuclear bombs and nuclear fuels. A child slips into the planet — a being with somebody else's toxic garbage to take care of.

There may be a way to move the radioactive leftovers completely out of our lives, of course. What is disturbing is that no one has come up with it yet. And we march ahead with nuclear goals.

So much for the chills which a couple of weeks of meditation on radioactive waste materials has brought us. In this first issue of the new year we have also included tales of more creative efforts. Citizens who have decided to be a part of lawmaking in their states in 1975 (see page 12). Researchers who care enough about what they see ahead for the Northern Great Plains to make an effort to get their facts to the people who live here (see page 14). A portrait of a tireless writer who wants to maintain the Montana state of mind (see page 16). A dialogue with two botanically-inclined readers in which we discover that the West's sagebrush is beyond good and evil (see page 6).

Happy new year to you all. May 1975 be a year of hope and creative solutions.

The editors.



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