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Colorado, maverick of the inland Western states

Its development-oriented old guard no longer rules in Congress

by Joan Nice

Colorado's congressional delegation has the best environmental voting record of any state in the Northern Rockies.

Colorado has people like Sens. Gary Hart and Floyd Haskell and Reps. Pat Schroeder and Tim Wirth — all Democrats — who vote consistently to protect the environment.

It has Rep. Frank Evans (D), who votes to protect the environment about half the time. Only the two Republicans in the delegation, Reps. Jim Johnson and Bill Armstrong, are more likely to vote against environmental protection than for it.

"Our worst legislator in Colorado is better than the best in most Rocky Mountain states," a Colorado environmentalist familiar with the region says. He says there are only a few outstanding legislators in surrounding states who are exceptions to the rule.

Colorado's delegation hasn't been different from its neighbors for long, however. In the early '70s it had representatives like Sen. Peter Dominick (R), Rep. Wayne Aspinall (D), and Sen. Gordon Allott (R) — all men more of the Western development-oriented mold than the newcomers swept in in the 1972 and 1974 elections.

Of the existing delegation, only Evans was in office Earth Day 1970. Since then, Colorado has developed a much more "liberal, anti-establishment climate," according to a Colorado political observer.

He says the state also has a more "protectionist" attitude toward its resources than most surrounding states. "There is a large number of people concerned about quality of life that politicians must answer to," he says.

Only on the issue of water projects has Colorado recently voted as a typical inland Western delegation. Three dam projects that would provide water for Colorado were included on President Jimmy Carter's "hit list" of projects that should, for economic or environmental reasons, be stopped. Congress fought for and won funds for about half of the projects on Carter's list, although the Colorado projects were not among them. Only Schroeder registered a vote in protest of the controversial dam funding bill.

According to votes selected and tallied by the League of Conservation Voters, Schroeder has the best environmental record of the Colorado delegation. From the time she was elected until 1976, she voted "correctly" 94% of the time.

Second is Wirth, with an 86% average. Next are the state's senators. Haskell has averaged 75% and Hart 72%.

Among the state's other representatives,



SEN. GARY HART, legislator of the year.

Evans has averaged 54%, Armstrong — 27%, and Johnson — 23%.

Colorado environmentalists who follow Washington closely say the delegation would be ranked slightly differently if representatives' overall performances, and not just their major votes, were taken into consideration. Most environmentalists would put Hart higher than ratings show him. Some say he should be at the top of the list. Most people would put Wirth lower. Some would elevate Haskell. Most say Johnson deserves a spot slightly above Armstrong, not below him.

"Schroeder doesn't worry about being between a rock and a hard spot," says one Colorado environmentalist.

While Schroeder is usually not in the thick of environmental battles because she is not a member of the committees that shape environmental legislation, she usually votes for environmental protection.

Schroeder most recently drew admiration from environmentalists and criticism from agriculturalists for her lone vote among the Colorado delegation for the Conte amendment to the Public Works Ap-

propriations bill, which would have cut funding for water projects on Carter's hit list.

"It should be recognized that was a very tough vote to make," one environmentalist says.

Another environmentalist points out that although the vote may have made her unpopular in the state's agricultural areas, it will be unlikely to harm her politically, since her district is urban — Denver.

"She's going to have a much harder time taking an environmentalist stand on the Foothills treatment plant (a water project that would serve Denver)," he says.

"I think she's unquestionably environmentally oriented," he says. "But when she gets close to an election, she does look very political — and she runs for office every two years. She's a populist first and an environmentalist second."

LEGISLATOR OF THE YEAR

Hart was recently chosen the National Wildlife Federation's legislator of the year for his work to strengthen the Clean Air

(continued on page 6)



Vol. 10 No. 6

Friday, March 24, 1978

Lander, Wyoming

Two sections, 24 pages

Carter considers land agency shuffle

by Bernard Shanks

President Jimmy Carter has ordered a study of federal programs for natural resources and the environment. The study, directed by the Office of Management and Budget, is considering possible reorganization of public land agencies to improve management and administration.

The Administration has generated widespread discussion with its proposals. Since the Aug. 2 order for study, environmental organizations have split over supporting either reorganization or the status quo. Old conservation groups have resurrected the words of forester Gifford Pinchot to oppose

the transfer of the U.S. Forest Service to the Interior Department. All those associated with public lands, from agency personnel to university professors, and from conservationists to timber buyers and

cattlemen have cussed and discussed various plans, proposals, and scuttlebutt.

Reorganization is especially important to the West, where half the land is in fed-

(continued on page 4)

JIMMY CARTER, like many presidents before him, is interested in reorganizing federal programs for natural resources and the environment. One of the obstacles he's facing is the ghost of forester Gifford Pinchot. Old conservation groups have resurrected Pinchot's words to oppose the transfer of the Forest Service to the Interior Department.



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HCN
Letters

WE ALL NEED SHEEP

Dear HCN,

I would like to offer a few comments in response to Frank Cox's letter of Jan. 13th entitled "Who Needs Sheep?"

To answer his question, we all need sheep. Like it or not, there will soon be over four billion people in this world to feed. As the number one producer of food in this world, we will be morally obligated to try and help feed this mass of humanity. One may ask, "How will we do this?" Much of our prime agricultural land is being put to agriculturally non-productive uses such as shopping centers and subdivisions. We are going to be forced into producing more food on less land. This is where sheep come in — they are able to graze arid and mountainous lands which are unsuited to other kinds of agricultural production. These sheep are able to produce red meat and fiber on lands that are otherwise unsuited for agriculture. This food and fiber can then be used to help feed a hungry world.

As far as switching from wool to synthetic fabrics, the exploitation of land for oil and coal from which these fabrics are derived has probably resulted in as much environmental destruction and loss of wildlife habitat as any industry in our country. Properly managed, sheep can graze in harmony with the environment and not disrupt the ecosystem.

From some of Mr. Cox's statements, I figure he must spend the great majority of his time indoors, for anyone associated with the outdoors at all knows that wool garments are unsurpassed in wearability and warmth and will even keep you warm when wet. Try that with a synthetic garment.

In summary, I repeat that we all need sheep, Mr. Cox, so that if sometime in the future shortages of grainfed meats and petroleum-derived fabrics become a reality, we will have an ecologically sound alternative to fall back on. This alternative is the range sheep industry.

A. G. Longobardi
 Moscow, Idaho

MISLEADING

Dear Editor,

The March 10 issue of *High Country News* contained an article on page 11 entitled "First Coal Lease Draws Fire." A sentence in the article stated: "Even after warnings from the U.S. Fish and Wildlife Service, the bureau (of Land Management) refused to postpone the lease sale to resolve the issue, according to Klafehn."

That statement attributed to Mr. Brad Klafehn could be misleading to readers. While the Fish and Wildlife Service is concerned about possible disruption of any nesting eagles, in this case the service on Feb. 28 participated in an on-site inspection of Westmoreland's underground Orchard Valley Mine near Paonia, Colo. Based upon this on-site inspection, the Fish and Wildlife Service is confident that any stipulations required to protect the eagle nest will not conflict with conduct of the mining operation.

Sam Marler
 Public Affairs Officer
 Fish and Wildlife Service

SAFETY CONTEST

Dear Editor,

Friendly Fire, Inc. would like to invite all readers of *High Country News* to enter our 1978 "Safe Installation of a Solid-Fuel Heater Contest." Winner to receive \$100.

If you are one of four finalists, we may ask for very detailed photographs instead of a personal inspection.

For a free entry blank, send a self-addressed stamped envelope to Friendly Fire, Inc., 1804 LaPorte Avenue, Fort Collins, Colo. 80521.

Bill Eckert
 President, Friendly Fire, Inc.

BRAVO FOR WHITE

Dear Editor,

Bravo for Phil White's work. Once again he excels and inspires. I'm glad he took a long vacation from being a lawyer and took to writing and photography.

Bart Koehler
 Cheyenne Wyo.

ARE WOOD STOVES THE ANSWER?

Dear HCN,

Like many of your readers, I've been following recent articles on woodburning stoves with some interest. I hope that someone can answer a couple of nagging questions and help me to decide whether burning wood is a genuine alternative to conventional heating systems or whether it amounts more to an indulgence in technological nostalgia.

One of the many fine accomplishments of environmentalists over the last decade is the effective support of laws and regulations which favor cleaner air. Yet, what will happen to clean air if woodburning stoves and fireplaces become more and more popular in places like Lander and Laramie and, most notably, Aspen?

You note that Bill Eckert thinks that, as far as particulates are concerned, "wood stoves are generally 99% cleaner than fireplaces." (HCN 1-27-78) Certainly that's a mark in their favor. Yet in the article that follows, Eckert says that "every person burning wood for heat has a creosote problem," creosote being "condensed acids and gases found in wood smoke." I wonder if those gases and acids have become any less harmful to the atmosphere since our forebears so eagerly gave up wood as a fuel in favor of coal and, later, petroleum and natural gas.

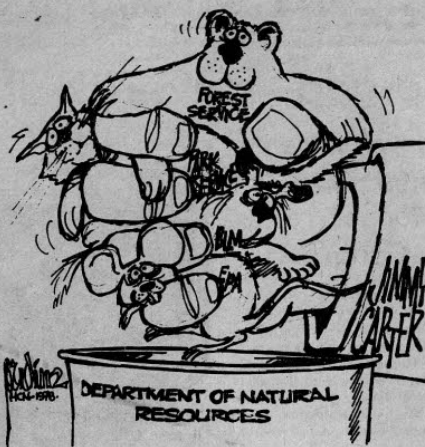
What about wood itself; how much do we have? Again, conservationists have been in the trenches for a long time trying to prevent the wholesale destruction of our forests.

Of course, we want "just the old dead stuff" for our stoves. So do the people of Germany who, reportedly, keep the floor of the famous Black Forest picked clean as a parking lot. Besides its esthetic and spiritual value, "the old dead stuff" is important ecologically.

Wood stoves undoubtedly make a lot of sense for isolated locations like farms and ranches and cabins, but are they a wise choice for city-dwellers? Frankly, I don't know for certain, but I think that if one principle can be distilled from the experiences of environmentalists, it is this: if a solution seems simple and easy, then probably it isn't really a solution at all.

Now, I think, is the time to set aside the romantic features of woodburners and to appraise them forthrightly and objectively alongside every other technology.

Larry Van Dusen
 Worland, Wyo.



HIGH COUNTRY

By Tom Bell

Yesterday was tree planting time. On this, the Ides of March, signs and sounds and smells of spring are everywhere. Cock quail call from fence posts above the house. Pairs of Canada Geese fly up and down the valley below us. Crocus and violets liven the ground with dabs of color. There is new freshness in the air.

There are times when my own mind questions the reality of life on an acreage in a remote valley of eastern Oregon. Spring is not one of those times. The promises of the Good Earth are too compelling.

In fact, the doubts that come on occasion are only momentary. My convictions are that we live on a wave of the future.

Jerry Belanger, editor and publisher of *Countryside* magazine, says the attribute most common to the modern-day homesteader is spirituality. He says, "These spiritual people are not interested in homesteading merely as an escape from modern life, but rather as an escape to real life."

William Ellis is a physicist who has worked for the National Science Foundation, been a consultant with the United Nations, and served as a science advisor to Ethiopia. He recently moved back to his home state of Maine. His experiences have led him to believe there is a social revolution in progress. That revolution is marked by a movement back to the land and the small community. He says this new movement "may portend a world future far different from that of conventional thinking."

It speaks of a deepening respect for rural values — a sense of community, self reliance, independence, job satisfaction, and personal dignity. And he thinks places like Maine have the tradition of self-reliance, as well as a freedom from urban problems, to make the transition into this new society a much easier process.

He argues that for every person who has given up urban economic securities for something more abstract on the land, there are many more who are considering the move. They do not yet have the courage.

George F. Will, a nationally syndicated columnist, may have been throwing some light on this new social revolution when he reflected on our bicentennial in 1976. He wrote, "The material success of capitalism

... has been possible by habits of discipline that were reinforced by hardships of life. . . . But abundance subverts such habits. And the dynamic of our abundance produces — indeed requires — a constant increase in consumption, and in appetites. This dynamic generates a culture of self-indulgence. Such a culture is incompatible with self-government, which is, after all, about governing the self. That is why one stanza of "America the Beautiful" is a kind of prayer — "Confirm thy soul in self-control. . . ."

Those who are putting the trappings of urban affluence behind them and moving back to the land are accepting the challenge. They are demonstrating their willingness to once again accept some hardships amidst the seeming abundance. The time-honored traits of thrift and frugality are no longer out of vogue. Restraint and moderation are practiced out of necessity. But life itself becomes more rewarding.

Our lives are rich with the things of the Good Earth.

In Situ uranium mining HCN Index

What do the HCN index and the in situ uranium mining story have in common? They were both paid for in part with monies from the High Country News Research Fund.

You can help with the next index or help with HCN's coverage of the developing West by sending a contribution to the research fund. Donations are tax-deductible. Thank you.

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Mar. 24, 1978 — High Country News-3

West can't wait to deal with automobile pollution

Three cheers for the Rocky Mountain News's recent offer to print free carpool ads! This is one small indication that Denver is finally becoming aware of the severity of its air pollution problems. Other cities in the Rockies and Northern Plains such as Salt Lake City, Cheyenne, and Billings should also take a look at Denver's plight to remind themselves of how bad it could get if they don't take preventive steps now.

Once upon a time, Westerners thought of air pollution as an Eastern cities' problem. But according to the Council on Environmental Quality, Los Angeles and Denver are the two cities with the dirtiest air in the country.

Denver is in the midst of a crisis, and the people know it. Lest anyone put on blinders and forget, the Denver Post has been brandishing color photos across its front page showing Denver with building

silhouettes barely visible through the brown haze.

The people are getting the message, and they're demanding action. A group of senior citizens marched on city hall with buttons saying "We Can't Wait" and told city council members of the health problems they face because of the pollution.



Nurses testified that the aging process is accelerated by pollution, and people with heart and lung diseases are weakened. Frighteningly direct in their approach, they asked that city council members make oxygen available during air pollution alerts.

People are also appealing to their state legislators. The legislators are considering requiring that auto dealers sell only cars that meet emission standards that are stricter than federal standards (see page 13). They're also considering incentives for car pools and having the state purchase only "clean" cars for its own use.

The city is trying to encourage use of buses by offering free bus service during off peak hours. Use of buses could potentially reduce total vehicles miles in Denver by six percent.

But there is only so much that government can do. The main culprit in Denver is

the automobile. As the Denver mayor pointed out recently, the public is demanding that the government do something, but this time, it's the public that must act.

They must tell their governmental leaders they're ready to accept downtown walking malls and accept parking lots being closed down. They must use buses, bicycles, or car pools. They must stop driving their cars. Some estimates are that the city will have to cut total vehicle miles by 50% just to meet federal air standards.

People in the larger cities of the region can profit from Denver's plight. While reminding Western congressmen that they're concerned about auto emissions as well as power plant emissions, they should show city and state leaders that they're willing to try alternatives to cars. It will be a hard habit for the independent Westerner to kick, but as Denver's finding out, there's not much choice.

—MJA

Guest editorial

Ranchers, environmentalists, Indians — new Establishment?

by Katherine Morehead

I recently returned from a conference of rural women in Washington, D.C., both stimulated and with a pervasive feeling of uneasiness.

The First Rural American Women Leadership Conference was sponsored by a new advocacy group, Rural American Women, Inc., and was heavily subsidized by the federal government.

Particularly disturbing to me was an apparent schism between agriculture and other non-urban populations, and also the apparent widespread ignorance of the problems posed to the West by energy development.

I also came away concerned, possibly because I am a landowner, by a growing impetus toward land reform.

Also disturbing to me is a growing feeling of the awesome power of the federal

government over every aspect of our lives, and by the apparent willingness of many people to extend that power even further.

Rural, for purposes of this conference, was defined as all areas having populations of 50,000 persons or less. Of the 150 or so delegates and participants at the conference, less than a dozen were primarily concerned with agriculture.

Broadly speaking, the agricultural women wanted to talk more about economics, land use, energy, and the preservation of a way of life, while those from other areas were more concerned with social action programs such as pre-natal clinics, battered wives' centers, comprehensive health plans, and legal services.

We all seemed to agree, for example, on the desirability of keeping essential agricultural land in production, rather than going for development. But there was little agreement on how that might best be accomplished.

Having regarded myself for the last several years as fairly liberal, I was surprised and discomfited to find myself pushed into some unexpected ideological corners. One odd conclusion I reached at the end of the conference is that in some funny way, the farmer, the rancher, the Indian, and the

environmentalist, because he is a self-appointed steward of the land, have somehow become the new Establishment.

Perhaps because those four groups are all trying in their way to preserve a way of life, a vastness of sky and prairie, they are seen by those who feel they are not sharing fully in the benefits as privileged.

Perhaps I exaggerate, but I got the strong feeling at this conference that those who have been on the land for several generations are perceived, not as rooted in our



culture, or as good stewards of the land, but as exploiters of the People and opponents of social progress.

Many people don't seem to understand that fouling the air in Montana or Colorado ultimately diminishes us all. They don't understand that the vast imports of oil and the search for expensive substitutes — coal, nuclear, and synthetic fuels — exact an enormous social cost for everyone.

The ideological thread woven through the fabric of the entire conference that most disturbed me was the notion of land reform. Many of those articulate, intelligent women were talking about old-fashioned, take-from-the-rich, give-to-the-poor land reform.

They called for the federal government to use the right of eminent domain to condemn land for mine workers and farm workers. They called for legislation that would establish a commission to determine whether or not a farmer could sell his land for non-agricultural use. They spoke of measures that would place a limit on the amount of land an individual or company could own.

What frightens me is that I think many of those well-meaning people fail to see the implications of the government's taking control of an individual's right to hold property. They fail to see that a policy that can be applied to agribusiness today can be applied to a one-acre homestead tomorrow. They fail to recognize that the concept of

the 160-acre farm was tried on a massive scale already under the Homestead Act, and that the countless tales of heartbreak and failure were caused by geography, climate, and economics.

Bigness is such a dirty word to some of those women that they are willing to throw out the baby with the bath water.

One of the most stirring speakers at the conference was Lise Sergio, an author and lecturer. She spoke of the need for rural women to use their very real power to help preserve our basic freedoms. Rural women need to think, she said, not be swung by emotions. Because they are close to nature, the changing of the seasons gives them time to reflect on the eternal verities of life.

I hope that these women I met, and others as well, will remember that federal handouts are not counted among those eternal verities.

Our country faces some difficult and perhaps insoluble problems. But what answers there are must surely lie ultimately in the hearts and minds and dedication of individual men and women.

Katherine Morehead and her husband, Andrew, own the M Cross Ranch near Savery, Wyo. She is a correspondent for the Casper Star-Tribune, and a member of Farm Bureau, Cow Belles, and the Wyoming Outdoor Council.



Drawing by Dixie Reece

Guest editorials do not necessarily reflect the opinions of the staff of HCN.



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Write Box K, Lander, Wyoming 82520.

4-High Country News - Mar. 24, 1978

Agency shuffle. . .

(continued from page 1)

eral ownership. The agencies, their structure, policies, and responsiveness to the public are important. Reorganization can result in new directions or a new focus for old programs. Despite a long history of mismanagement, the Western public lands hold the nation's major wilderness areas, most of the energy resources, and some of the most scenic lands. The lands are valuable grazing, recreation, wildlife, and watershed resources. They are an important heritage for all Americans.

A glance at the scattered federal land ownership patterns and the numerous agencies and projects brings up questions of organizational and management efficiency. One Carter Administration proposal would consolidate natural resources functions into a Department of Natural Resources (DNR). Under this plan the Forest Service and Soil Conservation Service, now in the Department of Agriculture, would be combined with Interior agencies into one large department. Also drawn into the proposed DNR would be the civilian functions of the Army Corps of Engineers, the Water Resources Council, and possibly the Tennessee Valley Authority.

A second proposal would add to the proposed Department of Natural Resources all the programs of the Environmental Protection Agency. The result would be a Department of Natural Resources and the Environment.

Still another proposal would combine most of the present activities of Agriculture and Interior into a Department of Agriculture and Renewable Resources.

Other proposals consider internal reorganization of existing agencies, terminating outdated programs, and other plans.

Another major concept is a Department of Resource Development and a Department of Environment and Conservation. The idea would be to separate preservation and development efforts with a formal structure.

TALK IS EASY

Carter has said, "We must give top priority to a drastic and thorough revision and reorganization of the federal bureaucracy." The Administration appears determined to restructure the bureaucracy. But it is easier to talk about reorganizing public lands and federal agencies than to do it.

Nearly every president since Theodore Roosevelt has urged a restructuring of the public land management agencies. Major attempts at reorganizing were attempted during the administration of Franklin Roosevelt. As Interior secretary, Harold Ickes tried again and again to transfer the Forest Service from the Department of Agriculture and establish a Department of Conservation. He was never successful.

In the 1950s the Hoover Commission strongly recommended consolidating water development agencies and the Forest Service with Interior Department agencies to develop a Department of Natural Resources.

While relatively minor organizational changes have taken place, the basic public land structure has been in existence since the turn of the century and has only been complicated by new agencies and new programs. Attempts at consolidation and simplification run into two major obstacles: the inertia of the bureaucracy and the reluctance of Congress. Both roadblocks are tied to the distribution of public land in the West and its current users.

For the agencies, for Congress, and for the Western public land users, the status



Photo by David Sumner

PUBLIC LANDS are shown in both photos above. The Lost River Range in Idaho, at left, is managed by the U.S. Forest Service in the Department of Agriculture. Fossil



Wyoming Travel Commission photo

Butte in Wyoming, at right, is managed by the National Park Service in the Department of Interior.

quo is best. A single public land department could weaken the power and influence of certain congressional subcommittees dominated by Westerners, of existing regional agencies, and of their clients — mining, livestock, timber, and other economic interests.

Most of the public land and natural resource agencies are in the Department of Interior. Interior, begun in 1849 as the "Home Department," went through a period when it was a catch-all cabinet

of new laws. Efforts to manage the refuges have been diverted into such projects as protection of endangered species, and enforcement of import regulations. The decline of the Fish and Wildlife Service has been hastened by competition from the states over the management of wildlife. The lowest point in the agency's history may have occurred when Secretary of Interior Rogers C.B. Morton transferred three major wildlife areas from the Fish and Wildlife Service to the BLM. This ac-

budget of the Corps, the Bureau has recently fallen on hard times. Reclamation was the agency responsible for the Teton Dam collapse in Idaho.

MISFIT

The Forest Service in the Department of Agriculture has been the glaring public land organizational misfit for nearly 75 years. Managing 180 million acres, it remains isolated from Interior and most other public agencies. Although the Forest Service oversees most of the public timber land, it has large programs in applied natural resources research and multiple land use. The Forest Service is a large agency with highly qualified personnel. The agency was originally housed with Interior, but forester and conservationist Gifford Pinchot prevailed upon Theodore Roosevelt to transfer it to Agriculture in 1905. Long after he left the agency, he continued the fight to keep it out of Interior. Pinchot built a cadre of followers who agreed with him, not only within the Forest Service, but within the forestry schools and professional organizations.

These Pinchot supporters carried the fight against the transfer the Forest Service to Interior led by Harold Ickes. Frustrated with the Forest Service, Ickes confided to his diary, "I fervently hope that some day someone will curb this lawless organization. Here is another example of bureaucracy running wild even to the extent of defying the express orders of the President."

Even after Pinchot's death in 1946 the Forest Service successfully beat back an attempt by the Hoover Commission during the 1950s at consolidating the public land

Congress and the committees represent the largest barrier to public land reorganization.

While it has suffered from an exploitation image at times, it has become the best known guardian of the public lands. President John Kennedy's secretary, Stewart Udall, and now Secretary Cecil Andrus have stressed conservation programs and values.

The largest, but least known of the land agencies, is the Bureau of Land Management (BLM), overseeing approximately 450 million acres of land, almost entirely in the West. Long considered weak and ineffective and once jokingly called the Bureau of Livestock and Mining, the BLM is undergoing the fastest changes of all the land agencies. Even before receiving an organic act in 1976, the agency was shifting to multiple-use management and developing more tolerance for the protection of wilderness and wildlife.

The Fish and Wildlife Service has highly trained personnel — and is the most conservation-minded of all the federal agencies. However, despite its responsibilities for 30 million acres in wildlife refuges, it has been the weak sister in Interior. Funding and manpower for the agency have declined relative to the workload, which has increased with the passage

of new laws. Efforts to manage the refuges have been diverted into such projects as protection of endangered species, and enforcement of import regulations. The decline of the Fish and Wildlife Service has been hastened by competition from the states over the management of wildlife. The lowest point in the agency's history may have occurred when Secretary of Interior Rogers C.B. Morton transferred three major wildlife areas from the Fish and Wildlife Service to the BLM. This ac-

tion was viewed by many to be the first step in dismantling federal wildlife refuges. Aroused environmentalists reversed this action with legislation and widely publicized the plight of the wildlife refuges. Another Interior agency, the National Park Service, manages approximately 25 million acres of federal land. Its holdings, although primarily in the West, include many historical sites, recreation areas, and parks in other areas. Originating as the purist of the land management agencies, its primary mission is to maintain park lands in a natural state. However, in the face of competition for land and funding from other agencies such as the Forest Service, the Park Service has broadened its program to include developed recreation areas.

The remaining major Interior agency is the Bureau of Reclamation, managing 7.5 million acres. Like the BLM, Reclamation is confined to the Western United States. Its mission has been the construction of irrigation and water power projects in the 17 Western states. Relative to its massive counterpart, the Corps of Engineers, the Bureau has often been underfunded. Lacking the manpower, political clout, and



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See next page

The March 10 and March 24 issues of HCN contain several stories about

Uranium mining

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agencies. The American Forestry Association recently used one of Pinchot's speeches as its argument against moving the Forest Service out of Agriculture.

The Army Corps of Engineers is the other major organizational anomaly in the public land policy area. The Corps, although part of the Defense Department, is overwhelmingly managed by civilian employees. While it has some irrigation and power development responsibilities, its primary areas of interest are flood control and navigation improvement as well as the management of 7.8 million acres. Like the Forest Service, the Corps is a large and highly experienced organization. Its cooperation with Congress and development of "pork barrel" projects has been refined into a masterful art form. Carter learned of the Corp's skill when the Administration tried to eliminate some water development pork from this year's budget. To a large extent it failed in its objective, and the bacon was delivered in the form of the public works appropriation bill with 10 water projects the Administration didn't want.

Water developments are the most confusing and overlapping of all the natural resource programs. The Corps has a large national program. The Bureau of Reclamation in Interior operates only in the West. The Tennessee Valley Authority is an independent agency with water projects only in the Tennessee River Valley. Additionally, the Department of Agriculture's Soil Conservation Service funds small-scale water developments throughout the nation. Each project and each agency has a public it serves and cooperating congress-



Idaho Department of Commerce photo
MOST COMMODITY INTERESTS, such as timbering, mining, and grazing, favor the status quo.

men who perpetuate the existing organization.

Despite the talk of reorganization, a number of factors are working to perpetuate the status quo.

Without being part of the public land organizations, it is difficult to appreciate the depth of competition among the agencies. An agency's employees are usually intensely loyal. Despite the similarity of management programs, there are very few transfers between federal agencies. Each agency has various symbols and uniforms and administrative procedures. Agency identity is adopted when a person leaves college and is pursued throughout his career. While the public constantly confuses the difference between a forest ranger and a park ranger, the differences are as important as those between competing football teams. Reorganization threatens all groups, and all are opposed.

In the past forestry schools and natural resources colleges have indoctrinated young people in a specialized field. Professional chauvinism has been widespread within the agencies. One result has been communication problems among the disciplines and among agencies. This narrow professional outlook has helped continue the present public land management structure.

New programs in integrated land management eventually will break down some of the professional barriers. The historic narrow focus of professional societies is beginning to broaden. In the meantime, however, many high-level bureaucratic positions are held by people with decades of training and experience in a specialized natural resource field. Presidential power pales by comparison to the built-in resistance to change among the thousands of federal employees and their congressional and professional counterparts.

Interagency competition and professional views are not the only problems facing reorganization. The Department of Agriculture has had a shrinking political base in Washington. Today half of the Agriculture employees are in the Forest Service.

Any attempt to move that agency will severely weaken the department, unless it attracts other substantial programs.

Similarly, Interior has lost some programs and power to the new energy department. It will guard its remaining agencies and budgets.

Congress has always had a vested interest in organization of the executive branch. Congressional committees reflect administrative organizations. The committee structure focuses the attention of Congress on specific areas and specific agencies. Members of Congress specialize through the committee structure. Budgets and staff, and in turn, political clout result from years of service on a committee. Congress and the committees represent the largest barrier to public land reorganization.

Chairmanships of subcommittees and full committees concentrate a congressman's power. The agencies and congressmen develop close ties. Ambitious bureaucrats spend years cultivating a slowly emerging congressman until he becomes a subcommittee chairman.

A cooperative system between the execu-

The Forest Service in the Department of Agriculture has been the glaring public land organizational misfit for nearly 75 years.

tive and legislative branch has many advantages. Specialized legislation demands some cooperation. But there is a pitfall. Collusion is a source of inertia for reorganization. A congressman who has spent 20 or more years working his way up the seniority ladder until he has a committee staff, a specialized knowledge, and a responsive set of friends in the bureaucracy will oppose a plan to reorganize away his advantages.

WHY REORGANIZE?

Rationale for consolidating and reorganizing the natural resource and public land agencies are numerous. In many small Western towns there are duplicate offices of two or more federal land agencies dealing with natural resources. In the field, despite attempts at cooperation, there is an expensive duplication of equipment. Fire fighting organizations have separate warehouses, fire crews, tankers, and aircraft to fight fires. Artificial administrative boundaries determine management priorities. While reorganization would not necessarily solve these problems, it could facilitate cooperation among agencies.

From a national perspective, environmental, esthetic, and non-consumptive values of the public lands have been under-represented by the agencies. At the same time because the key decision-makers for these agencies are Western

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congressmen, the traditional mining, domestic livestock grazing, and lumber uses have been dominant. Reorganization could attract Eastern and urban congressmen who place a higher value on non-consumptive uses of public lands to the key subcommittees now dominated by the West. Pooling purely Western agencies like BLM and the Bureau of Reclamation with the Forest Service and the Corps of Engineers would tend to make managing natural resources a national issue, rather than a regional one. While reorganization might not immediately dethrone commodity-oriented Western congressmen, it could gradually erode their exclusive power.

Those who favor reorganization also argue that the differences between the agencies are artificial and not based on physical, biological, or even administrative factors. For the public dealing with the collection of agencies, with different regulations, symbols, and uniforms, the administrative structure is confusing at best. In short, a single public land management department could be more responsive to national interests, and more efficient and understandable than the existing set-up. Reorganization could result in more democratic administration of the federal lands.

Whatever its potential, reorganization has not gained widespread support. Environmental and conservation organizations disagree on most proposals. While there is widespread agreement for maintaining the independence of the Environmental Protection Agency, no consensus exists for the land management agencies. Most of the timber and commodity interests favor the status quo. As might be expected, key congressmen have voiced opposition to moving the Forest Service to Interior.

Based on past history and on present congressional and administrative inclinations, substantial reorganization will be difficult. But the skirmish will be interesting. We all have a stake in the outcome.

If you want to make comments or obtain more information about the President's Reorganization Project write: William Harsch, Associate Director, Natural Resources Environment Study, President's Reorganization Project, Office of Management and Budget, Washington, D.C. 20503.

Bernard Shanks is an associate professor in the department of forestry and outdoor recreation at Utah State University in Logan, Utah. He has had five years experience with the National Park Service as a ranger and has done seasonal work for the Bureau of Land Management and the U.S. Forest Service. He has a doctorate in resource development from Michigan State University.

Research for this article was paid for in part by donations to the HCN Research Fund from readers and friends.



THE NATIONAL PARK SERVICE, originally the purist of the land management agencies, has broadened its program to include developed recrea-

tion areas. This floating marina is part of Glen Canyon National Recreation Area, which is managed by the Park Service.

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Colorado votes for environment. . .

(continued from page 1)

Act and to protect wetlands.

"His instincts for what's right are uncanny," says one environmentalist.

Hart says that the environment is his top domestic priority — and that nuclear waste is at the top of his list of environmental concerns. He is co-chairman of the Environmental Study Conference, a group of several hundred members of Congress with an interest in environmental issues. While he has become something of an environmental specialist in Congress, he also seems to have broad appeal in the state. He is charismatic and intelligent, constituents say. He won by a substantial margin in the last election.

Before he was elected to the Senate, Hart, an attorney, worked on natural resource issues as a special assistant to then-Secretary of the Interior Stewart Udall. He was campaign director for Sen. George McGovern in the 1972 election.

Hart definitely looks better on the environment than anybody in the state, says a Colorado political observer. "But, then, he's got the luxury of not running for office this year."

ENVIRONMENT FIRST

"We can count on Hart more than Haskell, but Haskell is usually very good on things," says Brad Klafehn of the Colorado Open Space Council Mining Workshop.

Haskell, although he won't go so far as to label himself an environmentalist, has prided himself on putting environmental considerations first, even when it means taking on big business or big oil.

Rumor has it that election fears about his bad reputation with business interests have inspired Haskell to introduce an oil shale development bill, S. 419.

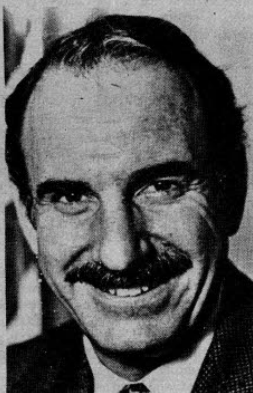
Haskell's staff scoffs at that assessment. "If he was interested in making industry happy, he'd jump on the tax credit for oil shale," says staffer David Michael. Haskell opposed a three dollar per barrel tax credit for oil shale included in the Senate version of the national energy bill.

Haskell's bill would provide federal funding for two commercial-sized prototype oil shale plants. At hearings recently held in Golden, Colo., on the bill industry essentially told Haskell that if it could get the tax credit measure passed, it wasn't interested in S. 419. A Senate version of the bill includes the credit; a House version doesn't.

While that issue awaits resolution in



REP. PAT SCHROEDER, a populist first.



REP. FRANK EVANS, the old guard.



conference committee, Haskell still maintains that his approach is more prudent than the tax credits.

"He does not want to see wholesale shale development, but he would like to see controlled development," Michael says. "The two prototypes — one above ground and the other in situ or modified in situ — would allow the country to assess the economic viability and the environmental impact of the technology."

Environmentalist Brad Klafehn, usually a Haskell fan, was startled by the senator's comments at the hearing in Golden.

"He was totally out in left field — raising the specter of another Arab oil embargo, saying we need oil shale technology right now to be energy independent," Klafehn says.

Haskell has earned his good reputation among environmentalists partly through his tough stands on wilderness. He successfully led the effort to designate the Weminuche, Flattops, and Eagles Nest areas as wilderness.

"Haskell showed fantastic courage on the Eagles Nest," says Jerry Mallett of the Wilderness Society in Denver. The Denver Water Board, fighting to keep the area open to the construction of 26 small dams in the high country to provide water for the Denver area, "was camped out on Haskell's doorstep in Washington for weeks," Mallett says.

The Haskell bill on the Eagles Nest, which was eventually passed by the Senate, prevented the dam construction proposed by the water board, but allowed the board a few thousand acres of land for a tunnel to divert water from the lower slopes of the wilderness to Denver and other Front Range cities.

In the House, Johnson obtained passage of a slightly stronger Eagles Nest bill that didn't provide for the tunnel.

Environmentalists said that while they preferred the Johnson bill, they could live

with the Haskell version. The issue was an extremely sensitive one for Schroeder and Wirth, however. Just as Haskell had been earlier, they were under heavy pressure from the Denver Water Board and water users in their districts to push for the wilderness dams. Schroeder's district is Denver and Wirth's includes the west edge of Denver.

Both Schroeder and Wirth decided to oppose the Johnson version of the bill and support the Haskell version. On the final vote, they felt the conference committee compromise was closer to Johnson's bill than Haskell's, so they voted against it. The bill passed June 12, 1976, despite their opposition.

A Schroeder aide says that she doesn't think the "no" vote on the wilderness lowered the representatives in environmentalists' eyes.

Mallett tends to agree. "There was a lot of politicking going on, but they held up pretty well."

Another Colorado environmentalist sees it differently. "She (Schroeder) vacillated on some pretty critical stuff," he says.

Vacillation is apparently less surprising to environmentalists when it comes from Wirth.

While Wirth generally "talks a good line and votes right, he sometimes undercuts important legislation in committee," says Brad Klafehn. Klafehn accuses Wirth of a tendency toward "grandstanding" — making speeches to gain votes and attention, not good legislation. "If we had more substantive work and less grandstanding from him, we'd be happier," Klafehn says.

Another environmentalist explains Wirth this way: "Wirth's innate response to environmental issues is good. But he waffles because he's very concerned about his image and what the reaction of the press is going to be. He tends to go for the easy shots — doing a study, setting up a task force."

Klafehn is particularly upset with Wirth's stand in favor of government loan guarantees for synthetic fuels projects such as oil shale and coal gasification.

Nevertheless, Wirth is well-liked by many environmentalists in the state. They remember that he fought for strong Clean Air Act amendments and has been "very supportive" on wilderness issues.

THE OLD GUARD

Evans, the only old guard politician left in the delegation, inspires lukewarm praise and some criticism from environmentalists.

"While he's not an environmental advocate, he has usually come through on the vote for us," a Colorado environmentalist says. "But just lately, he's been negative."

Evans came into the political arena before the environmental movement was under way. Now, one observer says, "He's a politician, and if he can be an environmentalist, too, that's fine."

Being both an environmentalist and a politician has apparently been difficult for Evans on recent wilderness proposals. Mallett of the Wilderness Society says that Evans is responsible for keeping two areas in the San Luis Valley — Goose Creek and La Garita — as well as an addition to the Hunter-Fryingpan Wilderness, out of the Endangered American Wilderness Act.

On the other hand, Evans has been a fairly consistent supporter of wilderness in the past. He led the effort in the House to pass the Weminuche Wilderness bill. In the federal strip mine bill, he championed amendments to protect river valleys from the adverse effects of coal strip mining.

Even Colorado's two representatives with the poorest environmental records, Johnson and Armstrong, have occasionally

supported local wilderness legislation.

Johnson, who represents voters on the Western Slope, is straightforward about it. He says he will work for wilderness bills that help keep water away from the Denver Water Board. On this basis, Johnson has led the fight in the House to establish the Eagles Nest, Flattops, and Hunter-Fryingpan wildernesses.

Armstrong has never taken the lead on a wilderness proposal, although he has supported proposals introduced by others.

One environmentalist says that Armstrong will usually listen to him. Another



REP. TIM WIRTH, concerned about image.

says flatly, "I would characterize him as anti-environmentalist."

Both Johnson and Armstrong are swayed by their Republican party affiliation when it comes to decisions on wilderness in other states. Armstrong tried to block passage of the Montana Wilderness Study Act, for instance, because Montana's Republican representative, Ron Marlenee, opposed it.

THE HIT LIST

According to environmentalists in Washington, D.C., the entire Colorado delegation — except for Schroeder — "crumbled" when it came to supporting Carter's water project "hit list."

Both Haskell and Hart say they bucked Carter because of the way he approached the issue — not because they supported funding for all the dams.

The bill finally passed by Congress cut funding from three Colorado projects — Narrows, Savery-Pot Hook, and Fruitland Mesa. Both Haskell and Hart say they are trying to get funds for the Narrows project reinstated.

"When you have an expanding population and an energy crunch and you get all your water in the spring — that mandates storage," a Haskell aide says.

"I don't fault them on it," one Colorado environmentalist says. "Haskell read it right. He figured that water is such a sacred cow that the public would misread what Carter and (Interior Secretary Cecil) Andrus were trying to do."

In the upcoming months Haskell will have more to worry about than delicate environmental tradeoffs. He is facing a tough challenge by a trio of Republicans. One is Rep. Bill Armstrong. Another is former astronaut Jack Swigert, who has hired former Senate Minority Leader Hugh Scott from Pennsylvania as his campaign manager. The third is Denver businessman John Cogswell.

"I think either Armstrong or Swigert

(continued on page 12)

NWF wants study of Channel A

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Court to say whether wetlands will be drained

by Sarah Doll

In a clash involving state versus federal jurisdiction over water projects, the National Wildlife Federation (NWF) has filed a suit against the U.S. Army Corps of Engineers. Under scrutiny is North Dakota's Channel A project, designed to benefit farmers whose lands are flooded periodically by runoff flowing from Dry Lake to Devil's Lake. The water now runs in a meandering fashion that creates thousands of acres of wetlands. The proposed drainage of these wetland acres would have potentially serious consequences for the large number of waterfowl that use the area as a stopover point on the way to their breeding grounds.

Keith Harmon, a wildlife manager with the Wildlife Management Institute, is concerned that draining the wetlands would threaten the major part of North America's snow and blue goose population, as well as large numbers of canvasback and redhead ducks.

Those opposed to the project also fear increased pollution of Devil's Lake, which would also adversely affect wildlife. The 4.1-mile Channel A would increase runoff rates, raising the sediment level of water flowing into the lake. Pesticides and fertilizers from farmers' fields would also have a more direct route into the lake.

According to Elliot Schubert, associate professor of biology at the University of North Dakota, the present slow flow of water between the two lakes results in large amounts of pollutants being absorbed by plant life. The channel would allow more of these substances, especially phosphorus, into Devil's Lake, possibly resulting in "algal blooms," blueish-green scums that form on the water's surface and along the shores, choking out other forms of life.

Another concern is that the additional influx of water will raise Devil's Lake to the point where it would flow over several sewage lagoons along the lake's shores.

In light of these possible disasters, NWF's suit asks that the Corps of Engineers exercise jurisdiction over the project. This would require an environmental impact statement (EIS) and a permit to dig the channel. Although the North Dakota Wildlife Federation at first refused to support the suit because members thought the channel was necessary for flood control, in January 1978 it reversed its position and came out in support of NWF's suit.

The suit is based on Section 10 of the 1899 Rivers and Harbors Act, which places all projects affecting the "course, condition, location, or capacity" of a navigable water of the United States under the Corps of Engineers. The Corps's regulations, how-

ever, limit its jurisdiction to structures affecting a body of water's "navigational capacity" only. This, NWF contends, is in conflict with the 1899 law, which clearly includes "condition" of water.

Whether or not Devil's Lake is a navigable water of the U.S. is also an issue. Proponents of the channel contend that it is a landlocked lake, with no outflow to any other state. Opponents point out, however, that in earlier years it was a link in interstate commerce since boats on the lake connected with rail lines on its shores. In similar disputes, Coeur d'Alene and Chelan lakes in Idaho were declared by the Corps to be navigable waters of the U.S.

According to NWF's attorney, Kenneth Kamlet, the purpose of the suit is not to prevent farmers from draining water from their fields or to stop construction of the project. Rather, the suit has been filed because NWF feels an EIS is necessary to study the full range of the channel's implications for wildlife. Kamlet points out that the Devil's Lake Advisory Board appointed by the governor agreed, before the project

the construction of the channel was to end, not in Devil's Lake itself, but a few hundred feet above the lake in a coulee, which drains directly into the lake. The Corps bases its reversal of its 1974 stand on this change in plans for the channel. Attorney Kamlet terms the Corps' position "absurd." He feels this suit will be important in setting precedents for similar projects around the country.

An attempt by the NWF to get an injunction halting work on the channel was denied. The project was begun in October 1977 and was about one-third completed when winter weather halted it in early December.

RESIST FEDS' AUTHORITY

The NWF suit is under fire from North Dakota Agriculture Commissioner Myron Just, who views it as an attempt to expand federal authority into business more properly the state's. The \$2.1 million project was funded through a \$600,000 grant from the state legislature and a levy in Ramsey

and Cavalier counties, which encompass the land to be drained.

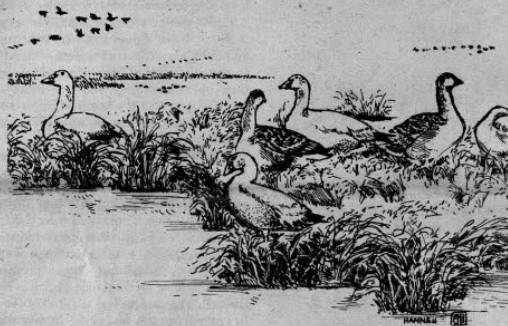
In a lengthy letter, Ramsey County Water Management District Chairman Robert Garske told Thomas Kimball, executive vice-president of NWF, that the lawsuit is "absolutely shocking." He says the drainage area affected is totally in North Dakota, and therefore, federal involvement is out of place. In the letter, Garske implies that loss of the project may mean loss of the farmers' cooperation in wildlife preservation, and goes on to state that victims of continued flooding might "transfer hostility from those responsible for the delay and their frustration, to wildlife in the area." This, he points out, would be damaging to NWF's own goals.

He also suggests that defeat of the project will result in the farmers finding other methods to solve the flooding problem. These methods may be more detrimental to wildlife than the channel, he says. Although Garske feels that the channel will not harm waterfowl in any way, he also says "the people of the Devil's Lake Basin want to be on an equal status with ducks."

According to Garske, this suit has left the local people feeling they have no influence over their own area's development—especially since it comes soon after the National Audubon Society's suit blocking the Garrison Diversion, which also affects Devil's Lake. The NWF suit, he feels, is even less justified than the Audubon suit, because the project is not federally funded.

Wetlands protection has been a controversial issue in recent years in North Dakota, especially when it concerns federal versus state authority. In 1977, the legislature gave counties veto power over establishment of waterfowl refuges. In addition, they ruled that easements sold by a landowner for wildlife wetland refuges would end as soon as the land was sold or the landowner died.

North Dakota wetlands produce more ducks than any other state except Alaska.



SNOW GEESE use the wetlands that would be drained for the Channel A.

began, that more information regarding its impact on wildlife was needed. NWF also hopes the Corps will be required to comply with the Fish and Wildlife Coordination Act, which would require the Corps to mitigate damage to wildlife. This should, in effect, limit wholesale drainage of the wetlands area, although farmers might still be able to save their fields from flooding.

In 1974, the Corps declared it did have jurisdiction over Channel A. However, when final plans for the project came out,

House committee agrees to set aside 93 million Alaska acres

The calving ground for the largest remaining caribou herd was given only interim protection by the House Interior Committee before the committee passed the Alaska lands bill (HR 39). The calving ground is in the Arctic National Wildlife Range, which will be open to limited exploration for oil and gas during a five year study of surface values. In 1983 Congress will decide whether or not it is a priority area for protection.

"We want this as wilderness and we'll fight to the death for it because of that herd," Pam Rich of the Alaska Coalition says.

The Interior committee cut the wilderness acreage almost in half, from 146 million acres to 75 million acres. These figures include some existing parks and refuges as well as new wilderness areas. Much of the 75 million acres that is not designated as wilderness or park will still be somewhat protected from mineral development as the

bill now stands. Although exploration is allowed, both houses of Congress must certify that there is a national need before any mineral development can take place.

However, the coalition of conservation groups was pleased by the 32-13 vote margin from the committee when it sent the bill on to the committee on Merchant Marine and Fisheries on March 21. The bill as passed by the committee sets aside about 93 million acres of the 115 million acres the coalition had pushed for.

Rich says that the coalition is seeking two changes in the bill in the merchant marine committee. The coalition wants a portion of Chugach National Forest set aside as the Copper River National Wildlife Refuge and wants protection for rocks and islands six miles off the Alaska shore, which are critical marine habitat. These areas are particularly vulnerable to offshore oil drilling effects, she says.

House floor action is expected by early May. The Senate has tentatively scheduled hearings for mid-April.

For more information on the bill, call the Alaska Coalition in Washington, D.C., at (202) 543-3663 or Pam Rich in Cheyenne, Wyo., at (307) 635-0920.

Eagles numerous in Jackson Canyon

Record numbers of bald eagles have been counted this winter at the Jackson's Canyon eagle roost, 10 miles west of Casper, Wyo.

A high of 62 bald eagles were seen in January 1978 by Steve Lund of Casper who has researched the eagles of the area for the last three years. The largest number of bald eagles observed in the ca-

nyon prior to this winter was 46 seen in February 1977.

Wyoming's third known communal eagle roost was discovered in January 1978 by Wyoming Environmental Quality Council member Glenn Goss. The new roost, located roughly 35 miles southeast of Jackson's Canyon in the mountains near Glenrock, has sheltered as many as 43 bald eagles at once.



national wildlife week march 19-25

The bulldozing badger



The Sherman tank of the animal world



badger tracks are extremely toed-in.



Photo by Don Domenick, Colorado Division of Wildlife
THE MOTHER badger is an aggressive protector.

by Sarah Doll

The badger is sometimes referred to as nature's bulldozer or the Sherman tank of the animal world. An amazingly efficient digging machine, the badger can dig his way entirely into the ground, out of harm's way, in under 60 seconds. Its strength and fighting ability are legendary, enabling it to kill a dog of four times its own weight. Badgers can be quite aggressive, and only the reputation of a near relative, the wolverine, surpasses that of the badger for ill-temperedness.

Because of its nocturnal ways, few people have actually seen a badger, but farmers and ranchers all over its range are aware of its presence. Besides digging several different burrows for itself a year, it digs out many burrowing animals, such as ground squirrels or prairie dogs, for food. The result is a landscape of holes, on which farmers and ranchers blame many a cow's broken leg. When digging a nesting burrow, the badger is extremely neat, spreading the diggings out over a large area so they won't call attention to the hole, and an unwary horse or cow is even more likely to stumble in.

Except for this one disconcerting habit, wise farmers recognize the badger as a valuable friend. Its voracious appetite helps keep the rodent hordes in check.

The American badger, *Taxidea taxus*, is found from Texas north to Wisconsin, and in all the states to the west of this line. Its four subspecies have adapted to conditions in Death Valley, and to those as high as 13,000 feet in the Rocky Mountains. In spite of man's takeover of its environment, it still survives in large numbers.

Wisconsin, at the northeastern corner of its range, is known as the "badger state," not so much for large numbers of badgers as for its early population of lead miners, who, badger-like, burrowed into the hills for protection during the winter months.

The badger is a member of the weasel family, or Mustelidae, whose members have musk or stink glands at the base of the tail. The badger has adapted quite differently from the rest of the family members. It doesn't depend on the stink glands, as does the skunk, to upset an enemy. It does exude a strong odor when excited, however. It doesn't survive by speed, as does the weasel. Its special adaptations are five tough, inch-or-more-long claws on each foot, razor-sharp teeth, and a lower

jaw that is locked into a long cavity in the head, giving enormous tenacity of grip. Its long, flat body, at rest, is often mistaken for a boulder or bunch of grass. Its gray color is created by a heavy coat made up of individual black and white hairs, which formerly were prized for shaving brushes. The American badger has distinctive white stripes down the middle of its head and behind both eyes.

A large badger may reach 24 pounds, and be 30 inches long and 9 inches high. A frightened badger's hair stands on end, making it look twice its size. Its skin is tough and extremely loose, enabling it to turn on and attack an adversary that already has a grip on it. Another unique trait of the badger is its ability to run backwards

almost as quickly.

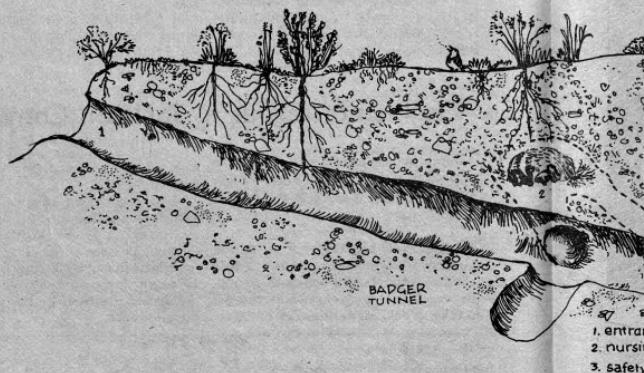
The badger's diet consists of some fruits, earthworms, and meat, however. It will catch, including the speed of its movement, will sometimes take refuge in the burrows of the few animals that bother a badger.

Badgers place in late pregnancy the embryo is developing in early spring.



N.D. Game and Fish

BECAUSE of its nocturnal ways, few people actually see a badger in the ground in a confrontation with a dog. The hair standing on end is a sign of excitement.



1. entrance
2. nursing
3. safety

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almost as quickly as it moves forwards.

The badger is an omnivore, and will consume fruits and grasses, insects, earthworms, and carrion. It prefers fresh meat, however, and will eat any it can catch, including snakes. It is no match for the speed of a rabbit on open ground, but will sometimes feed on a rabbit that takes refuge in the badger's burrow. It is one of the few animals that will prey on its relative, the skunk. Skunk spray doesn't seem to bother a hungry badger.

Badgers pair off for life. Mating takes place in late summer. The implantation in the womb and subsequent growth of the embryo is delayed for about five months; birth occurs about two months afterwards, in early spring. The young number from

one to five, and are only about three and half inches long, plus one and half inches of tail, at birth. They stay underground, nursed by the sow (female), for six to eight weeks. The boar (male) assists with feeding the young after they start eating solid food. The mother is an aggressive protector after they venture out of the ground. They stay with their parents, learning to hunt, until October.

Badger dens, especially those built for nests, are sometimes 50 or 60 yards long. Badgers keep tidy houses and dig latrines outside. The grass they carry inside for bedding is frequently changed.

Abandoned badger holes are used by many other opportunistic animals, such as foxes, snakes, or rabbits. Foxes have even been observed living concurrently with a badger in a burrow. Coyotes and hawks have been seen following a badger as it hunts to pick off any rodents the badger dislodges but doesn't catch.

Badgers do not hibernate, but their appetite and activity slow down somewhat during the winter months.

The dachshund ("dachs" meaning badger in German) was bred for the sport of badger-hunting. The special shape and remarkable courage of the dachshund enabled it to chase the badger down its burrow. Another popular early day sport, cruel to both badgers and dogs, was "badger baiting," in which a badger was set in a barrel. Bets were placed on various dogs, which tried to pull the badger out of the barrel. This "sport" gave rise to the expression "to badger," meaning to harass or tease.

The badger is classified as a furbearer in Wyoming and Colorado, which enables these states' game departments to set seasons on trapping. Montana has no classification for the animal at all. Little interest is shown by trappers for the animal's pelt in most Western states, however. Colorado fur dealers, for example, report 536 badger pelts taken from the state in the 1976-77 season, as opposed to 22,300 muskrat pelts. Badger pelts have not been highly prized, and are worth only about \$15.

In spite of the badger's near-valueless fur, however, man is its major enemy. Most human pressure on badgers has been due to the traditional view that predators are evil, especially predators that dig holes and act vicious. In spite of this view, however, the badger continues to prosper, and continues to help the human animal in a specialized way.



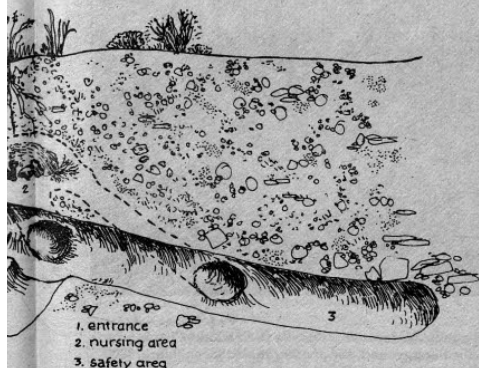
N.D. Game and Fish Department photo by Ed Bry
BADGERS FIGHT with razor sharp teeth and a tenacious grip.



The badger's voracious appetite helps keep the rodent hordes in check.



N.D. Game and Fish Department photo by Ed Bry
You actually see a badger. This one is standing its hair standing on end reveals the animal's



Colorado Division of Wildlife photo by Don Domenick
THE BADGER digs itself several different burrows. It also digs out other burrowing animals, such as ground squirrels and prairie dogs, for food.

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Navajo Tribe rejects WESCO gasification plant

by Dede Feldman

ALBUQUERQUE, N.M.—In a 48-8 vote last month, the Navajo Tribal Council moved to reject a proposal by the Western Gasification Company (WESCO) to construct a \$1.3 billion coal gasification plant in the heart of the Navajo Nation. WESCO is a consortium of two utilities, Texas Eastern Transmission and Pacific Lighting (of California).

The project, which has been in the planning stages since 1973, would have used coal stripped from land leased from the tribe by Utah International near Burnham, N.M.

Although residents of the Navajo community of Burnham and nearby Shiprock had protested the proposed development for several years for both environmental and spiritual reasons, the tribal leadership had wavered on the project — until last month. If completed, the plant would have given the tribe an estimated \$750 million in royalty payments, rental fees, and taxes during the 25 years of the lease agreement.

According to observers close to the

Navajo Tribal Council, the main reason for rejection of the WESCO proposal was that members of the council felt that the financial benefits to the tribe were too low and that the tribe would have little say once the plant was built.

Many members of the council were swayed by a study of the WESCO proposal recently completed by the Department of Interior. The study recommended that the tribe ask for at least 5% or as much as 10% of the company's gross revenue. WESCO had offered one-half per cent. The study indicated that other tribes were making as much in similar deals with large power companies elsewhere. While not all members of the council felt this figure was realistic, many, including Tribal Chairman Peter MacDonald and tribal attorney George Vlassis, felt the royalty figure should be increased to at least three or four per cent.

Another objection to the WESCO proposal cited by several members of the tribal council was a clause that stipulated that if a future tribal law was in conflict with the contract, the contract would prevail. This,

said several councilmen, was an infringement on tribal sovereignty — in advance.

In addition, many observers here feel that the tribe's rejection had much to do with the fact that this is an election year on the Navajo Reservation, and it is easier for many tribal politicians to reject, or at least shelve, the proposal.

WESCO officials were surprised and disappointed by the sudden rejection of the gasification proposal that has already cost them \$30 million just for planning. WESCO officials presented the council with an alternative plan calling for the construction of the huge plant just outside the reservation. The proposed plant would net the same financial return to the tribe, without the tribal control that would come with locating it on the reservation. The hitch, however, is that WESCO needs a right-of-way to get the coal from the Utah International lease to the alternate plant. The council refused to grant the right-of-way — at least for the present. Much to the dismay of WESCO, the advisory committee of the tribal council shelved the entire alternate proposal.

Joe Byrne of WESCO's Los Angeles

headquarters says the firm is winding the project down as far as spending is concerned and has suspended all engineering and consulting agreements. The firm has closed its Farmington, N.M., office, and its coal sales contract with Utah International is due to expire in June.

But several environmentalist and Indian leaders here warn that this may be another of WESCO's bluffs. "WESCO is far from dead," predicts John Liebendorfer, a researcher with Albuquerque's environmentalist Southwest Research and Information Center. "There's far too much at stake."

"Technically, the alternate proposal is still alive before the advisory committee," said John Redhouse, from the National Indian Youth Council, a local organization that has been fighting gasification for several years now. "Gasification's been given a minor shot in the arm by Carter's recent approval of federal loan guarantees to finance such projects," he added.

"WESCO will probably come back with a better deal when the council reconvenes in the spring."



energy news of the Rockies and Great Plains

WATER TUG-OF-WAR. Utah Power & Light Co. opposes plans for the proposed 10,000 megawatts of nuclear generating capacity in Utah because the company has its own ideas of how water supplies could be used. UP&L Vice President Franklin N. Davis says the plant would, in effect, be sending Utah's allocation of water to Phoenix, Los Angeles, and San Francisco "by wire." "We need it for other uses, for example for power generation for our region, for coal gasification, possibly to develop oil shale and so forth," he explains.

ANTELOPE EMISSIONS CUT. The North Dakota Health Department has issued air quality permits to Basin Electric Power Cooperative to build the Antelope Valley power plant. However, the state stipulated that the two units could emit only 3,845 pounds of sulfur dioxide an hour instead of 11,832 pounds. The original plant design would have polluted Theodore Roosevelt National Memorial Park below Class I standards. Last year, the park was redesignated Class I, which allows almost no degradation of air quality. Before the plant can be constructed, Basin must get approval from the Rural Electrification Administration (REA).

IPP LOOKS AT LYNN DYL. Thwarted in its original plan to build a large coal-fired power plant near Capitol Reef National Park, the board of the Intermountain Power Project (IPP) has decided to begin preliminary studies of an alternate site in central Utah near Lyndyl. IPP's first plan had drawn criticism from Secretary of Interior Cecil Andrus for the 3,000 megawatt plant's potential to pollute the park's air. According to a *Deseret News*

story, one member of the board was uncertain about whether to begin studies on the new site or to wait "until we get a new secretary of Interior."

FOULED NEST. Rep. Dan Marriott (R-Utah) has scheduled an informal public hearing to get public comment on a pile of radioactive tailings within Salt Lake City. He is proposing that the U.S. government accept 100% of the cost of removing the pile, which he says is a health hazard that continues to threaten Salt Lake City residents. A city-county health director has suggested posting a sign saying "Warning — entering a federally fouled nest." The director, Dr. Harry L. Gibbons, says the federal government has responsibility because the uranium was milled at the request of the federal government for materials for nuclear weapons.

TENNECO SEEKS N.D. OKAY. Tenneco, Inc., and its subsidiary, Intake Water Co., have agreed to negotiate with the state of North Dakota to acquire water for proposed energy conversion plants on the Montana-North Dakota border, according to the *Dickinson Press*. The diversion petition is being made in compliance with a provision of the Yellowstone River Compact which stipulates that no water can be moved from one river basin to another without the unanimous approval of North Dakota, Wyoming, and Montana. The state of North Dakota had charged that Tenneco intended to divert the Yellowstone River water without North Dakota's consent. A suit alleging this was filed against the company.

ROCKY FLATS PICKED. Daniel Ellsberg will be one of the main speakers at a demonstration to be held April 29 at the Rocky Flats nuclear weapons plant northwest of Denver. The demonstrators will ask that the facility be shut down. The demonstration is planned by the American Friends Service Committee, the Fellowship of Reconciliation, and the Mobilization for Survival. Ellsberg says, "Colorado is a good place to say no. This weapon (the neutron bomb, which is to be produced there if approved) must be stopped. This entire process must be stopped so that humanity can survive."

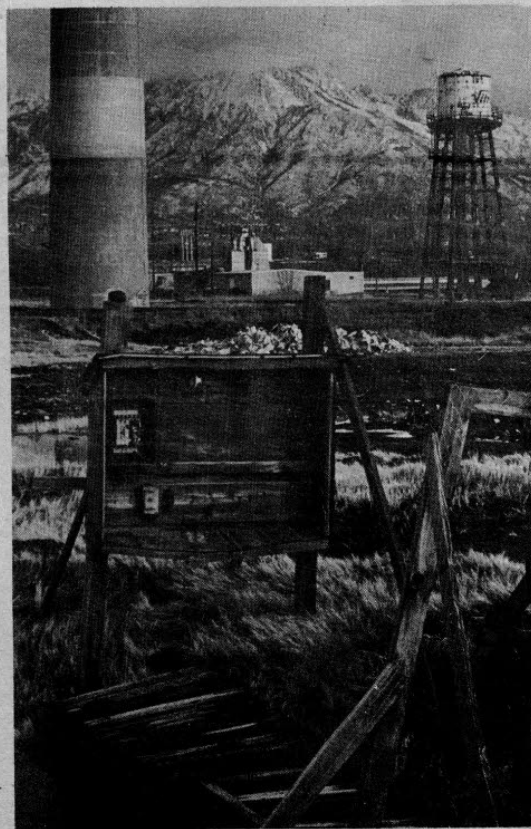


Photo by Jack McLellan

VITRO'S TAILINGS ponds are located at this site in Salt Lake City. Interstate Highway 15 is in the background, and another main thoroughfare, 3300 South, is shown at the right edge of the photo.

Mar. 24, 1978 — High Country News-11

USFS roadless land oil policy set

by Dan Whipple



VERN HAMRE doesn't expect the new guidelines to make it easier for companies to get permission to drill in new areas.



**The HCN
Hot Line**

energy news from across the country

SULFUR DIOXIDE STANDARDS UPHELD. The Associated Press reports sulfur dioxide pollution control standards for industrial air discharges in Ohio were upheld by a federal appeals court. The court ruled that the Environmental Protection Agency (EPA) could set a formula that measures the sulfur dioxide emissions of each smokestack in an industrial facility and assume that the plant runs at full capacity 24 hours a day. The ruling is a victory for EPA, which wants to issue control regulations based on the "worst case" possible in an area. The 32 companies objecting to the rules claimed that EPA's assumptions were unreasonable.

SAVE SUMMER HEAT FOR WINTER. A Johns Hopkins University researcher claims to have developed a system for storing the heat of summer in underground water aquifers for use in the winter. W. Richard Powell, a senior scientist at the university's applied physics laboratory, says that energy consumed for heating and cooling could be reduced by as much as 80% using his system. An underground water well would store 60 degree Fahrenheit water, which had been pumped in during the summer when warm water was plentiful. The heat from that water could be gradually extracted by heat pumps, producing heat and cooling the stored water. The cooler water would then be put in another storage system for use as air conditioning in the summer months, according to the Washington Star.

FREEMAN EXPRESSES FAITH. In his first major address on nuclear power since becoming the director of the Tennessee Valley Authority (TVA), S. David Freeman expressed his faith in nuclear power as being a proven and available energy alternative. He says TVA, which has plans for more nuclear plants than any other utility in the country, is considering constructing its own permanent disposal facilities for spent fuel. He told the Atomic Industrial Forum Fuel Cycle Conference that the nuclear industry must candidly face the problems of radioactive waste.

The U.S. Forest Service has issued policy guidelines for access and drilling on oil leases in roadless lands identified by the second Roadless Area Review and Evaluation (RARE II). The policy guidelines will be particularly important for national forests that lie over the Overthrust Belt, a promising oil and gas formation. They are designed "to get a policy acceptable to both the oil and gas industry and environmentalists," according to Region IV Regional Forester Vern Hamre.

The Forest Service policy was prepared, at least in part, as a response to an appeal by the Sierra Club about the agency's access policy. The appeal itself was dismissed for technical and procedural reasons, but the Forest Service acknowledged that there was potential for serious conflict between wilderness values and petroleum exploration.

In designing the policy, the Forest Service had to deal with what it called "a bewildering variety of options." The agency has long allowed the leasing of oil and gas properties on roadless lands in the forest. Howard Banta, the agency's director of minerals and geology, says, "This was done in speculation that most of the leases will expire or lapse without being drilled upon, and that, if drilled upon, the impacts on wilderness values will be minimal because no commercial discoveries will result." This expectation, Banta admits now, was incorrect.

Many of the leases sold on roadless areas were accompanied by some version of a "no surface occupancy" stipulation. The stipulations were part of the settlement of a 1972 lawsuit brought by the Sierra Club. However, leases issued before that date, even those in roadless areas, do not contain such stipulations. In addition, a number of leases issued after that date do not contain the required stipulations as the result of "administrative errors" by the Forest Service. As many as 300,000 acres of roadless lands in southern Idaho, western Wyoming, and Utah may have such errors.

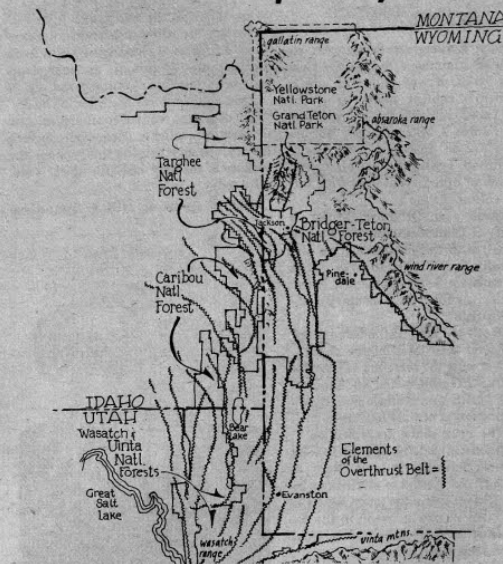
To deal with the confusion, the agency has established several policy options that will be applied to each request for a permit to drill. The Forest Service will look at the area in which the drilling will take place and assess: the restrictions contained in the lease; the wilderness values associated with the lease tract; and, the estimated oil and gas potential of the lands.

Once these factors have been weighed, the agency decides whether or not to open the land to drilling. In RARE II inventoried lands, drilling would be permitted only if strict conditions to protect the environment and wilderness character of the land are applied. In some cases, in areas of "high wilderness potential," drilling would not be permitted until final determination about the wilderness status has been made.

Under the guidelines, access would be easier for oil and gas drilling if the leases are not on roadless lands, or if there is an old, but usable, road on an area that has been designated as a RARE II tract. Some of the "roadless" lands actually have old roads through them, and the Forest Service is willing to let drilling take place in some instances if the company does not substantially upgrade the road. One such permit has been approved, with the agreement of the Sierra Club, on the Bridger-Teton National Forest in Wyoming.

GREAT IMPROVEMENT

Hamre says that he does not expect these guidelines to open any areas to drilling



more easily. Sierra Club's regional representative Bruce Hamilton agrees. He says that the new policy is a great improvement over the old one. In the past, the Forest Service guidelines allowed access to any areas not covered by the no surface occupancy clauses, regardless of their wilderness potential.

One oil industry spokesman says, "the guidelines lean too heavily toward the wilderness option." But one oil company representative says, "I'm just glad to see something down on paper."

One concession that the oil industry got from the Forest Service is that, while this evaluation process is going on, the Forest Service will help them convince the Interior Department to suspend leases. Many of the most controversial leases were issued in 1969 and are due to expire next

The Forest Service had to deal with "a bewildering variety of options."

year. Under a suspension, the companies would be allowed to hold the leases until the wilderness issues are finally disposed of.

The most difficult question that the Forest Service must address is the handling of the leases on which there are administrative errors. The agency admits that it is in a weaker bargaining position in regard to these leases, though it has had some initial successes in its negotiations. One oil company has agreed to a no surface occupancy stipulation on over 2,500 acres on Upper Palisades Lake in the Bridger-Teton Forest.

The guidelines were announced at a Forest Service meeting March 10 in Salt Lake City. Once the general policy was discussed, the industry representatives, environmentalists, and the individual foresters broke up into smaller groups to discuss individual case actions. If attendance at these meetings is any indication, the oil industry is most concerned about access on the Bridger-Teton Forest in Wyoming. Of

the 50 or so oil representatives attending, about 35 of them sat in on the discussions about Bridger-Teton.

Data submitted by the Rocky Mountain Oil and Gas Association (RMOGA) to the Forest Service also support interest in the Bridger-Teton. The data suggest that industry estimates of the recoverable oil and gas in the Idaho-Wyoming portions of the Overthrust Belt are considerably higher than U.S. Geological Survey estimates. RMOGA estimates are as much as 50% higher for oil and 75% higher for natural gas.

AREAS OF INTEREST

As identified by roadless tracts, the areas with the highest estimated values for oil are in the Bridger-Teton. The roadless areas of most industry interest are Gannett Spring Creek, Commissary Ridge, Salt River Range, Southern Wyoming Range, and Grayback. Gannett Spring Creek overlaps both the Bridger-Teton Forest and the Caribou Forest in Idaho. In Idaho, areas in which the industry has the most interest for oil are Caribou City in the Caribou and Targhee forests, and Meade Peak in the Caribou Forest. Both of these areas show considerably less potential than the Wyoming areas, however.

Prospects for natural gas in the forests are much better than oil; a number of areas in Idaho, Utah, and Wyoming show considerable potential for gas. These areas include all of the above listed areas as well as: the North Fork of Sheep Creek roadless area, the Togwotee area, and the Palisades in Bridger-Teton; Bear Creek and Garns Mountain in the Targhee National Forest and Stump Creek in the Caribou in Idaho; and Beartop in Utah's Ashley National Forest.

Oil industry representatives are concerned that the petroleum potential of the roadless lands will not be considered in evaluating the roadless lands for wilderness potential. One industry source says, "If the Forest Service ignores the oil and gas potential when it makes a final determination about the wilderness value of these lands, we can become as liberal with lawsuits as the Sierra Club."

12-High Country News — Mar. 24, 1978

Endangered Species Act in danger

Furred, finned, feathered cousins' fate at stake

by Philip White

When the Endangered Species Act received near-unanimous passage by Congress in 1973, it was hailed as one of humankind's noblest assertions of the rights of those creatures that environmental writer John G. Mitchell called "our fellow travelers on Spaceship Earth, those furred, finned, feathered, and chlorophylled cousins of ours that evolved from our common colloidal soup."

That same year, Dr. David Etnier, a University of Tennessee ichthyologist, had discovered a three-inch member of the perch family in the lower 16 miles of the Little Tennessee River. He named it the snail darter, owing to its alimentary fondness for escargot.

Today, both the act and the fish are endangered, and their fates intertwined.

The act directs the secretary of Interior to identify threatened and endangered species of plants and animals and allows the designation of critical habitat of such species. The crux of the act is Section 7, which requires all federal agencies to take "such action necessary to insure that actions authorized, funded or carried out by them do not jeopardize the continued existence" of such species or "result in the destruction or modification" of critical habitat of such species.

According to Thomas L. Kimball, executive vice president of the National Wildlife Federation, "overwhelming evidence shows that the act is saving endangered species without detriment to legitimate development objectives."

John Spinks, chief of the Office of Endangered Species of the U.S. Fish and Wildlife Service (FWS) in Washington, notes that only three lawsuits and only one irreconcilable conflict have arisen from nearly 5,000 consultations with other federal agencies on endangered species. "Compare that record with the first four

years of NEPA," Spinks said.

To date, according to Marshall Jones of the FWS Office of Endangered Species in Denver, only 178 animals and four plants have been classified as endangered, and 22 critical habitats have been established.

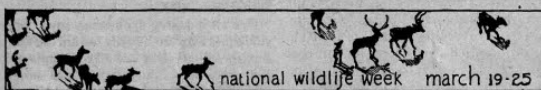
But despite a record of conflict resolution perhaps unequaled in recent bureaucratic history, the act is coming under potent fire because of the only lawsuit which is still alive today.

That, of course, is *Hill v. Tennessee*



Fish and Wildlife Service
photo by Luther C. Goldman

THE BALD EAGLE is listed as an endangered species in 43 of the 48 contiguous states and as a threatened species in the other five.



Valley Authority. A group of conservationists sued under Section 7 of the act and obtained injunctions against the TVA, a federal agency, prohibiting it from closing its nearly-completed, \$100-million-plus Tellico Dam at the mouth of the Little Tennessee because it would cause the extinction of the snail darter. The U.S. Supreme Court is due to hear arguments on TVA's appeal early this spring.

Meanwhile, TVA has applied its enormous political torque to undermine the Endangered Species Act.

Rep. Robin Beard (R-Tenn.) has introduced amendments exempting all federal public works projects on navigable waters from compliance with the act if project construction commenced prior to the initiation of the endangered listing for a species. This amendment would allow TVA to complete Tellico and would liberate other ongoing water projects from possible endangered species hassles. U.S. Reps. Albert Gore (D) and John Duncan (R), also of Tennessee, have introduced bills to exempt Tellico and the Columbia Dam on the Duck River in Tennessee from compliance.

The Columbia Dam would eliminate half of the total known population of Dutton's river snail and its habitat, which are proposed for threatened and critical designation.

Amendments may also be attempted during the act's reauthorization process. A Senate subcommittee will hold hearings on reauthorization in April.

Ironically, according to Kimball, the assault on the ESA arises from a dam project that is totally indefensible on grounds apart from the endangered species issue

and was strongly opposed long before the snail darter entered Etnier's net.

"The TVA project cannot be defended on its merits. A recent study by the General Accounting Office charges TVA with exaggerating the benefits of the project and underestimating its costs. The GAO study recommends that the dam not be completed until Congress has fully reassessed the project," Kimball says.

Jones says the FWS hierarchy feels "there is no need for any changes in the act, which has been very successful and has proven to be flexible enough to protect the species without prohibiting human development."

Toby Cooper, program director for Defenders of Wildlife in Washington, agrees. "The program has worked remarkably well. The amendments would, essentially, emasculate the basic purpose of the act: to save species from extinction. Conservationists must rally nationwide now to support the act."

Cooper cited the rapid recovery of the Louisiana alligators after being designated as endangered. They have since been reclassified as threatened. He also noted the successful programs to propagate peregrine falcons, red-cockaded woodpeckers, and whooping cranes.

When Interior Secretary Cecil Andrus was asked about the Endangered Species Act during a House subcommittee meeting in February 1978, he said, "For now, it would not be wise to change the act." However, he said he agreed that the act was not being used as Congress intended. "I think it was for the larger visible endangered species that it was intended," he said. While pointing out that the TVA dam was the only serious problem area for the act, he said he didn't think Congress envisioned it as being used to stop projects. He said Congress was motivated to pass the act because of the declining numbers of bald eagles, the national bird.

Colorado's delegation usually votes to protect the environment. . .

(continued from page 6)

could beat Haskell," says a Colorado political observer. "Floyd's in deep trouble. A significant number of the people in this state don't know him. And he's got the business community mad at him."

The choice between Armstrong and Haskell would be a clear one for environmentalists. But it is not clear how much the environmentalist vote will help Haskell.

"A number of people in the state are concerned about quality of life. But environmental organizations in Colorado are weak

right now in terms of their ability to mobilize people. There's a leadership problem," says the observer.

If Armstrong wins the primary, he plans to try to make jobs the big issue. "Haskell has supported measures that will make it very difficult to provide the needed amount of jobs in Colorado," an Armstrong aide says.

At least four people have announced for the House seat that Armstrong is vacating. One of them, Gerald Frank, has a 100% environmental voting record in the 1977 Colorado General Assembly, according to an analysis prepared by the Colorado Open Space Council (COSC). Two other Colorado legislators are running — Robert Eckelberry (R), who has a 45% record, and Ken Kramer (R), who has a 40% record. Dan Nugent, an independent, is also running.

Since Evans announced he was retiring this year, at least two people have announced they will try for his House seat, Harold McCormick (R) and Ray Kogovsek (D). Since neither of the candidates has a strong environmental record in the state legislature, environmentalists probably won't take much interest in the race.

Environmentalists may be interested in both Wirth's and Johnson's races, however. Wirth is facing a tough fight against a right-wing conservative who almost beat him last election, Ed Scott.

"It'll be very tight," says Wirth's staff. "I don't think he's in quite as much trouble as he thinks he is," says a Colorado



REP. JAMES JOHNSON: wilderness for water.

political observer, "unless the rapid-growth areas in his district, which tend to be conservative, are expanding extremely rapidly.

Wirth's 2nd District is difficult to predict because it has more Republicans than Democrats and more independents than both.

A strong environmentalist, Morgan Smith, is challenging Johnson in the 4th District. Smith, a wealthy state representative from Brighton, Colo., scored 100% in

COSC's 1977 voting analysis.

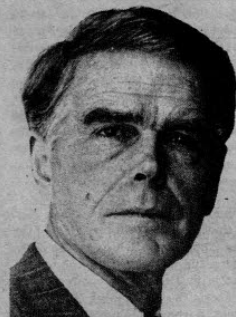
"I think Smith could take it," says the political observer. "He's energetic, sophisticated, charismatic, and fiscally conservative — all of which will help him."

What about Schroeder? "It's always hang-out politics in Denver, but she's very popular," an environmentalist says.

"I think she's unbeatable," says the political observer.



REP. BILL ARMSTRONG: jobs are the issue.



SEN. FLOYD HASKELL, in deep trouble.



Western Roundup



13
Mar. 24, 1978

Foothills plant approved for Denver

The federal government has given the go-ahead to the Foothills Water Treatment Complex to serve Denver, despite the objections of the head of the regional Environmental Protection Agency (EPA), a local citizens' group, and the President's Council on Environmental Quality (CEQ).

The CEQ, the EPA, and the citizens' group — the Water Users Alliance, all said the project would encourage growth in the Front Range and that this effect was not given proper consideration in the environmental impact statement prepared by the Bureau of Land Management (BLM) and the Forest Service. The CEQ said the indirect impact of Foothills on metropolitan Denver's air quality was not assessed.

State BLM chief Dale Andrus said the federal government "cannot and should not interfere" in the question of future population growth. The BLM and other federal agencies' support for expanding the plant beyond its initial capacity will be contingent on adoption of an effective program to

Dollar per acre to save the Great Bear

Know All People By This
Certificate

that _____ has paid and pledged
\$ _____ to preserve and defend _____ acres of the

Great Bear Wilderness

Protectorship of said public land has been granted in
Section _____ Township _____ Range _____ County, Montana



President, Montana Wilderness Association

Dated _____

The Montana Wilderness Association is offering Great Bear Protectorship Certificates for individuals who donate money to help fight in Congress for the establishment of the 387,000 acre Great Bear Wilderness.

The MWA proposes that interested parties donate one dollar for each acre they want to protect. The donation confers not only a Great Bear certificate but also "un-challenged authority to protect your personal property in the magnificent Great Bear."

To obtain "ample opportunity to fight like hell until (your) legally described parcel of land is included in the nation's Wilderness Preservation System," send one dollar per acre of interest to the Great Bear Wilderness Fund, MWA, P.O. Box 635, Helena, Mont. 59601.

AMAX shelves Kirwin copper mine

AMAX has dropped plans for its Kirwin copper mine outside of Meeteetse, Wyo., at least for the time being. A company spokesman says that a drop in copper prices has caused the project to be shelved.

AMAX began looking at the Kirwin site in 1962, and has done environmental studies and basic operational planning, but no work on the mine itself. The project has

encourage more moderate water use, according to the Rocky Mountain News.

The Water Users Alliance is considering filing a lawsuit challenging the adequacy of the environmental statement. The Denver Water Board plans to begin construction as early as this summer.

been the subject of heated controversy in Meeteetse and Cody, Wyo., where most of the impact was expected.

Last year, the Wyoming Environmental Quality Council declared the area of the mine site to be an area of "unique and irreplaceable scenic, natural, historic, or archeological value." This would have required the company to obtain a permit from the council before mining could occur.

BLM begins wilderness land inventory

The Bureau of Land Management (BLM) is beginning a study of its lands for wilderness potential. As a first step, BLM is asking for public input on ground rules to be followed in developing an inventory of roadless lands.

Interior Secretary Cecil Andrus says that there are five major objectives in the study: considering all public lands for wilderness potential; inventorying all BLM roadless areas of 5,000 acres or more and identifying wilderness study areas within two years; studying and reporting to the President by July 1980 on the wilderness potential of 55 areas already selected as potential wilderness; studying and reporting the suitability of all potential wilderness areas by October 1991; and applying interim management to areas that qualify for wilderness preservation until a final

determination is made by Congress.

Copies of the BLM proposal are available from Director (370), BLM, Washington, D.C. 20240. Comments will be accepted until May 17.

Public Lands News estimates the amount of BLM roadless areas to be from 30 million to 80 million acres. The newsletter estimates that a total of about 10 million acres may eventually be declared wilderness.

Public hearings will be held on the proposed approach during April: in Utah on April 11; Colorado on April 13; Idaho, California, Alaska, and Oregon on April 14; Wyoming and New Mexico on April 18; Montana and Nevada on April 20; and Arizona on April 25. Call the BLM for times and places.

Colo. car dealers threaten air lawsuit

Members of a group of Colorado automobile dealers have threatened a lawsuit if the state legislature passes legislation requiring stricter auto emissions controls than the federal government. The Rocky Mountain News reports that one dealer says, "I'd say a lawsuit was possible if the bill passed. I don't think we'd have any other choice."

The Denver auto dealers presented testimony at state senate hearings on the

legislation. They said that they feared they would be unable to obtain cars from manufacturers if the law passed.

The Colorado bill essentially ignores federal law, which says that states may not set auto pollution standards stricter than federal ones. An opponent of the measure says, "I don't see any use for us to start knocking heads with the federal government over the certification of automobiles."

Water policy debates heat up — again

Water projects are again becoming a focus of debate as state and federal politicians try to restore funding for threatened projects and conservationists try to eliminate "pork barrel" projects.

Twenty-five conservation organizations have drawn up a list of the "Terrible Twenty" water projects that "represent the worst abuses" of the water development programs, according to the Audubon Leader. The Western projects that made the list are the Central Arizona Project, the Central Utah Project, and the Garrison Diversion in North Dakota.

In addition to the 20 "worst" projects, the coalition identified 30 other "highly questionable" projects and asked President Jimmy Carter to review them carefully before funding them.

The mood in the states and the U.S. Congress seems to be far from a reduction in water projects, however. Interior Secretary Cecil Andrus has outlined a plan that would reduce the Garrison Diversion from its original total of 250,000 irrigated acres to 96,300 acres. North Dakota officials and

the state's congressional delegation call the plan "completely unacceptable."

The N.D. congressional delegation is asking the Government Accounting Office to investigate the legality of the Administration withholding \$24 million of the total that had been appropriated by Congress for Garrison. The delegation argues that this is illegal impoundment of funds. The government argues that the project may violate federal environmental standards and the money can't be spent until that issue is resolved, according to *The Onlooker*. The response to a lawsuit by the National Audubon Society, a new environmental impact statement is being prepared on Garrison.

The Senate Energy and Natural Resources Committee has tentatively endorsed five water projects for Colorado, at the urging of U.S. Sen. Floyd Haskell (D-Colo.). Two of the five — the Savery-Pot Hook project on the Wyoming-Colorado border and the Fruitland Mesa project in southwestern Colorado — were among those for which the Carter Administration recommended cutting out funding last year. In addition, the committee approved funding for the Closed Basin project and the Animas-La Plata project, both in southwestern Colorado. Neither of these had received priority funding previously.

Another Colorado project, the Narrows Dam, was also revived by the committee after a favorable report on the project was released by the Administration several weeks ago. Narrows had also been on the original Carter "hit list."

Finally, Carter has promised funding for the Central Utah Project, one of the "Terrible Twenty," according to the *Deseret News*.

House and Senate hearings on all of the water projects are scheduled April 3 through 12 in Washington, D.C.

Montana feeds starving bighorns

The Montana Fish and Game Department has airlifted food to starving bighorn sheep on Wildhorse Island. A helicopter was used to deliver hay and protein pellets to the animals.

Bighorn are not native to the island, which is located in Flathead Lake. They were introduced many years ago and management has been minimal because the department was uncertain about who owned the sheep. Until mid-February of this year, the island was privately owned, but it has now been purchased by the state of Montana.

This winter, the sheep population was estimated at 160 to 200. So far 30 to 50 of them have starved and another dozen may have drowned trying to cross the frozen lake to reach more food. Officials estimate that the island could support about 75 sheep, and they are looking at a number of management techniques to keep the population to that level, including the possibility of opening the island to hunting.



14-High Country News — Mar. 24, 1978



HCN Bulletin Board



RADIOACTIVE WASTES

The U.S. Environmental Protection Agency (EPA) is seeking public involvement in developing standards for radioactive waste treatment. A workshop will be held March 30-April 1 at Stouffer's Denver Inn, 3203 Quebec, Denver, Colo. Registration begins at 10 a.m., and Sen. Gary Hart (D-Colo.) will keynote the sessions at 1:30 p.m. Hart is chairman of the Nuclear Regulation Subcommittee of the Senate Environment and Public Works Committee. A background document that will be used during the workshop is available from EPA in Denver at 1860 Lincoln St. or call (303) 837-2221. To register or to submit written comments, write EPA Forum Manager, Ecological Analysts, Inc., 275 Board Hollow Road, Melville, N.Y. 11746.

WORLD ENVIRONMENT GRANTS

Small grants are available for local constituency groups that want to plan projects for World Environment Day June 5. The U.S. Environmental Protection Agency (EPA) is now accepting applications. Each regional EPA office will have \$1,500 to spend on World Environment Day, but the grants are to be used only for services or products. Plans must be approved by the Washington, D.C., EPA office so letters should be sent immediately. A few \$100 grants are also left for Sun Day, which will be May 3. Write to your regional EPA Public Awareness Office to apply for either grant. For Colorado, Montana, South Dakota, North Dakota, Utah, and Wyoming, write to Region VIII EPA, 1860 Lincoln St., Denver, Colo. 80203. For Idaho, write to Region X EPA, 1200 Sixth Ave., Seattle, Wash. 98101.

APPROPRIATE TECHNOLOGY

A consulting firm has prepared three publications on appropriate technology with funds from the National Science Foundation. The three deal with the political and practical barriers to appropriate technology, its implications, and specific projects in the field. They are: "Appropriate Technology in the U.S. — An Exploratory Study," "Appropriate Technology — A Directory of Activities and Projects," and "Appropriate Technology and Agriculture in the U.S." They are available free from Design Alternatives, Inc., 1312 18th St., NW, Washington, D.C. 20036.

OFFICE PAPER RECOVERY

Offices faced with rising energy costs should consider office paper recovery, according to **Office Paper Recovery: An Implementation Manual**, prepared by the U.S. Environmental Protection Agency. EPA has published a guide that can help conserve resources, lower environmental emissions, and save money. It is available from Solid Waste Information, EPA, Cincinnati, Ohio 45268. Single copies are free.

CLIVUS MULTRUM Organic Waste Treatment System

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'DISASTERS'

A coalition of national environmental groups has asked Carter to halt 20 major water projects now under construction and to reform federal water development policy. The group has published a booklet explaining its concerns entitled **Disasters in Water Development II**. The group will hold a conference on "dams, rivers, and national water policy" April 8-9 at the 4-H Center in Washington, D.C. For more information write the Coalition for Water Project Review at 1000 Vermont Ave. NW, Washington, D.C. 20005.

FOREST SERVICE PROGRESS

Two progress reports on implementation of the Forest Service's Rangeland Renewable Resources Planning Act (RPA) of 1974 are available. Comments on the report are being sought until April 15, 1978. Copies are available from Forest Service offices throughout the nation.



ROADLESS AREA MAPS

Maps showing the locations of inventoried roadless areas with the national forests and grasslands are now available for most areas of the West. The maps are shown by state. Nationally, there are about 65.7 million acres in 1,920 areas identified as roadless or undeveloped within the national forest system. To get a map, contact any local forest supervisor's office or write to the regional office. For the Rocky Mountain Region, write Regional Forester, Box 25127, Lakewood, Colo. 80225. For the Northern Region, write Regional Forester, Box 7669, Missoula, Mont. 59807. For the Intermountain Region, write Regional Forester, Federal Office Bldg., 324 25th St., Ogden, Utah 84401.

JOB FOR ORGANIZERS

The Youth Project's Western Office is operating a job and internship placement service for non-profit community groups. For more information, contact the Organizers' Clearinghouse, The Youth Project, 149 Ninth St., San Francisco, Calif. 94103 or call (415) 626-5570.

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RENEWABLE ENERGY EXPERTS

Six experts in renewable energy systems will make a speaking tour of the "mountain plains region" this spring, sponsored by the Center for Social and Environmental Concerns in Helena, Mont. The experts include Joel Schatz of the Oregon energy office, Pliny Fisk of the Center for Maximum Potential Building Systems, Dennis Holloway of the University of Colorado School of Architecture, Sam Love of the Environmental Action Foundation, and William and Olga Olkowski of Farallones Institute. People interested in sponsoring an appearance of one of the experts in their community should contact the center at P.O. Box 1154, Helena, Mont. 59601 (406) 443-7056.

VOLUNTEER VACATIONS

The American Hiking Society is seeking volunteers who want to be campground hosts, naturalists, photographers, or trail workers, or who want to do other work in the national parks and forests. For information, send \$2.95 plus postage to Signpost Publications, 16812 36th Ave. W., Lynnwood, Wash., 98036 and ask for "Volunteer Vacations in Forests and Parks."

MAKING WOOD STOVES

Ole Wik has written a book recounting his own and others' experiences making wood stoves from discarded scrap. He explains techniques of using a limited number of primitive hand tools to produce them. Order for \$5.95 from Alaska Northwest Publishing Co.

DENVER ZPG ACTION

The Political Action Committee of the Denver Chapter of Zero Population Growth (ZPG) is starting a chain call-letter writing system to lobby the Colorado state legislature on issues important to the organization. ZPG is trying to find at least one person in each of the state's political subdivisions who will contact his or her state representative either by phone or in writing, upon notification by the ZPG committee. Interested persons should contact James C. Vanderhye, ZPG, P.O. Box 18291, Capitol Hill Station, Denver, Colo. 80218 or call 303-893-0669.

RECYCLING GUIDE

A guide is now available on starting recycling projects, including a discussion of common pitfalls. It is directed mainly to volunteer groups and is available free from the Oregon Department of Environmental Quality, 1234 S.W. Morrison St., Portland, Ore. 97205.

SOLAR GREENHOUSE FILM

Any group or homeowner who wants to build a solar greenhouse may be interested in a film by Mario and Dana Balibera, produced by Bill and Susan Yanda. The film depicts the basic concepts of solar construction as well as the enthusiasm generated by a community greenhouse-building workshop. The 21-minute, 16 mm film can be purchased for \$315, which includes two how-to books. It can be rented for \$55. Write Danamar Film Productions, 275 Kilby, Los Alamos, N.M. 87544.

Service Directory



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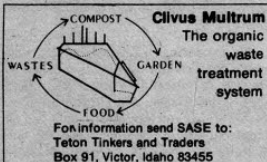
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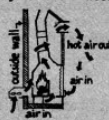
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BRANCHING OUT



RECYCLED IDEAS

by Myra Connell

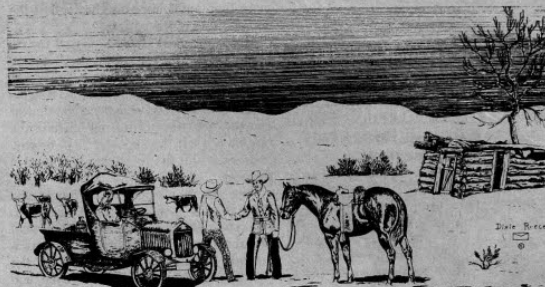
Perennial optimists like me find encouragement in articles describing ingenious recycling plans.

An ambitious project in the Northwest combines old magazines with mill trimmings of spruce and hemlock to make paper. City governments are beginning to consider composting organic waste as an alternative to incineration or dumping sewage sludge into streams or oceans. A

"tripledecker" experiment in East Lansing, Mich., recycles treated sewage in a series of lakes to produce water plants suitable for silage, plus fertilizers, fish, and irrigation water. These kinds of developments promise solutions to two of our most urgent problems — water pollution and solid waste disposal.

Along with this feeling of encouragement I have a tendency to be slightly amused. Some of the articles that urge thrift, recycling, and ways to "make do" seems to imply that these concepts are new. But we who were born to poverty and who later fought the Great Depression are aware that these ideas are as old as humanity itself. The latest "in" thing is to make the most of what you have; this was a motto of the past before the onset of the affluent age, a way of life of the American Indians, the colonists, the homesteaders, and all of that sturdy tribe that built America.

On the Wyoming homestead where I grew up, little went to waste (except, of course, quite a lot of wind and sunshine, which we did not know how to fully utilize). The cast-iron range that cooked our food



and baked our bread also warmed the kitchen-dining-living room. Wood ashes from the fire were leached to get lye, which was combined with surplus kitchen fat to make excellent laundry soap. In turn, the soap suds were used and reused until they had done their utmost in cleansing action. Lately I have seen tremendous amounts of soap and detergent go down the drain from washing machines that aren't equipped with "suds savers."

Water was a precious commodity, then as now. No drop was wasted: if used to sterilize the cream separator it was reused for washing dishes. If used to rinse clothes, it was reused to wash another batch and finally for scrubbing the floor.

Mother was thrifty in minor ways as well as in major ones, even drying the eggshells and adding them to the chicken feed to supply needed calcium.

Clothing, of course, was always handed down from older children to younger. Many children were entirely clothed in hand-me-downs and remodeled garments. Usable parts of worn clothes such as the backs of overall legs, were made into "soogans" (heavy quilts). All clothing was darned, mended, and patched to the nth degree.

Since we had no plastic toys from the supermarkets, we learned ways of devising playthings from material at hand. An empty thread spool became a spinning top; worn socks were unraveled and the yarn

rewound into a ball. We were string and paper bag savers. The colored cord that came around the bacon made a good fish-line.

It was not only in the home that recycling principles were observed. Good farmers returned barnyard manure to the land, as well as most grain straw. Wheat straw and sometimes grass hay was stuffed into ticks that served as mattresses. (You haven't lived until you have slept on a freshly filled straw or hay tick.) In the corn belt, corn shucks were used similarly.

Gene Logsdon in *Organic Gardening and Farming*, May 1977, "Make the Most of What You Have," says that recyclers who follow the "make-do" principle are helping to retard inflation. Increasing the amount of available consumer goods without increasing the money in circulation is about the only way economists know to take the wind out of inflation.

Ideas from the past may yet be the salvation of humankind.

classifieds

FAMILY PLANNING CENTER. Providing responsible counseling, thorough educational classes, clinics. Costs no more than you can afford. Anyone is eligible. Serving eight Wyoming counties with outreach RNs. NOWCAP, 268 Main Street, Lander, Wyo. 82520. (332-9315).

SHOW YOU CARE. Become a member of National Parks & Conservation Association. For over 50 years NPCA has been a leader in the continuing battle to protect our environment. Join with us today in our fight for a better tomorrow. Members receive our fascinating, monthly magazine. For membership information write to: NPCA, Dept., M, 1701-18th St., N.W., Washington, D.C. 20009.

UTAH WRITERS sought by HCN. We are interested in stories from Utah on air pollution, alternative energy innovations, coal development, and people making the news. Pay is two cents to four cents per word for fair, accurate news reporting. One-sided diatribes unacceptable. Contact Joan Nice, Box K, Lander, Wyo. 82520 with story ideas.

CITIZENS' FOOTRACE. High Country News is sponsoring the Second Annual Lander Citizens' Footrace to be held May 20. To enter, come to the south end of City Park between 5 and 5:45 p.m. The fee is \$1. Starting time is 6 p.m. Classes of competition will be based on interest and number of entries. For more information call Sarah Doll at 332-3929 or Joan Nice at 332-4877. (Classes last year ranged from youth to over-40, including a walking class.)

HOMESTEAD EXPERIENCE: Ranch in Jackson Hole, Wyoming, will take several serious adults interested in back-to-the-land experience-training. Mule logging, log building, animal care, and related homestead skills will be taught. Half tuition can be paid by working! Send \$1. for information to Diamond L Ranch, Box 220, Jackson, Wyoming 83001.

CANYON COUNTRY GUIDEBOOKS. For a list of 12 guidebooks and maps describing the canyon country of southeastern Utah, write Wasatch Publishers, P.O. Box 963H, Moab, UT 84532.

WANTED: HCN office manager. Duties include typesetting, bookkeeping, handling subscriptions, answering telephone. Bookkeeping and good typing skills necessary. Must be willing to accept responsibility. Salary \$375 per month for full-time work. Contact Joan Nice at High Country News, Box K, Lander, Wyo. 82520. Job starts May 1.

PUBLIC NOTICE WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY WATER QUALITY DIVISION

On March 30, 1978, at 9:00 AM, at Durham Hall, Alvey Fine Arts Building, Casper College, Casper, Wyoming, the Wyoming Department of Environmental Quality, Water Quality Division, will present to the public and the Wyoming Environmental Quality Council, proposals for modifications of the following Water Quality Division Rules and Regulations:

Chapter V — Regulations Governing the Certification of Water and Wastewater Systems Operators and Classification of Water and Wastewater Systems for Wyoming

Chapter VII — Regulations Governing the Surface Discharge of Water Associated with the Production of Oil and Gas

Copies of any or all of the proposed modifications may be obtained from:

Water Quality Division

Department of Environmental Quality

Hathaway Building

Cheyenne, Wyoming 82001

Oral statements from the public and interested local, state, and federal agencies will be received in the following order:

Chapter VII — 9:00 AM

Chapter V — Upon completion of comments on Chapter VII

Written copies of oral statements should be presented to the Hearing Officer at the hearing. Written statements need not be presented orally, but may be presented to the Hearing Officer at the time of the hearing, or may be submitted by mail prior to March 30, 1978, to:

Mr. Robert E. Sundin

Director

Department of Environmental Quality

Water Quality Division

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Eavesdropper

environmental news from around the world

LOONEY LIMERICKS

by Zane F. Cology

No wonder that Denver's a-stew.
It's lost sight of everything blue.
And what can compare
To one's water and air?
The green of a dollar won't do.

SKIERS THREATEN ALPINE ECOLOGY. "The time has come to limit further growth of winter sports and tourism in the Alps," according to Siebert Morscher, an Innsbruck University professor and Austrian environmentalist. Austrians in the Tyrol are becoming concerned that new hotels, second homes, condominiums, snowmobiles, and sports installations are overburdening the scenic valleys and slopes near Innsbruck. Ski runs and ski lifts are particularly criticized as the causes of damage to vegetation, wildlife, water supplies, and climate, according to the New York Times.

EPA PLANS PESTICIDE CURBS. The Environmental Protection Agency (EPA) will require that 23 basic chemicals, used in about 2,000 commercial pesticides, be applied only by qualified applicators. EPA has so far approved one million farmers as qualified users and about 233,000 commercial applicators. The 23 chemicals will come under strict sales controls later this year. In addition, only approved users may apply the pesticides that contain one or more of the restricted substances. An uncertified farmer who uses the pesticide after the rules go into effect will be subject to a fine of up to \$1,000.

16-High Country News — Mar. 24, 1978

A complete how-to guide to recovering
our continent's archaeological heritage**A FIELD GUIDE TO
CONSERVATION ARCHAEOLOGY
IN NORTH AMERICA**Georgess McHargue and Michael Roberts
Introduction by Thomas F. King, Ph.D.

by Georgess McHargue and Michael Roberts, J. B. Lippincott Company, Philadelphia, 1977. \$8.95, hard cover, \$4.95, paper, 320 pages. Maps and illustrations.

Reviewed by Peter Wild

If you do any hiking at all across the Western countryside, you're likely to come across broken pottery, strange arrangements of stones — maybe even a perfect arrowhead or pot. Some people ignore these evidences of past civilizations entirely, while others pick them up out of idle curiosity, then toss them aside. Still others proudly cart them home to add to their collections of artifacts.

There is an understandable thrill in possessing such finds. But, after all, arrowheads jumbled in shoe boxes — or even neatly mounted on the living-room wall — really don't do anyone much good, and

more than anything else they reflect the insensitivity of the collector.

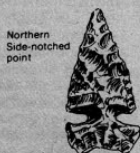
The fact is that like oil or coal the remnants of past cultures that lie all around us are nonrenewable resources. The person who thoughtlessly disturbs or collects them, as most of us have done one time or another, not only is missing much of the fun for himself, he is helping to destroy once and for all the irreplaceable record of the past.

However, the purpose of this handy field guide is not to grouse over our past shortcomings, but to enrich us. We don't all want to become junior archaeologists. Yet to understand something about who used the artifacts we stumble on, why, when, and how they were made, increases our pleasure and appreciation of the environment.

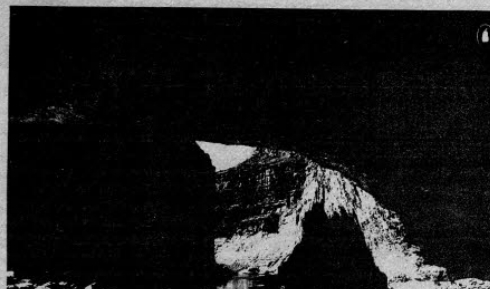
Furthermore, the knowledge might well be valuable to universities and local historical societies. Just about every area on the continent has hundreds of ancient sites waiting to be intelligently investigated or mindlessly plundered. Because of the wealth of opportunity and the shortage of funds, scientists are coming to depend more and more on tips and assistance from interested amateurs.

The best feature of this book is that it will be useful to readers with widely varying degrees of curiosity. For this reason, teachers will find it helpful for the class itching to go on an expedition. It provides a survey of archaeology across North America, then discusses the cultures and resulting artifacts of the regions. Several chapters detail how to explore sites without damaging them. Maps, photographs, and drawings will aid in identifying discoveries. The back pages steer the reader toward more comprehensive books, reputable supply houses, and the addresses of professional societies and state archaeological offices.

So, whether you've always wanted to find out more about the arrowheads that keep turning up in your garden — or whether you're considering a career in archaeology — this book is a good place to begin.

Western Pluvial Lakes
chipped stone crescentNorthern
Side-notched
pointBlack Rock
pointHumboldt
pointPinto
pointElys
pointFIGURE 24
Great Basin

The fact is that remnants of past cultures that lie all around us are nonrenewable resources.

**The Hidden Canyon · A River Journey**

John Blaustein · Thomas Edward Abbey · Introduction: Martin Luter

with text by Edward Abbey and photographs by John Blaustein, Penguin Books, 1977. \$7.95, paper, 136 pages.

Reviewed by Peter Wild

The Hidden Canyon joins Slickrock and Appalachian Wilderness as the most recent of the oversized books that Edward Abbey has penned about his favorite but threatened places in America.

We might expect the prophet to be at his roaring best, since here Abbey describes a boat trip through his holy of holies, the Grand Canyon. Yet one conservation publication passed off John Blaustein's photography as unmoving and Abbey's interwoven text as repetitive, a mere echo of his work on similar subjects.

The tribe of book reviewers, as sage as it may be, is not monolithic in its opinions. And in the case above, it seems that Abbey is being carped at simply because he has become a target large enough to hit with a casual shot — something of a compliment in itself. Regardless, readers should take a glance at *The Hidden Canyon* in their local bookstores and judge for themselves.

As to Blaustein's full-page color photos, there's little sense in writing 10,000 words either pro or con. Let me say only this: the day *The Hidden Canyon* arrived, guests came over for dinner and seized it from the coffee table. I finally managed to break through their oohs and ahs and coerce them into the dining room, but they insisted on bringing the book with them.

As for Abbey's text, since when has any author written his magnum opus in a

coffee-table book? The purpose of the format is to entertain at once the mind and the eye; there simply isn't room for a writer to get up enough steam for a record-breaking run. Given the imposed restrictions, if the prose isn't Abbey's best, it is pretty imaginative and heady fare.

On page 31 he adds yet another tantalizing suggestion to his long list of ways to rid the Grand Canyon of its major insult, the Glen Canyon Dam. Throughout, the book bubbles with comments about the passing natural surroundings and especially with observations on himself and fellow passengers. They are a naive lot, trusting their wooden boats too much. In skeptical Abbey's opinion, they are innocents doomed as they set out on "this suicidal journey."

"Salome dances. Inhibitions fall like dandruff."

He can be at his acid best while maintaining humor. The gargantuan, motorized rubber rafts plowing past them down the Colorado are condemned as the "wilderness mass transit system." Somewhat enviously he scours the machismo of the hairy oarsmen of his own party, who emerge from the wild rapids, "grinning like Bushmen." At night, lost from civilization in the mystical bowels of the canyon, "Salome dances," and "Inhibitions fall like dandruff."

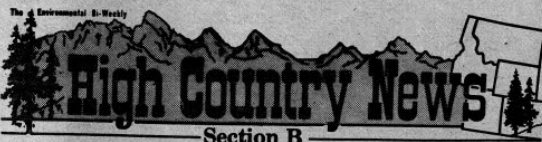
The book is a celebration that will reawaken memories for those who've been down the river and pique the longings of those who'd like to go.



Mar. 24, 1978 — High Country News-17

New uranium technology

In situ mining has advantages but is no panacea



by Justus Bavarskis

In situ mining of uranium has been going on for 20 years in this country, but the process never has accounted for more than one per cent of any year's production. That soon may change.

Gary Beach, a soil scientist for the Wyoming Department of Environmental Quality (DEQ), said in situ uranium mines "will blossom like all get-out in the near future. They'll be like oil rigs, all over the place." J. Fred Facer, chief of the supply analysis division's supply branch at the federal Department of Energy, agrees the method will grow, but more slowly than Beach predicts.

At first glance, in situ mining of uranium — in situ mining means mining in place — seems an attractive proposition. It disturbs far less land than conventional underground and open pit mining; it does not leave mountains of radioactive tailings; it permits companies to mine low-grade ore; and it gives the companies less time-consuming and costly research and paperwork to wade through.

But DEQ, now faced with an application from Wyoming Mineral Corp., a subsidiary of Westinghouse Electric Co., to commercially produce uranium by the in situ method, is concerned that the process may contaminate groundwater with nitrates and nitrites.

Concentrations of more than 10 parts per million of nitrates and nitrites in water have caused a disease called methemoglobinemia in infants. The disease hampers the body's ability to transport oxygen, and the infants suffocate.

Since 1945, the Environmental Protection Agency has reported, 2,000 infants in North America and Europe have contracted the disease from drinking polluted water, and between 70 and 80 of them have died. Other infants, however, have drunk water that contained more than 10 parts per million of nitrates without becoming ill.

In situ uranium mining may breed nitrates and nitrites because the process frequently calls for pumping a solution containing between one and five parts per thousand of ammonium bicarbonate into an ore body. The bicarbonate dissolves the uranium in the ore and this uranium-enriched solution then is pumped back to the surface where the uranium is extracted from it.

Conceivably, the ammonium could break down into nitrates and nitrites in the groundwater.

"Nobody says that conversion of ammonia to nitrates and nitrites will take place, but there is a potential for that," said Dan Herlihy, a hydrogeologist for DEQ.

"It's possible that some of the ammonia may be converted during mining," said Eric Tiepel, manager of environmental programs for Wyoming Mineral. "But once we've finished mining and restored the groundwater, we definitely can guarantee that there'll be less than 10 parts per million nitrates and nitrites left in there."

Besides, since the proposed operation would be a few miles from the towns of Eaton, Kaycee, and Lynch, and 45 miles

from Buffalo, there is almost no chance it would get into human drinking supplies, said William Eisenbarth, manager of licensing for the Denver-based Wyoming Mineral.

In situ, also called solution, mining last year yielded about 140 tons of yellowcake at two mines in Texas. It has been tried on a test basis at several sites in Wyoming and New Mexico, and Wyoming Mineral's is among the first proposals for uranium production by this method in the Rocky Mountain states.

John Klemenic, director of DOE's supply analysis division, has estimated that in situ production could reach 4,000 tons of yellowcake per year within the next 15 years. That would be about one-tenth the predicted 1990 production.

Typically, the method involves drilling four holes 50 feet apart in the form of a square, then a fifth hole in the middle. Water containing ammonium bicarbonate and between one-quarter and 1½ grams per liter of hydrogen peroxide is pumped into the ore body at the corner, or injection, holes. The dissolved uranium is recovered at the center, or recovery, hole. It is a recycling process so that, when the uranium



Photo courtesy of Wyoming Mineral Corp.

MINE SITE. For in situ uranium mining, a solution is pumped into an injection well (shown above). The solution dissolves the uranium in the ore and then the uranium-enriched solution is pumped back to the surface.

has been removed, the solution circulates back through the holes.

When it filed its original application in October, 1976, Wyoming Mineral asked for a 1,000-acre well field. Because of DEQ's fears about the nitrates and nitrites, that request has been scaled down.

"Our thinking now," said Herlihy, "is to maybe give them a small field, but they could not use ammonium bicarbonate in further mining until they've demonstrated they can restore that field."

"We're thinking about a 30-acre field

now, and, hopefully, we'll go up in steps from there," Eisenbarth said.

"No one, in my opinion, has yet shown the ability to restore groundwater to its original condition," said Herlihy. "Until someone has done that, we've got to have some questions," said Facer. "I don't really anticipate problems, but until it's done we just don't know the answers."

"No one in the business claims it is possible to restore water to its original condition," Eisenbarth said. "In our application, we say we will restore the groundwater to a toxicity rating comparable to the original. That may mean some ions get juggled about. But from the standpoint of the environment and the health and safety of the people, the water will be back to where it was originally."

To restore the water, Eisenbarth said mine water would be cycled over and over again through columns that work like water softeners and remove contaminants. It is filtered, then pumped back into the ground.

In situ mining of uranium may be a little cheaper than conventional methods. Its main economic advantage is that, "at a time when the nation is looking for additional energy supplies, this system lets us get at low grade uranium that previously it wasn't economically justifiable to mine," Eisenbarth said.

Its main economic disadvantage is that in situ mining recovers only 50 to 75 % of the uranium in the ore, as compared with 93% for conventional methods.

"I suppose the way to cope with this," said Eisenbarth, "is for the regulators, the environmentalists, and the companies to look at their charters to the overall community and come up with solutions everybody can be happy with, early in the game. You certainly can't look at it as miners versus environmentalists, or miners versus the regulatory people."

"We're in a dilemma now of assessing whether to insist on restoring groundwater to its original condition or whether we can accept a different level," said Beach.

"One of the big questions is that, with this Wyoming Mineral application, we'll be setting a precedent," said Herlihy. "If we allow them to leave toxic concentrations, then everybody else will want the same treatment."

"Solution mining needs its day in court and we hope DEQ will give it that day," said Eisenbarth. ●

poetry
of the
earth

One of America's most widely acclaimed poets, William Stafford, is known for his quiet poems about the West. He won the National Book Award in 1963 for his collection, *Traveling Through the Dark*, and teaches at Lewis and Clark College in Portland, Ore.

Pines at La Grande

They came along the edge one century. In a thousand years they filled the hills all around. Now you can cross in their shade or touch one and play wood tag summit to summit all day. They're from the sky I guess — no one planted them. If you have another version they'd listen, and so would I, to stand and know, or in winter to bow like them, suffering whatever comes. They surround this town; and all the news here flutters past them. They don't move except in the wind, and even then they shrug and come soberly back, hands in their pockets, tall, still as the centuries held inside the hills.

William Stafford



18-High Country News — Mar. 24, 1978



Photo by Richard Murphy, Jackson Hole News

THE FOREST SERVICE'S wilderness proposal for the DuNoir includes lots of rocky habitat for bighorn sheep, but little forested country.



Photo by Bart Koehler
MANY PEOPLE who have explored the DuNoir have, over the years, tried to protect it from development. Shown above, the East Fork of DuNoir Creek.

Photo by Bart Koehler
THREE TRUMPETER SWANS on Trail Lake, a DuNoir site that would not be included in the Forest Service's wilderness proposal.



The truth and beauty of the land leaked out.



Photo by Richard Murphy, Jackson Hole News
ONE DISAPPOINTMENT to some people familiar with the area is the Forest Service's omission of the southern wilderness. Shown above is one of the Kinsinger Lakes at dawn, with Pinnacle Buttes on the horizon.

Also

Their creeks a watershed. Dubois, Wyo. The drain left and the Forest Service for timber. Ever since explorers the creek the drain area has considered the area a DuNoir. In 1972, the parent to was not a wilderness, but desirable wilderness. The California State's felt that in 1988, DuNoir in 1972, 30,000 acres managed the Unit. The area the past timber has travel.

Shoshone now come for the study. In 1972, for acres of the intensive specified land pop with the volcanic drainage sult." The represent the Service, trees." All does cost a useful wilderness. Koehler who have developed Washable the upper cause of the ble take a ter cold in out of the land leaked

ABBEY, EDWARD

"Outrageous hero of dignified crusade, Curmudgeon Edward Abbey," by Peter Wild, Dec. 30, 1977, p. 1. Biog. and activities of subject. Pioneer Conservation Series.

AGENT ORANGE

"U.S. brings Agent Orange back home," by Glen Dodge, March 11, 1977 p. 1. Hazards of disposal of wartime herbicide.

ALASKA PIPELINE (oil)

"Environmental controls ignored in race to complete oil pipeline," July 1, 1977, p. 5. Builders accused of cutting corners on env. protection.

ALASKA PIPELINE (Natural gas)

"Gas pipeline route picked through Arctic Wildlife Range," Feb. 11, 1977, p. 10. Refuge recommended for pipeline.

"Like a crack across Mona Lisa," Apr. 22, 1977, p. 3. Guest editorial re: route of Alaska gas pipeline.

ALASKA — PLANNING

"Alaska plan prompts suit; generally pleases conservationists," Oct. 7, 1977, p. 13. Various aspects of planning for public lands in Alaska.

"Carving up Alaska and keeping one share wild," by Pamela Rich, May 20, 1977, p. 1. Summary of Alaska Nat'l Interest Lands Conservation Act — HR 39.

ALLUVIAL VALLEYS

"Cost v. benefit — save alluvial valleys," June 3, 1977, p. 3. Aspects of Baucus Amendment to strip mining bill.

ALTERNATE ENERGY

"Architect solves office buildings' energy problems," Jan. 28, 1977, p. 11. Denver office buildings use variety of energy saving and alternate tools for heating and cooling needs.

"Family gaining independence with sun, wind, wood, Electric car dream came true," by Joan Nice, Dec. 16, 1977, p. 7. Ricks family working toward energy independence.

"The New Western Energy Show," Sept. 9, 1977, p. 8 & 9. AERO message on alternate energy via light-hearted theater.

"Wyoming's energy ingenuity on tour; Conservation slide show," Feb. 11, 1977, p. 4. Excerpts from Nations' energy conservation slide show.

ALUNITE MINING (Colo.)

"Largest alumite heap near Colo. peak," Sept. 9, 1977, p. 13. 2 billion ton potential.

ANTELOPE

"Antelope losing home on the range," by Sarah Doll, June 17, 1977, p. 8 & 9. Seven Lakes Ferris planning unit of Red Desert home of largest antelope herd endangered by mining, grazing. Proposed as Natural Area.

ASPEN

"Aspen, a staple for man and beast," by Carl Brown, Dec. 2, 1977, p. 6 & 7. Discussion and description of aspen.

AUSTIN, MARY HUNTER

"Mary Hunter Austin defined the deserts with gusto," by Peter Wild, June 3, 1977, p. 1. Writings of Austin helped lay basis for present environmental concerns, Conservativ Pioneer Series.

BADLANDS WILDERNESS

"Noah's Ark for prairie life, the badlands," by Norm Nelson, May 6, 1977, p. 8 & 9. Ecology, description and significance of area.

BEAR LAKE (Utah-Idaho)

"Bear Lake booming and learning to live with it; people come for fun, phosphate, oil," by Ann Schimpf, Apr. 22, 1977, p. 7. Development and impact at Bear Lake.

BEARS — GRIZZLY

"Destined for conflict — or destruction? Grizzlies roam where sheep graze," by Bill Schneider, Oct. 21, 1977, p. 1. Beleaguered bear can't without help, hold back tide of civilization. Adaptation of Where the Grizzly Bear Walks.

BIRDS OF PREY NATURAL AREA (Idaho)

"Funds sought to enlarge hawk haven," Oct. 21, 1977, p. 13. Secretary Andrus behind fund campaign to purchase addition to area.

BLM (Legislation)

"Congress gives BLM legal clout, responsibility," Jan. 28, 1977, p. 15. Summary of Fed. Land Policy and Management Act of 1976.

BOBCATS

"Bobcats — misunderstood and mismanaged; Protection sought," by Sarah Doll, Jan. 28, 1977, p. 8 & 9. Open season on bobcats in West leading to their decline.

BOOK REVIEWS

"Architecture and Energy" by Stein, Richard G., review by Peter Wild, July 29, 1977, p. 16. Nation cannot afford wasteful design of modern buildings.

"Audubon Wildlife Treasury," by Line, Les Ed., review by Peter Wild, Jan. 28, 1977, p. 15.

HCN Index 1977

Pull-out section



Choice selections from Audubon magazine.

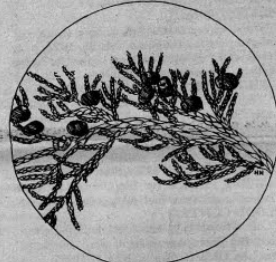
Beyond Repair, by Weisberg, Barry, review by Mike Jakubcin, Sept. 23, 1977, p. 16. Weisberg sees radical social transformation is essential.

The Bird Watcher's Bible, by Laycock, George, review by Myra Connell, Nov. 4, 1977, p. 23. Comprehensive description of bird watching as a hobby.

The Bluebird, by Zeleny, Lawrence, review by Peter Wild, Mar. 11, 1977, p. 6. Enemy-proof bird house answer to problem of losing endangered bluebirds.

Climb! Rock Climbing in Colorado, by Godfrey, Bob and Chelton, Dudley, review by Sarah Doll, Dec. 2, 1977, p. 16. Evolution of rock climbing.

Condominium, by MacDonald, John D., review by Peter Wild, Nov. 18, 1977, p. 7. Bulky novel with environmental moral.



The Copper Spike, by Jansen, Lone E., review by Doug Long, Nov. 4, 1977, p. 20. Coal lands in Alaska; Gifford Pinchot's activities as chief forester.

The Corporation and the Indian, by Miner, H. Craig, review by Peter Wild, Mar. 25, 1977, p. 16. Corporations doing to West as a whole as they did to Indians in 19th century.

Designing and Building a Solar House; Your place in the sun, by Watson, Donald, July 15, 1977, p. 6. Basic solar energy education.

Desperado, by Lichtenstein, Grace, review by Marjane Ambler, Dec. 2, 1977, p. 16. New Yorker gives assessment of West.

Energy and Conflict: The Life and Times of Edward Teller, by Blumberg, Stanley A. & Owens, Gwinn, review by Peter Wild, Nov. 4, 1977, p. 20. Larger political, historical, psychological contexts of environmental movement.

The Food and Heat Producing Solar Greenhouse, by Fisher, Rick and Yanda, Bill, review by Joan Nice, Apr. 8, 1977, p. 5. Most comprehensive book on design, construction and maintenance of solar heated spaces.

The Genesis Strategy, Schneider, Stephen H., review by Peter Wild, Feb. 11, p. 15. Interrelationships of climate, food and energy.

Island Between by Murie, Margaret E., review by Bruce Hamilton, Dec. 30, 1977, p. 15. Story of St. Lawrence Island: insight into Eskimo people, Alaskan conservation issues.

Journey Home, by Abbey, Edward, review by Peter Wild, June 3, 1977, p. 16. Series of autobiographical essays on the West.

Land Use Controls in the United States, Moss, Elaine, Ed., review by Peter Wild, Apr. 22, 1977, p. 15. A nation's approach to its land affects just about everything.

Long Distance Paths of England and Wales, by Millar, T. G., review by Peter Wild, July 29, 1977, p. 16. Evocative reading for the stay-at-home; opportunity for traveler in Britain.

Man in the Landscape, by Shepard, Paul, review by Jeff Gallatin, Nov. 4, 1977, p. 21. At-

tempt to abolish the dualism that has plagued Western man's relations with nature.

99 Ways to a Simple Life Style, by Fritsch, Albert J., review by Peter Wild, July 1, 1977, p. 20. Not too useful book on alternate life style.

Producing Your Own Power, How to make Nature's Energy Sources Work for You, Stoner, Carol Hopping Ed., July 15, 1977, p. 7. Classic introduction to alternate energy.

Rainbook — Resources for Appropriate Technology, deMoll, Lane, Ed., review by Heather McGregor, July 15, 1977, p. 13. Offers a personal, social and technological alternative.

The Rape of the Great Plains, by Toole, K. Ross, review by Tex Garry, Mar. 25, 1977, p. 16. Land of the Great Plains "grabs hold of you and won't let you go."

Recollections of the Flathead Mission, by Mengarini, Gregory, review by Peter Wild, May 20, 1977, p. 14. Author's account of 10 years with Flatheads.

The Riddle of the Winds, by Kals, W.S., review by Peter Wild, Apr. 22, 1977, p. 15. Comprehensive book about wind and its influence on man.

Solar Heated Buildings: A Brief Survey, by Shurcliff, W.A., July 15, 1977, p. 7. For serious student of solar heating and cooling.

The Solar Home Book, Heating, Cooling and Designing With the Sun, by Anderson, Bruce, July 15, 1977, p. 6. Solar energy can enrich life.

Sun Earth: How to Apply Free Energy Sources to Our Homes and Buildings, by Crowther, Richard L., July 15, 1977, p. 7. Academic approach to energy problem-solving. Ten thousand goddam cattle, A History of the American Cowboy in Song, Story, and Verse, by Lee, Katie, review by Bruce Hamilton, Nov. 4, 1977, p. 20.

Unacceptable Risk, by Olson, McKinley, review by Alexis Parks, Jan. 14, 1977, p. 16. Necessary, useful primer for public education programs dealing with problems of nuclear power.

Underground Designs, by Wells, Malcolm, review by Joan Nice, Dec. 2, 1977, p. 16. Architect explores ways for builders to avoid disrupting nature.

The Unsettling of America: Culture and Agriculture, by Berry, Wendell, and Radical Agriculture, by Merrill, Richard, review by Gary Nabhan, Oct. 7, 1977, p. 12. Agriculture cannot survive at expense of natural systems.

The Vanishing White Man, by Steiner, Stan, review by Tex Garry, July 1, 1977, p. 20. Whites who stayed in Great American Desert were shaped by the land. Hope for new world order is in these people.

Where the Grizzly Walks, by Schneider, Bill, review by John Mienczynski, Dec. 2, 1977, p. 16. Plight of the grizzly bear.

The World of the Bat, by Mohr, Charles, E., review by Peter Wild, May 6, 1977, p. 6. Purpose to shift traditional, unjustified loathing of bats to appreciation.

Wyoming, A Bicentennial History, by Larson, T.A., review by Myra Connell, Dec. 2, 1977, p. 16. Compression of 200 years of history into 200 pages.

YV88: An Eco-Fiction of tomorrow, by Swan, Christopher and Roaman, Chet, review by Peter Wild, Dec. 16, 1977, p. 16. A glib approach to serious problems.

BRANDBORG, GUY M. (Brandy)

"A tribute to Brandy, a forester," by Robin Tawney, Mar. 25, 1977, p. 5. Tribute to Brandy following his death March 11, 1977.

BROWER, DAVID

"David Brower — on conservation's cutting edge; Reckless, visionary," by Peter Wild, Nov. 4, 1977, p. 17. Brower's contribution to the environmental movement. Conservation Pioneer Series.

CAMAS — BLUE

"Blue Camas like gold to the Nez Perce," by Carl Brown, June 3, 1977, p. 8 & 9. Facts about blue camas; historical material about Nez Perce.

CANYONLANDS NATIONAL PARK

"Overwhelming rock," by Stephen Trimble, Jan. 14, 1977, p. 8 & 9. Descriptive free verse of southwest canyon areas, with photos.

"Park Service needs support on Canyonlands plan," by Jim Martin, Doug Holmes, Jim Stiles, Oct. 21, 1977, p. 3. Plea for comments and support for NPS General Management Plan for Canyonlands.

"Canyonlands plan angers local foes," Oct. 21, 1977, p. 13. Decision on roads protested near Canyonlands.

CERT (Council of Energy Resource Tribes)

"Tribes probe possibilities of their coal, uranium, Beyond OPEC'S goals," by Marjane Ambler, July 29, 1977, p. 1. Indian tribes organize for planning resource use and development.

COAL DEVELOPMENT

"East, West fight EIS battle through the mail," Dec. 30, 1977, p. 10. Quarrel over draft EIS for expansion of Absaloka mine in Montana.

"BLM analyzes potential Southern Wyoming coal mining sites," Nov. 18, 1977, p. 5. BLM PDES on 28 sites.

"BLM projects high growth from coal," Jan. 14, 1977, p. 7. BLM assessing future of coal development in Campbell and Converse counties. "Carter's energy plan will push Western coal boom, Rand researcher says," May 20, 1977, p. 1. Analysis of future coal needs and production.

"Coal conversion boom," Reckoning from Washington, by Lee Catterall, Apr. 8, 1977, p. 11. Analysis of future of Western coal.

"Coal lease nominations uncover little competition," by Dan Whipple, June 17, 1977, p. 11. General discussion coal leasing and nomination policies.

"Colowyo shrunk its mine to avoid federal delays, Interior reconsidering permit," July 29, 1977, p. 10. Environmental groups active in bringing matter to head.

"Court halts Western coal leases," by Dan Whipple, Oct. 7, 1977, p. 10. Court decision on leasing may be mixed blessing.

"EIS sparks Montana, BLM clash," by Dan Whipple, July 29, 1977, p. 11. State questions need for more federal coal leasing.

"Firms buy out opposition in North Dakota," by Dan Whipple, Sept. 9, 1977, p. 1. Coal companies buy land in Mercer County to quiet opposition to growth and impact.

"Groups challenge N.W. Colorado coal statement," Mar. 25, 1977, p. 11. Conservationists urge Andrus to reject EIS on coal development in N.W. Colo.

"Interior opens federal coal leasing to railroads; despite Congress' refusal," by Lee Catterall, Feb. 25, 1977, p. 11.

"Kleppe voids Crow contracts with coal firms," Jan. 28, 1977, p. 10. Kleppe settles lawsuit.

"Landowner veto power," by Lee Catterall, June 17, 1977, p. 10. Latest on strip mining and owner consent issues.

"Back to the freezer?," Reckoning from Washington, by Lee Catterall, Jan. 14, 1977, p. 7. Federal coal leasing in West closely related to strip mine legislation.

"Coal leasing moratorium," Reckoning from Washington, by Lee Catterall, Jan. 28, 1977, p. 10. Moratorium tied to strip mine legislation.

"Reckoning from Washington, by Lee Cat-



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terrell, Apr. 22, 1977, p. 11. Andrus says strip mine bill not tough enough.

"South Wyoming may not look like much, but: Wildlife biologists wary of mining plans," by Philip White, Nov. 18, 1977, p. 1. Possible impact of coal mining proposed for S. Wyoming.

"Study says N.M. losing riches," Mar. 25, 1977, p. 14. State losing millions on undeveloped coal.

COAL GASIFICATION

"In situ gas from coal: bene or boon?" by Dan Whipple, Oct. 21, 1977, p. 1. In situ process could mean power plants in West.

COAL SLURRY PIPELINE

"Slurries added to strip bill?" by Lee Catterall, May 20, 1988, p. 10. Sen. Johnston proposes slurry pipeline amendment to strip mine bill.

COAL — TAXATION (Wyoming)

"Governor proposes 1 1/2% tax increase; Wyoming environmentalists want more," Jan. 28, 1977, p. 12. Wyo. legislature debates coal tax increases, owner consent, scenic rivers, min. stream flow, open space easements, export policy. Regional legislative roundup.

COSC (Mining workshop)

"The formidable little COSC Mining Workshop," July 29, 1977, p. 10. Activities of two-person watchdog group.

CRANES — SANDHILL

"Cranes' fate depends on Platte's flow: Will irrigation silence nature's philharmonic?" by Philip White, Apr. 8, 1977, p. 1. Water projects and uncontrolled mining of underground water threaten cranes' spring habitat.

DAMS

"Carter attacks dams; battle of the decade ahead?" by Bruce Hamilton, Feb. 25, 1977, p. 7. Carter likely to meet opposition to plan to review 19 water projects.

"Carter reduces 'hit list' for water projects. Some water projects modified," Apr. 22, 1977, p. 6.

"Carter re-examines pot barrel," Feb. 25, 1977, p. 3. Editorial re: Pres. Carter's re-evaluation of 19 water projects.

"Other water projects endangered," Reckoning from Washington, by Lee Catterall, Mar. 11, 1977, p. 10. Significance of re-evaluation of water projects is in long-range effect, according to Interior official.

Reckoning from Washington, by Lee Catterall, May 6, 1977, p. 11. Catterall comments on Carter Adm. attitude toward water projects.

Reckoning from Washington, by Lee Catterall, Mar. 25, 1977, p. 6. Catterall report on Carter's proposed review of 19 water projects.

"Senators, states rally to save reclamation projects," Mar. 25, 1977, p. 6. Carter's review of water projects raises furor.

DESOLATION CANYON

"Desolation Canyon becoming perhaps too popular," by Joan Nice, Sept. 9, 1977, p. 1. River running trip; possibility of reservation system to protect canyon.

DEVOTO, BERNARD

"DeVoto, the writer most Utahans can't forgive," by Peter Wild, Jan. 14, 1977, p. 1. Biographical notes on "one of Rocky Mountains' most effective conservationists." Conservation Pioneer Series.

DIVESTITURE

Reckoning from Washington, by Kay Coates, Oct. 21, 1977, p. 1. Rep. Moss pushes for horizontal divestiture.

EAGLES

"The bald eagle: our endangered emblem," by Jim Scott, Apr. 22, 1977, p. 8 & 9. Causes of dwindling numbers of eagles; some attempts at remedy.

"The perilous first months of the golden eagle," by Sarah Doll, Oct. 21, 1977, p. 8 & 9. Many hazards for eagles.

ECONOMICS (Mont.)

"Forbes calls small-is-beautiful baloney," by Robin Tawney, Mar. 11, 1977, p. 11. Schumacher and Forbes economic philosophies clash at Mont. forum.

EISA

"Sierra Club sues over prime ag land," Sept. 9, 1977, p. 13. Suit seeks to enjoin FmHA water loans without EISA.

ELECTRIC VEHICLES

"CU watches electric vehicles," Mar. 11, 1977, p. 10. Univ. of Colo. experimenting with electric vehicles.

ELECTRIC GENERATING PLANTS

"Andrus nixes S. Utah plant site," Dec. 30, 1977, p. 10. Proposed site near Capitol Reef Nat'l Park not approved.

"BLM delays Warner-Allen: Concerned about project deficiencies," Sept. 23, 1977, p. 10. Environmental problems delay building of two plants in S.W.

"Coal plant planners eye Southern Utah The Intermountain power project — 10 miles from

Capitol Reef," by Ruth Frear, May 6, 1977, p. 1. Another coal plant planned in wake of Kaiparowits.

"Montana Power, EPA dispute blame for layoffs, Colstrip 3, 4 shut down," Oct. 21, 1977, p. 11. Construction workers pawns.

"Proposed power plants plentiful in Rockies," July 15, 1977, p. 10. Listing of proposed plants in Mont., Idaho, Wyo., Utah, Colo.

ELK

"Smokey the bear has been bad for the elk," by Martha D. Noffsinger, Feb. 25, 1977, p. 8 & 9. Controlled fires in Idaho increase food supply for elk.

EMP (Electromagnetic pulse)

"Microwave experiments toll reported," Feb. 25, 1977, p. 13. Microwave research linked to cancer, disease, in Mont.

EMPLOYMENT

"Jobs not linked to energy waste," Apr. 22, 1977, p. 10. Report by Environmentalists Thursday, Feb. 9, 1978 for Full Employment claims solar development will create jobs.

ENDANGERED SPECIES

"Bobcat, lynx, other populations studied," Sept. 9, 1977, p. 13. Review by U.S. Fish and Wildlife Service to determine status of three species.

"Powerful law protects plant species: Endangered species act," by Mark Peterson, July 15, 1977, p. 12. FWS will soon place 14 species on endangered list.

"Threatened or endangered?" Aug. 12, 1977, p. 13. U.S. Fish and Wildlife Service reviewing status of other.

ENERGY

"Grants, loans in latest national energy package," Nov. 4, 1977, p. 10. House-Senate conferees agree on solar energy, insulation, etc.

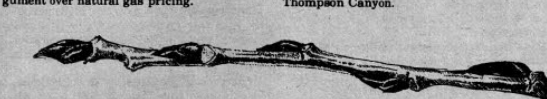
"Utah legislature vows to make more and use less," by Joan Nice, Mar. 25, 1977, p. 1. New buildings must meet energy conservation standards: new coal-fired plant to be built near Capitol Reef.

"Jobs not linked to energy waste," Apr. 22, 1977, p. 10. Study. Jobs and Energy, claims "eliminating energy waste and commercializing solar technologies will provide jobs."

"Link, Judge hit overseas aids for Energy States," May 20, 1977, p. 11. Old West Regional Commission cancels overseas aids inviting industry, after protests from governors and environmentalists.

"Carter conservation course replaces old production binge," Apr. 22, 1977, p. 3. Editorial comment on Carter energy policy.

"Energy bill delayed," Dec. 2, 1977, p. 9. Carter Administration energy bill delayed by argument over natural gas pricing.



ENVIRONMENTAL QUALITY COUNCIL (EQC)

"EQC says Wood River special, considers system for designation," June 17, 1977, p. 12. Problems of EQC in designating rare and uncommon areas.

ENVIRONMENTAL SONGS

"The environmental songs of Fred Small: Doom ditties," Nov. 18, 1977, p. 8 & 9.

ENVIRONMENTALISTS

"Carter's crew emerging," Apr. 8, 1977, p. 15. Names of Carter appointments to environmental posts.

"New environmental ethic?" Reckoning from Washington, by Lee Catterall, Feb. 11, 1977, p. 10. Young environmentalists fill positions in Carter administration.

FARMING

"Canadian land bank saves farm acres, Saskatchewan aids agriculture," by Robin Tawney, July 29, 1977, p. 4. Bank helps farmers stay on land.

"Non-farmers drive up agricultural land prices," July 29, 1977, p. 5. Farmers being priced out of business.

"Private land banking — hope for the future?" by Robin Tawney, July 29, 1977, p. 4. Phil Tawney explores private non-profit approach to farm finance.

FENCING

"NM ranchers fence with BLM rules," May 20, 1977, p. 13. Fences that may stop predators also stop antelope.

FERRETS — BLACK-FOOTED

"Black-footed ferret seen in Montana," Nov. 4, 1977, p. 13. Ferret seen by prairie dog shooters.

FIREWOOD

"Smokey forgot; bears (and others) need firewood," by Carl Brown, Nov. 4, 1977, p. 16. Proposition that fires have place in a natural environment; facts about firewood.

"Wood stove revival puts damper on energy costs," by Bruce Hamilton, Feb. 25, 1977, p. 1. Practical information re: wood as fuel for home heating, and wood burning stoves.

FISHING STREAMS — PROTECTION

"Fish die in scramble for scarce Western water," by Joan Nice, May 6, 1977, p. 7. Drought causes drastic kill of fish in Wyo. streams.

FLATHEAD COALITION

"Flathead Coalition primes for battle with Canada," by Glenn Oakley, Sept. 23, 1977, p. 1. Coalition looking for legal ways to save Flathead area from coal, oil, gas development.

FLOOD CONTROL

"Colo. officials cautious about rebuilding after flood; Big Thompson residents want compensation," by Glen R. Smith, June 17, 1977, p. 6. Possible solutions for flood problems in Big Thompson Canyon.



FOX — SWIFT

"The smallest canine is making a comeback," by John H. Tobias, Aug. 12, 1977, p. 8 & 9. North American Wildlife reintroducing swift fox to former range.

FREAR, RUTH

"Desert, pines inspire Ruth Frear in Utah fights," by Garry Blake, Dec. 2, 1977, p. 20. Successful activities of Sierra Club worker.

GARRISON DIVERSION

"Friendly suit avoids Congress," by Bruce Hamilton (Guest Editorial), May 20, 1977, p. 3. Garrison case settled out of court.

"Garrison debate continues," Feb. 11, 1977, p. 13. N.D. Legislators for, Canada against Garrison.

"Garrison report calls for revisions," Jan. 14, 1977, p. 13. U.S.-Canadian team claims "adverse impacts on water users" from Garrison project.

"JC shoots down Garrison," Sept. 23, 1977, p. 5. JC recommends against proceeding with 80% of project.

GEESSE, CANADA — DRAWING

"No title, by Laney Hicks, Dec. 30, 1977, p. 8 & 9. Pen and ink drawing of Canada goose with young.

GEO THERMAL ENERGY

"Boise rediscovered geothermal," by Bruce Hamilton, Mar. 11, 1977, p. 1. Long-time development of geothermal use at Boise.

"Hot spot in Wyoming," Mar. 25, 1977, p. 11. Hot Springs considered for heating building.

"Individual wells prove expensive in Klamath Falls, Ore.," Mar. 11, 1977, p. 7. Development of geothermal in Klamath.

GLEN CANYON RECREATION AREA

"Glen Canyon resort planned," Jan. 14, 1977, p. 13. National Park Service plans large facility

on Lake Powell.

"Plans for Glen Canyon enrage environmentalists," Oct. 21, 1977, p. 12. Environmentalists upset over acreage.

GOATS, MOUNTAIN

"The remote white goat: Sheltered by a rugged habitat," by Sarah Doll, Dec. 16, 1977, p. 8 & 9. Facts about mtn. goat.

GRASSLANDS

"Nature conservancy seeds grass park," Apr. 22, 1977, p. 13. 7,200 acres to be made into tall grass park.

GREAT DIVIDE BASIN

"Too much water stymies desert mine; Red Desert uranium venture," by Philip White, July 15, 1977, p. 1. Reclamation problems in Chain of Lakes region of Red Desert.

"Where will the great seal go?" by Philip White, July 15, 1977, p. 8. Some interesting features of area.

HARDIN, GARRETT

"Hardin attacks freedom, philanthropy," by Peter Wild, Sept. 23, 1977, p. 1. Human concerns for future basis for Hardin's controversial theories. Conservation Pioneer Series.

HERBICIDES

"Big Sandy herbicide spraying plans shelved," Nov. 4, 1977, p. 12. Environmental concerns cause postponement of spraying.

HEN — SATIRE

"Carter to Wyoming: burn, baby, burn," by Ed McCall, July 15, 1977, p. 1, special section. Satirical political comment on fate of Wyoming.

"Cattle Kate died for buffaloes' rights to the range," by Irving Scrubb, July 15, 1977, p. 1, special section. Satire on environmental movement.

HICKS, LANEY

"Dear Friends," Feb. 25, 1977, p. 16. Biographical notes re: Hicks upon her retirement as representative of Sierra Club in Northern Plains.

HIGH COUNTRY NEWS — INDEX

"Index — 1974-76, Feb. 25, 1977, p. 16. Leading articles indexed for years indicated.

HIGH COUNTRY NEWS — POLICY

"HCN still survives on wild generosity; Rate raise ahead, nevertheless," Feb. 11, 1977, p. 16. Semiannual report to readers.

"Lack of revenues blues at High Country News; Report to stockholders a familiar tune," Oct. 16, 1977, p. 16. Income not quite reaching outgo.

HINCHMAN, HANNAH

"Wyoming's quiet, its purity of light. Returning home," Oct. 7, 1977, p. 8 & 9. HCN adds artist Hinchman to staff.

HYDROGEN

"Hydrogen project," Dec. 16, 1977, p. 11. Experiment underway to use hydrogen as fuel.

"A look at the IJC," by Mike Jacobs (reprint from The Onlooker), June 3, 1977, p. 6. Discussion of IJC.

INDIANS

"Tribes plea for UN assistance endorsed," Oct. 21, 1977, p. 10. U.N. responds favorably to Indian plea for help against exploitation.

INTERMOUNTAIN POWER PROJECT

"Conservatives' lavish handouts aid IPP plant," by Joan Nice, Mar. 25, 1977, p. 3. Editorial, criticism of plans for financing plant.

"IPP study says power plant is feasible," Feb. 25, 1977, p. 10. Plant in region where Kaiparowits was planned declared feasible.

IRRIGATION

"Excess acres hearing in November," Oct. 21, 1977, p. 13. Hearings to be held re: strict enforcement of 1902 law on irrigation.

"Irrigating desert hurts agriculturist, consumer, Idaho studies say," from the Idaho Citizen, Oct. 7, 1977, p. 6. Studies challenge advisability of 987,000 acre irrigation proposal.

"Present users would subsidize corporate farms, coalition says," from the Idaho Citizen, Oct. 7, 1977, p. 7. Numerous recommendations that overlap irrigation proposals and electric rates.

"Issue (Interested in Saving S. Utah's Environment)"

"Raising the issues in a hostile environment; Three Utah crusaders," by Jeff Gallun, Jan. 14, 1977, p. 15. Activities of Utah group: Esp. Janet and Lloyd Gordon and Hank Hassell.

JACKSON HOLE

"Scentic bill to protect Jackson Hole: Congress considers \$22 million bill," by Jean Witzmeyer Hocker, Dec. 16, 1977, p. 1. Bill to protect from over-development.

KAIPAROWITS POWER PROJECT

"California must certify need" before another Kaiparowits could be built," Nov. 4, 1977, p. 11. Sierra Club gets ruling that Calif. must prove need for new plants outside state.

KRUTCH, JOSEPH WOOD

"Joseph Wood Krutch, a voice for the deserts," by Peter Wild, Mar. 25, 1977, p. 1. Conservation Pioneer Series.

LAMB'S QUARTERS

"Lowly lamb's quarters provides food and drugs," by Carl Brown, Sept. 23, 1977, p. 7. Weed once important food and medicine.

LAND USE AND PLANNING

"Oregon's land use law in trouble," Feb. 11, 1977, p. 12. Land use commission stripped of power. Regional legislative roundup.

"Legislators seek repeal of Idaho's land use law," Jan. 28, 1977, p. 12. Conservatives attack land use law. Regional legislative roundup.

"Wyomingites link planning to Mafia, Communism," Feb. 25, 1977, p. 12. Eight people testified in favor of repeal of 1975 land use planning act at committee hearing. House passed, Senate rejected bill to repeal. Regional legislative roundup.

LEOPOLD, ALDO

"Aldo Leopold saw a fierce green fire die," by Peter Wild, Feb. 11, 1977, p. 1. Biographical review of Leopold; Conservation Pioneer Series.

"Leopold, thinking like a mountain," by Peter Wild, Feb. 25, 1977, p. 6. Second in two-part biographical series on Leopold. Conservation Pioneer Series.

LIPTON, CHARLES

"In the Indian camp, a New York consultant," Dec. 30, 1977, p. 16. Tribes consult Lipton when negotiating with energy companies.

LOBBYING

"Colorado legislators vote to scrap land use commission," Apr. 8, 1977, p. 12. Colo. LUC to be dismantled.

"Conservationists on the defensive in Mont.; Hopes for new bills, too," Jan. 14, 1977, p. 12. Mont. environmentalists cautiously optimistic. "COSC urges more citizen input into legislation; Colorado land use, energy bills to surface," Jan. 14, 1977, p. 12. Review of regional legislation — Colo.

"Idaho conservation bills: few losses, few gains; Holding ground against a hostile legislature," by Barbara Swacy, Apr. 8, 1977, p. 12. Regression marked 1977 Idaho legislature.

"Lamm vetoes bills that would reverse '76 progress. Land use, reclamation bills killed," by Ron Lehr, Sept. 3, 1977, p. 12. Summary of 1977 Colo. legislature re: environmental issues.

"Montana legislature of 1977 seen as stalemate; Coal lobbyists, environmentalists say," by Robin Tawney, May 20, 1977, p. 12. Lengthy review of Mont. leg. session.

"N.D. solons interested in politics — not environment; Attack wetlands protection," May 6, 1977, p. 12. Review of N.D. legislation.

"New Mexicans for CAN," Jan. 14, 1977, p. 12. Citizens against nonreturnables pushing bottle bill in New Mex.

"Utah solons to set energy policy," Jan. 14, 1977, p. 12. Energy expected to be big issue.

LOWER TETON DAM PROJECT

"BuRec blamed for Teton Dam collapse in Idaho," Jan. 14, 1977, p. 4. Inadequate design at difficult site caused dam break, according to investigating panel.

LRCC (Laramie R. Conservation Council)

"LRCC chairman Tyler Dodge anticipates a community of strangers," Jan. 28, 1977, p. 4. Dodge points out many unfavorable aspects of Wheatland boom.

MANURE

"Cowtown's manure means megawatts," by Joan Nice, July 1, 1977, p. 1. Manure can yield power while avoiding disadvantages of coal.

MADISON RANGE — (Mont.)

"Ski resorts, logging imperil Madison," by Robin Tawney, July 1, 1977, p. 1. Many aspects of environmental problems of Madison Range area.

MERDI

"The Montana Energy and MHD Research and Development Institute," May 20, 1977, p. 6. Description of MERDI.

MILLS, ENOS ABIJAH

"The father of Rocky Mountain Park," by Peter Wild, July 29, 1977, p. 1. Biographical material on Mills. Conservation Pioneer Series.

MINERAL EXPLORATION

"Firm calls 'rape' over Wyoming rule on 'soiling,'" by Philip White, Dec. 16, 1977, p. 10. DEQ authority challenged re: bulldozing for mineral exploration.

MINING

"Andrus proposes mining law repeal; Substitutes leasing, royalty system," Sept. 23, 1977, p. 11. Carter Administration challenges 1872 mining law.

"In the Indian camp, a New York consultant," Dec. 30, 1977, p. 16. Advice from attorney

Charles Lipton to Indians re: dealing with energy companies.

"Indians wrestling for control over their minerals," by Marjane Ambler, Dec. 30, 1977, p. 1. Mineral wealth may be threat as well as blessing.

"Sec. Andrus says no leasing without his o.k.," by Marjane Ambler, Feb. 25, 1977, p. 1. Speculation on reason for Andrus memo.

MOOSE

"The moose: an ungainly stubborn creature on tip-toes," by Sarah Doll, July 1, 1977, p. 16. Description and habits of moose.

MOUNTAIN SHEEP — BIGHORN

"Bighorns restored," Apr. 22, 1977, p. 13. Captively bred bighorns transplanted to Zion Nat'l Park.

MUIR, JOHN

"John Muir, a cultural hero lost in his mythology," by Peter Wild, Aug. 12, 1977, p. 1. Biog. material of "high priest of wilderness lovers," Conservation Pioneer Series.

MURIE, ADOLPH

"The keen observations of a bedroll scientist," by Jim Scott, Sept. 23, 1977, p. 8 & 9. Modern study of American wildlife began with Murie.

MURIE, OLGAUS

"Inner ingredients inspire others," by Margaret Murie, Sept. 23, 1977, p. 3. M. Murie analyzes Olga's influence on young.

"Journeys to the North led Olga Murie into battles for wilderness," by Peter Wild, July 1, 1977, p. 13. Biog. material on subject. Conservation Pioneer Series.

"Olaus Murie, scientist with a sketchbook," March 25, 1977, p. 8 & 9. HCN celebrates Wildlife Week by publishing Murie sketches from private collection of Margaret E. Murie. Quotes from Murie's Journeys to the far North.

NATIONAL GRASSLANDS

"Remnants of a prairie wilderness — the National Grasslands," by Hannah Hinchman, Nov. 4, 1977, p. 8 & 9. Our last chance to set aside a remnant of the Great Plains in its natural state.

"Environmentalists attack RARE II grasslands plans," Nov. 4, 1977, p. 12. RARE II grasslands inventory unsatisfactory.

NATIONAL PARKS

"Controls on land in park upset owners," Oct. 7, 1977, p. 7. Nat'l park policy on in-holdings called socialism.

NON-GAME SPECIES

"Who pays to protect the robin in the park?" by Stephen S. Campbell, July 29, 1977, p. 8 & 9. Colorado under-funded for protection of non-game habitat.

NORTHERN ROCKIES ACTION GROUP

"NRAG: born in controversy, growing in support," by Marjane Ambler, June 17, 1977, p. 12. Activities of NRAG.

NUCLEAR POWER

"Court rules nuclear plant liability limit is unconstitutional," Apr. 8, 1977, p. 11. 1957 Price-Anderson law, limiting liability of nuclear plants declared unconstitutional.

"New nuke policy has something for everyone," by Lee Catterall, Apr. 22, 1977, p. 11. Review of Carter policy re: plutonium.

"Nuclear protesters begin defense," Dec. 30, 1977, p. 11. Jurors in trial to determine whether protest justified.

OFF-SHORE DRILLING (Alaska)

"Oil lease sale shocks Alaskans," Nov. 4, 1977, p. 11. Cook inlet leasing fails to include important environmental conditions.

OIL SHALE

"DOE helps finance Occidental oil shale project," Oct. 21, 1977, p. 10. U.S. Dep. of Energy to spend 43 million to develop in situ oil shale.

"Oil shale goes ahead," Sept. 9, 1977, p. 10. Occidental Oil Corp. and Ashland Oil Co. get go-ahead from Andrus, with conditions.

"Oil shale resurgence: lots of hype and little hope," by Dan Whipple, Aug. 12, 1977, p. 10. Much discussion of oil shale development.

"Shale firms bypass Colorado permit process," by Dan Whipple, Nov. 18, 1977, p. 7. Legal battle over oil shale in Colo.

"Suit filed to halt shale projects," Dec. 16, 1977, p. 11. EDF, COSC and FOE claim Interior required to prepare EIS's.

ORR, JOE

"Joe Orr, committed to one big extra voyage," Oct. 21, 1977, p. 16. Laramie resident plans solar greenhouse, total life support system.

ORVs

"Geologists document off-road vehicle damage," by Sarah Doll, Sept. 9, 1977, p. 7. Problems of ORV use of public land.

OWNER CONSENT

"Severed mineral estate haunts Western ranchers," by Dan Whipple, May 6, 1977, p. 5. Problem of surface ownership versus mineral ownership.

PETROLEUM INDUSTRY

"Oil development threatens forests," by Dan

Whipple, Dec. 2, 1977, p. 1. Tug-of-war between oil industry, environmentalists, and federal gov't.

PHOSPHATES

"Phosphate search could affect wildlife," Dec. 2, 1977, p. 11. Wyo. Fish and Game recommends EIS before phosphate prospecting can begin near Kemmerer.

PINCHOT, GIFFORD

"Pinchot ruled the forest service back when conservation was king," by Peter Wild, May 6, 1977, p. 1. Career of professional forester Pinchot and his influence on forests of U.S. Conservation Pioneer Series, Part II.

"Stubborn tree farmer rescues forests," by Peter Wild, Apr. 22, 1977, p. 1. Biography of early conservationist. Conservation Pioneer Series Part I.

PLUNKETT, JERRY

"Plunkett's coal-stingy energy recipe for the twenty-first century," by Joan Nice, May 20, 1977, p. 6. Innovative work of Plunkett in energy field.

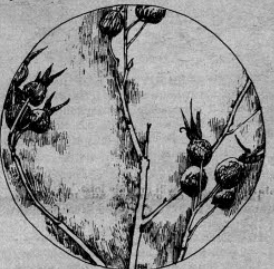
POLLUTION — AIR

"Alphabet soup translations," Nov. 4, 1977, p. 7. Definition of abbreviations and terms used in clean air legislation and enforcement.

"Andrus holds up Intermountain project with clean air request," July 1, 1977, p. 8 & 9. Andrus favors Class I air for Capitol Reef and Canyonlands.

"Caution: living here is unsafe," Nov. 4, 1977, p. 2. Editorial on air pollution in West.

"Cheyenne's health, timber depend on clean air," by Dan Whipple, Jan. 28, 1977, p. 6. Report on Cheyenne's efforts to insure Class I air quality.



"Clean Air Act: making it work for you," by Marjane Ambler, Nov. 4, 1977, p. 6.

"Clean air bill easy on autos, good for national parks," Aug. 12, 1977, p. 11. Clean Air Act amendments signed by Carter.

"Colorado proposes abandoning gas vapor recovery regulations," July 29, 1977, p. 7. Service stations complain against regs. requiring recovery of vapors.

"Confessions of an Engineer," by John Bartlit (Reprint from Los Alamos Monitor), Apr. 8, 1977, p. 3. Technology available for cleaning more than 97% fly ash from coal generating plants.

"Controlling a source," Nov. 4, 1977, p. 7. Guidelines for putting clean air act to use.

"Crow tribe, AMAX protest N. Cheyenne clean air ruling," Oct. 21, 1977, p. 12.

"18 days of dirty air o.k.," June 3, 1977, p. 11. Clean air laws would be weakened by proposed amendments now in Congress.

"Federal judge rules against tribe on Colstrip 3 and 4," Feb. 11, 1977, p. 11. Judge Battin ruled that Colstrip 3 and 4 are not subject to Federal air regs.

"Jackson would exempt Colstrip 3, 4," July 1, 1977, p. 8 & 9. Proposed amendments to Clean Air Act in Congress.

"Kennecott defies EPA air regs," Apr. 8, 1977, p. 8. Kennecott claims factors beyond its control prevent meeting deadline.

"Missoula may curtail use of fireplaces," Dec. 30, 1977, p. 10. Wood burning adds to particulates.

"North Dakota makes citizens prepare EIS for clean air," July 1, 1977, p. 8 & 9. Dunn County Committee for clean air meeting obstacles.

"Northern Cheyenne tribe wins Class I air quality," Aug. 12, 1977, p. 1. Redesignation first to take effect under Clean Air Act.

"Protecting your favorite place," Nov. 4, 1977, p. 6. Ideas for action to maintain clean air.

"Senate committee reverses vote on further dirtying of air," May 6, 1977, p. 10. Committee actions re: Clean Air Act.

"Ski resort limits cars, fireplaces to protect air," Sept. 9, 1977, p. 7. Pollution from cars and fireplaces regulated.

"The last straw — an air grab," by Dan Whipple, Jan. 28, 1977, p. 3. Editorial re: Northern

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Cheyenne efforts to preserve air quality on reservation.

"Utah air plan criticized at hearings; Hastily prepared," by Ann Schimpf, Jan. 28, 1977, p. 6. Report on air planning in Utah.

"Utah wrestles with a second air quality plan," by Ann Schimpf, Apr. 8, 1977, p. 6. Utah to draft set of recommendations.

"Utility uses luncheon technology," by John Bartlit, June 17, 1977, p. 3. Guest editorial discusses Arizona public Service Company dragging feet on clean air.

PALEONTOLOGICAL SITES

"Endangered feces: a tie to the past," by Philip White, Feb. 11, 1977, p. 6. Scientists studying dung from giant ground sloth.

PESTICIDES

Guest Editorial by Hank Fischer, Oct. 7, 1977, p. 3. Use of Avitrol Corn Chops 99-S to control blackbird damage to sunflower crop in Montana.

PETROLEUM INDUSTRY

"FS rejects Sierra Club oil appeal," Dec. 16, 1977, p. 10.

POLLUTION — WATER

"What you can do to get clean water," Mar. 25, 1977, p. 7. National Wildlife Week facts and ideas for fighting water pollution.

"Wyo. proposes regs to keep rivers, lake clean," Dec. 2, 1977, p. 12. DEQ lists waters for Class I designation.

POPLAR RIVER PROJECT (Canada)

"Canadian project may pollute U.S.," by Marjane Ambler and Dan Whipple, June 3, 1977, p. 1. Project's potential for pollution serious.

POPULATION CONTROL

"Zero Population Growth explores impact of migration to West," by Sarah Doll, Dec. 2, 1977, p. 15. Review of recent paper by ZPG organization.

POTASH

"Potash deposits in the Williston Basin," Jan. 14, 1977, p. 13. U.S. firms propose mining potash in Mont. and N. Dak.

PRAIRIE DOGS

Jan. 28, 1977, p. 13. Deplorable slaughter of prairie dogs described in photo caption.

RADIOACTIVE WASTE

"Explosion at nuclear plant," Dec. 30, 1977, p. 11. Plant at Waterford, Conn., releases radioactivity.

"False alarm raises nuclear security fears," Nov. 18, 1977, p. 13. Accidental tripping of alarm at Idaho Lab. raises questions of safety.

"Workshop reveals pent-up nuclear resentment," May 20, 1977, p. 10. "Basic underlying issue — people do not want nuclear power or nuclear waste at all."

"Worrisome tailings," June 3, 1977, p. 10. Uranium mill tailings near Grants Junction leaking radon gas.

"Yellowcake spilled; clean up slow, disorganized; NRC agrees to study problem," by Timothy Lange, Dec. 16, 1977, p. 1. Highway accident of truck carrying yellowcake brings problem of radioactive hazard to forefront.

RANCHING AND RANCH LIFE

"Former forces try combining forces: Can the stockmen and the environmentalists be friends?" by Marjane Ambler, Oct. 7, 1977, p. 1. Environmentalists and agriculturists move toward cooperation.

RANGE MANAGEMENT

"Hormay tells how rest-rotation works," Jan. 14, 1977, p. 5. Summary of "Principles of Rest-rotation grazing and multiple-use land management."

"Rest-rotation range plan — panacea or problem?" by Bruce Hamilton, Jan. 14, 1977, p. 1. Rest-rotation not a panacea.

RECLAMATION

"Tough reclamation regs under attack; Montana subdivision law in danger, too," Feb. 11, 1977, p. 12. Real estate interests attack subdivision regs.

REED, JAY

"Audubon teacher takes nature lab to students," by George H. Harrison (reprint from Exton), Mar. 11, 1977, p. 16. Reed and his job as Audubon Mobile Environmental Education Project.

ROADLESS AREAS

"FS opens roadless areas to oil, gas," Oct. 7, 1977, p. 11. Directive permits owners of existing leases to develop, unless "no surface occupancy" provision.

"Roadless review enters 2nd most critical stage; Controversy has just begun," by Marjane Ambler, Dec. 2, 1977, p. 10. Up to date information on RARE II.

"State legislators warn of timber 'lockup,'" Nov. 18, 1977, p. 13. Legislators call conference against RARE II.

ROBINSON, DAVE

"A tribute to Dave Robinson," by Joe Lamon, Sept. 9, 1977, p. 3. Cheyenne tribe member leads

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ROWLAND, ALLEN

"Allen Rowland looking for trouble: Northern Cheyenne Chairman," by Marjane Ambler, Jan. 28, 1977, p. 16. Cheyenne chairman leadership, esp. in coal leasing policies.

SAVERY-POT HOOK PROJECT

"Fear of industry no reason to fund bad water projects," Mar. 25, 1977, p. 3. Feasibility of Savery-Pot Hook.

SEVERANCE TAXES

"Colorado political parties differ over size of severance tax," Feb. 25, 1977, p. 12. Republicans favor smaller, Democrats larger, tax.

"Severance tax challenge," Oct. 21, 1977, p. 11. Wyo. law called retroactive.

"States take bigger bite of coal money," by Dan Whipple, Mar. 11, 1977, p. 12. States on severance taxes in several western states.

SEWAGE DISPOSAL

"Early composting toilet junk—but now only glowing reports," Mar. 25, 1977, p. 12. Swedish composting toilet had early problems.

"Sewage irrigation cleans up streams," Mar. 25, 1977, p. 15. Community sewage waste water used for irrigation.

SKROTZKI, MARK

"Mark Skrotzki cuts his teeth on Glenwood Canyon," by Mark Peterson, Apr. 8, 1977, p. 16. Skrotzki organizes group to find alternatives to four-lane highway in Glenwood Canyon, Colo.

SNOWMOBILES

"Crashing through the snow," by Bruce Hamilton, Feb. 11, 1977, p. 3. Editorial opposed to unrestricted use of snow machines on public lands.

"Teton Park left open to snowmobiles, Environmentalists want more restrictions," by Bruce Hamilton, Feb. 11, 1977, p. 6. Park service decision to allow snowmobiles in Grand Teton disturbs environmentalists.

SOCIAL IMPACT

"Feds would bust the boom," Reckoning from Washington, by Kay Coates, Sept. 9, 1977, p. 10. GAO report on Rock Springs and Green River starting.

"Gary Payne: a community identity is a fragile thing," Jan. 28, 1977, p. 5. Director of Mental Health Center comments on impact.

"Legislation leaves gaps in impact aid," Jan. 28, 1977, p. 5. Various aspects of impact in Wheatland.

"Poll says railroads, coal mines, and housing concern Gillette," Sept. 9, 1977, p. 11. Gillette not entirely pleased with development.

"Wheatland: the model boom town?" by Marjane Ambler, Jan. 28, 1977, p. 11. Will Wheatland be example of what communities should demand from industry? Answer could affect other booming communities.

SOLAR ENERGY

"BRI corners market on what no one wants to do," by Joan Nice, Apr. 22, 1977, p. 16. Brothers Redevelopment Inc. among solar pioneers in Denver.

"Cheyenne citizens to build greenhouse complex," Apr. 8, 1977, p. 10. Community greenhouse to provide food for low-income and elderly.

"Methane-powered greenhouse faces first winter," Nov. 18, 1977, p. 10. Solar heated greenhouse in Cheyenne will use methane as supplement.

"Mr. and Mrs. Sunshine take gospel to Wyo.," by Marjane Ambler, Jan. 28, 1977, p. 12. Charles and Frances Nations demonstrate that use of solar energy is feasible now.

"N.M. solar power group prefers passive designs," Most economical, perhaps most efficient, July 1, 1977, p. 12. Keith Haggard's approach to solar use.

"Northern Colorado group tackles solar heater hookup problems," June 3, 1977, p. 1. Solar collector built and installed.

"Smokehouse heated, cooled by do-it-yourself solar system," Mar. 25, 1977, p. 10. Solar heated restaurant at Mountain Home, Idaho.

"Solar heating ideas from homeowners and pros," Nov. 4, 1977, p. 5. Solar heating tips.

"Solar heating industry troubled by installation, operating problems," by Joan Nice, Nov. 4, 1977, p. 1. Analysis of solar problems.

"Solar power like meat and potatoes," Sept. 9, 1977, p. 10. Solar display in San Francisco.

"Tower power," Jan. 14, 1977, p. 11. Barstow, Calif., to be site of first solar power tower. Public Service of N. Mex. proposes hybrid plant.

STATE LANDS (Wyoming)

"Wyoming plans to revise access regulations because of protests," Dec. 2, 1977, p. 5. Attempt to protect state lands from abuse draws protests.

STREAMS—MINIMUM FLOW

"Citizens push for minimum stream flows," Nov. 4, 1977, p. 13. Idaho citizens petition for

minimum flow referendum.

STREAMS—PROTECTION

"Using Yellowstone is losing it," by Jim Posowitz (Mont. Fish and Game) Mar. 11, 1977, p. 3. Guest editorial argument against "Use it or lose it" philosophy, esp. re: Yellowstone River.

STRIP MINING

"Colorado needs federal help," May 6, 1977, p. 3. Comments in editorial of fed. compared with Colo. strip mine regs.

"Congress may save stream valleys from stripping to protect farms," by Dan Whipple, Mar. 25, 1977, p. 5. Controversy over strip mining alluvial valley floors.

"Final strip mining bill," by Lee Catterall, July 15, 1977, p. 11. Federal bill on way to White House at last.

"House passes strip mining bill," May 6, 1977, p. 11. Major provisions of strip mine bill passed by U.S. House.

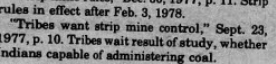
"Miners attack coal strip mining law," Sept. 23, 1977, p. 10. Mining industry critical of regs of mine reclamation.

"Reckoning from Washington," by Lee Catterall, May 20, 1977, p. 11. Strip mining on alluvial valley floors main issue in new bill.

"Roncalio says Herschler bending to pressure on strip mine bill," by Lee Catterall, Mar. 11, 1977, p. 10. Herschler and Roncalio disagree on merits of pending federal strip mining bill.

"Strip mine rules," Dec. 30, 1977, p. 11. Strip rules in effect after Feb. 3, 1978.

"Tribes want strip mine control," Sept. 23, 1977, p. 10. Tribes want result of study, whether Indians capable of administering coal.



SWEETWATER RIVER DISPOSAL

"Officials measure charms of Sweetwater Canyon; is it outstandingly remarkable?" by Justus Bavarskia, June 17, 1977, p. 1. Report of inspection trip by BOR, BLM for purpose of a possible recommendation.

SYNTHETIC FUELS

"Without subsidies, synfuel interest in West waning; Concept in coma," by Dan Whipple, Jan. 14, 1977, p. 11. Present status of synthetic fuel projects.

TECHNOLOGY

"Grants to bring low-income people appropriate technology," June 3, 1977, p. 5. Announcement of grants from U.S. Community Services to projects for helping people with energy cons., solar, wind and water power, producing food, recycling, etc.

UDALL, STEWART

"Stewart Udall made conservation national policy; Energetic, expert politician," by Peter Wild, Dec. 2, 1977, p. 13. Biog. and activities of subject. Conservation Pioneer Series.

UNITED STATES FOREST SERVICE

"Timber now secondary in Forest Plan; Key values get emphasis instead," Aug. 12, 1977, p. 5. New plans promise more wildlife habitat, grazing, wilderness, etc.

URANIUM MINING

"Desert mine dewatering plan denied," Dec. 2, 1977, p. 9. DEQ denies permit until disposal of water from mine is satisfactory.

"TVA, Union Carbide plan uranium mines in S.D.," by Dan Whipple, May 20, 1977, p. 7. Details of revival of interest in uranium in S.D.

"State still reluctant to okay desert mine," Oct. 21, 1977, p. 10. Wyo. DEQ criticized Minerals Exploration Co. on reclamation, oil and gas operations.

WALLOP, MALCOLM

"Environmentalists can't count on Malcolm Wallop," by Lee Catterall, May 6, 1977, p. 10. Outline of bills opposed by Wallop that would strengthen environmental positions.

"Wallop defends clean air votes," June 17, 1977, p. 10. Wallop ideas on air, coal leasing.

WARE, KENT

"Between the Indians and the energy companies; In the Gulf Oil camp, an Indian," Dec. 30, 1977, p. 16.

WATER

"Bighorn water battle goes to court; State camouflages Indian water suit," by Marjane Ambler, Apr. 22, 1977, p. 1. State of Wyo. spurred to action by complaints that projects have been stymied by Indians' claims.

"Carter team questions water projects," Jan.

14, 1977, p. 13. Transition team advises re-evaluation of several Western water projects.

"Carter's water politics to strangle the West?" by Bruce Hamilton, Aug. 12, 1977, p. 6. Western politicians and water users mad.

"Cheyenne water plans cut hole in roadless area," by Philip White, Jan. 28, 1977, p. 7. Report on Cheyenne's plans for water from west slope of Sierra Madre.

"Dam builders nervous about Carter camp," by Lee Catterall, June 3, 1977, p. 12. Controversy re: Carter water ideas.

"Feds win major California water fight," Apr. 22, 1977, p. 13. Western states lose water decision against federal gov't.

"Governors set up drought task force," Feb. 25, 1977, p. 13. Western governors and Andrus meet to find ways of dealing with drought.

"Herschler debunks 'use it or lose it' water rights theory," Nov. 18, 1977, p. 11. Wyo. Governor speaks out against 'use it or lose it' and in favor of min. flows.

"How much water will the Indian tribes get?" Apr. 22, 1977, p. 5. Discussion of Shoshone and Arapaho water rights.

"Indian farmers dive into Arizona water battle," by Gary Nabhan, Aug. 12, 1977, p. 7. Arizona Indians claim priority to water.

"Montana house votes to protect Yellowstone River," by Dan Whipple, Feb. 25, 1977, p. 12. Moratorium on water permits in last major free-flowing river.

"Northglenn, farmers share water through reuse; Cooperation, not condemnation," by Jill Susan Rowe, Nov. 4, 1977, p. 22. City borrows water from farmers; treats sewer effluent, returns water to farmers. Northglenn may become model.

"Opportunity in the midst of crisis," June 17, 1977, p. 3. Editorial outlining Andrus' ideas on water conservation.

"Public asked to help reform U.S. water policy," July 15, 1977, p. 4. Public hearings to be held in July and August and final water policy due Nov. 1.

"Water won't stretch for Western cities' growth," Oct. 7, 1977, p. 3. Editorial on growth versus water supply in West.

"Wyoming seeks Indian water ruling," Feb. 11, 1977, p. 13. Wyoming files suit to determine Big Horn water rights.

"Yellowstone River hearings underway," Sept. 9, 1977, p. 13. More requests for water than river carries.

"California leads the West in water saving ideas," by Dan Ray, May 6, 1977, p. 12. California innovative and imaginative in water saving.

"Some ways to lose those lack of water blues," by Dan Ray, July 1, 1977, p. 20. Hints on saving water.

WEATHER MODIFICATION

"Interstate suit may stop cloud seeding," Feb. 25, 1977, p. 13. Suits threatened over cloud seeding. Uncertainties outlined.

"Too much snow worries Colorado," Dec. 16, 1977, p. 13. Cloud seeding halted in Colo.

WEED CONTROL

"Proposed herbicide program may backfire on state, critics of Wyoming plans say," by Heather McGregor, Aug. 12, 1977, p. 12. Herbicide program on Big Sandy River could wipe out scout's efforts and result in worse conditions.

"WETA (Western Environmental Trade Association) forum criticized: funding out," by Glenn Oakley, Dec. 30, 1977, p. 11. Humanities committee refuses funding: unbalanced program.

WETLANDS

"Herschler opts out of wetland protection effort," Oct. 7, 1977, p. 6. Effort to explain Gov. Herschler's attitude on Sec. 404 of Water Pollution Control Act.

"We must save the swamps, too," by Charles Warren, Sept. 9, 1977, p. 3. Wetlands' essential role.

"WETA forum criticized: funding out," by Glenn Oakley, Dec. 30, 1977, p. 11. Humanities committee refuses funding: unbalanced program.

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Mar. 24, 1978 — High Country News-19

"The DuNoir is probably the most desirable area in all of Wyoming to be in wilderness."

Also plans a rocky 11,000 acre wilderness

Forest Service wants to let loggers in the DuNoir

by Richard Murphy

The areas around East and West DuNoir creeks are the only remaining tributary watersheds of the Wind River above Dubois, Wyo., that have not been clearcut. The drainages are also one of the few places left around Dubois where the U.S. Forest Service feels that it can supply the demand for timber and motorized recreation.

Ever since 1743, when a group of French explorers entered the DuNoir and named the creeks in honor of the "black timber" in the drainages, the timber potential of the area has been obvious. Conservationists consider the wilderness characteristics of the area just as obvious. After a visit to the DuNoir in 1972, Congressman Teno Roncallo (D-Wyo.) said that "It was readily apparent to me that the entire DuNoir basin was not only eligible for inclusion as wilderness, but was, in fact, probably the most desirable area in all of Wyoming to be in wilderness."

The caretaker of the land, the United States Forest Service, however, has never felt that the DuNoir should be wilderness. In 1946 it opposed the inclusion of the DuNoir in the Washakie Wilderness, and in 1972 it objected to the designation of 30,000 acres of the DuNoir as a special management area. Congress, however, named the DuNoir a Special Management Unit. The Forest Service has been studying the area and its management potential for the past five years, while not allowing timber harvest, road building, or vehicular travel.

Shoshone National Forest officials have now come out with their recommendations for the area based on the results of the study. In their draft environmental statement for the DuNoir, they propose 11,000 acres of the area as wilderness, and allocate the remainder of the land to "more intensive timber management" and unspecified recreational development. The land proposed as wilderness is contiguous with the Teton and Washakie Wildernesses and is essentially the high buttes of volcanic conglomerate surrounding the drainages. Calling the proposal an "insult," The Wilderness Society's Wyoming representative, Bart Koehler, has characterized the proposal as "a typical Forest Service wilderness: rocks, cliffs, and no trees." Although the proposed wilderness does contain trees, almost no commercially useful timber land has been included in the wilderness area.

Koehler is only one of a long list of people who have tried to protect the area from development. In the 1800s, Chief Washakie and his people used to winter in the upper reaches of the Wind River because of the mild climate. They told horrible tales of hardship, deep snows, and bitter cold in hopes of keeping the white men out of the area. The truth and beauty of the land leaked out, however. Soon the settlers

came and the town of Dubois was established.

During the early part of this century the DuNoir drainages supported half a dozen logging camps of "tie hacks." The Scandinavian tie hacks harvested an estimated 500,000 railroad ties through selective cutting of the DuNoir. The ties were cut and shaped in the DuNoir and floated in man-made lakes until spring. At high water the dams were blown and the ties were driven down to the Wind River and then down the river to the rail head at Riverton.

Since the Forest Service has abandoned its "purity concept" — the idea that an area should have absolutely no signs of man's presence in order to qualify for wilderness designation — the few remains of the tiehack era should not necessarily be a stumbling block in considering the whole DuNoir as wilderness, conservationists feel.

Although Shoshone National Forest Supervisor Ray Hall agrees that the "individual remains are insignificant" by themselves, he feels one is not able to get away from the evidence of man in the lower DuNoir drainage. As much as 50 million board feet of lumber were cut in the DuNoir before 1930, but they were selectively cut. Except for the occasional rotting stump, the forest does not show much evidence of the tie hacks. The major intrusion is the remains of the man-made dams and rotting building logs.

The regenerated forest of Engelmann spruce, subalpine and Douglas fir, and whitebark and lodgepole pine has now reached maturity in many parts of the black forest. The forest service estimates that 400,000 board feet of lumber is lost each year to old age and insects in the DuNoir. The agency would like to see that timber harvested, along with some green stands.

Another major concern of those seeking to preserve the DuNoir is the wildlife habitat of the area. Bighorn sheep habitat on the tops of the buttes would be protected in the Forest Service's plan, but increased road access to the area could severely affect elk. The twin DuNoir drainages support a resident herd of about 300 elk, but almost 1,000 additional elk migrate through the DuNoir in the fall and spring. In the spring the elk leave their Spring Mountain winter range near Dubois and travel up to the Teton and Washakie wilderness areas. On their way, the elk use the DuNoir as their calving grounds.

In testifying during the U.S. Senate hearings of 1968, Bill Crump of the Wyoming Game and Fish Department said, "The development of road systems in the upper drainages of this area would result in population declines (of elk) similar to those experienced in other drainages of the Wind River."

The plan says five miles of permanent roads will be built to provide public access



Photo by Richard Murphy,
Jackson Hole News
THE REMAINS of a tiehack surge dam on West DuNoir Creek — one reason why the area shouldn't be declared wilderness, according to the U.S. Forest Service.

to lower West DuNoir and Upper East DuNoir creeks. The agency does not indicate the locations of the roads or of specific timber sale areas. The agency intends to conduct intensive timber management on 10,300 acres.

Temporary roads will also be built outside the wilderness area for timbering and other purposes, but the plan doesn't say how many miles of these roads will be constructed nor whether they will be in the upper drainages referred to by Crump.

The temporary roads are to be rehabilitated and closed. However, considering the historical ineffectiveness of Forest Service road closures, many environmentalists are concerned that the logging roads will provide access to the area which will precipitate damage to the elk.

Another disappointment to many people familiar with the area is the Forest Service's omission of the southern Pinnacle Buttes and Kisinger Lakes area in the West DuNoir from the proposed wilderness. Although the area rates high in wilderness characteristics, the agency considers it an "awkward appendage" to the wilderness that would present management problems. The lack of easily identifiable topographic boundaries is one stated reason for its exclusion, although the possibility of a new access road from Long Creek that would pass by Kisinger Lakes may have also entered into the decision.

Critics say that one problem with evaluating the Forest Service's proposal is the open-ended and vague nature of the document. Hall explains that the statement is not specific because the Forest Service has not determined exactly what it is



Photo by Richard Murphy,
Jackson Hole News
STUMPS left by tie hacks have become a focal point in the controversy over wilderness in the DuNoir.

going to do with the non-wilderness lands. Bart Koehler sees the undefined development plans as "a smoke screen to keep the public from seeing just how damaging the plan really is."

"If the plan is approved, the DuNoir will only be a memory," he said.

The Forest Service will be conducting a public hearing on the plan on Saturday, April 1, at the Dubois High School Auditorium in Dubois, Wyo. The hearing will be held from 9:30 a.m. to 11:30 a.m., 1 p.m. to 5 p.m., and 7 p.m. to 10 p.m. Those who wish to present oral testimony should notify the Regional Forester, 11177 W. 8th Ave., Box 25127, Lakewood, Colo. 80225 prior to March 29. People may also enter their names for oral testimony when entering the hearing.

Written testimony will be accepted as part of the official hearing record if it is so identified and postmarked on or before May 1, 1978.

The Forest Service will also accept written comments on the draft environmental statement through June 2, 1978. Copies of the draft environmental statement and the wilderness proposal are available from the Shoshone National Forest, Box 961, Cody, Wyo. 82414.

This article originally appeared in the JACKSON HOLE NEWS.

Council seeks to protect Indian land, resources



JOHN REDHOUSE: "To combat the bureaucratic cavalry, there's nothing better than facts."

by Dede Feldman

The National Indian Youth Council (NIYC) is fighting for the survival of Indian tribes, according to John Redhouse, a Navajo and the associate director of the organization. "With these energy exploitations going on now on Indian land we see the possible beginning of the end," he says.

NIYC, one of the country's oldest Indian organizations, has a staff of 48 at its Albuquerque, N.M., headquarters. Through the years, the organization has been involved in developing Indian job opportunities, helping Indian ex-convicts, organizing recreation programs, as well as its work preserving Indian land, water, and other natural resources.

Speaking about the Four Corners area, Redhouse said, "Everything that makes Indian people — and Navajo people — what they are is being threatened. If they destroy the land, our physical and spiritual basis as a people will be destroyed."

For the past several years, much of

NIYC's time has been spent researching energy and related developments in the Four Corners area. In response to many area residents who have asked for assistance in blocking further strip mining by El Paso, WESCO, and Consolidation Coal Co., NIYC has mounted an extensive campaign to halt further development.

Included in the campaign have been dissemination of information, support for a local referendum on the issue, testimony at various hearings on the social and environmental impacts of energy exploitation in the area, legal and financial support for the 18 Navajos arrested last year for protesting the revised El Paso-Consolidation Coal lease, and opposition to congressional legislation that would provide a federal loan guarantee to the gasification industry.

NIYC has also sued to stop the El Paso-Consolidation Coal Co. lease (see HCN, 3-10-78, p. 11).

"We've focused our efforts on the Four Corners area because it represents the weakest link in the Indian energy belt that contains coal, uranium, oil, and gas. The tribes to the north are fighting energy exploitation and looking into more appropriate technologies, such as wind and solar energy," Redhouse says.

"But the Four Corners area, with its huge deposits of coal and uranium, is still the big question mark. If it goes — and the energy developments occur — it will represent a psychological defeat for smaller Indian tribes," he says.

Another reason cited by Redhouse for the focus on Four Corners is its powerful religious significance for all people.

"The Four Corners is a spiritual center, and if it gets wiped out, woe be to the rest of the world," he warned.

In response to criticism from within the Navajo Nation that NIYC is an "outside"

force interfering with events on the reservation, Redhouse, who himself has roots within the Four Corners area, responds:

"We're not the real outsiders; WESCO and El Paso are the real outsiders."

"We've acted in response to requests from the grassroots people up there who want to preserve the traditional way of life. If the Navajo tribal organization were properly representing and responding to its constituency, there would be no need for us."

Although NIYC finds itself on the other side of the fence from Navajo tribal leadership on this issue, Redhouse stresses that this is not always the case.

"It's erroneous to assume that NIYC and the Navajo Tribe are always at odds."

determination and economic self-sufficiency include research and legal action.

One recent project which involves both these approaches is a hydrology-geology study of the Navajo Indian Irrigation Project (NIIP). Data collected so far in the study indicate that the irrigation return flow to the San Juan River will be largely non-existent, and certainly insufficient for the industrial purposes now planned.

"We've found that the government has lied about this return flow," Redhouse says, "thus setting the stage for the eventual theft of Navajo water."

According to Redhouse, this kind of bureaucratic theft is nothing new when it comes to Indian resources.

The Four Corners area represents the weakest link of resistance in the Indian energy belt, which contains coal, uranium, oil, and gas. The tribes to the north are fighting energy exploitation.

"The Navajo Tribe has taken a positive and constructive lead in several areas."

Among the areas cited by Redhouse are the Navajo Tribe's formation of N.A.T.O. (Native American Treaty Rights Organization) to counter the present white backlash; the Navajo Tribe's attempt to make pollution unprofitable through a sulfur emissions tax; and the tribe's new criminal code, which asserts criminal jurisdiction over non-Navajos.

The tribe has also turned down WESCO's proposal for a gasification plant, at least for now. (See story on page 10.) NIYC has been fighting the plant for years.

Approaches used by NIYC in achieving its long-range goals of Indian self-

To combat these "liars and thieves" — the bureaucratic cavalry, as he calls them — Redhouse suggests that there's nothing better than facts.

"Once we expose something, then we can move on to another level," Redhouse explained.

Quite often for NIYC, this other level is litigation.

NIYC has been involved in many legal cases, representing individuals and tribes from Oklahoma to Utah.

"We've got to keep fighting. We don't have any choice. Our physical and spiritual survival is at stake," Redhouse says.

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Dear Friends

In this issue, we are including the index of High Country News articles for 1977. The index was prepared by Myra Connell, HCN's diligent and perceptive "Branching Out" columnist.

Myra's experience as a librarian helped her put together the index. But beyond that, Myra has a varied and interesting background that places her in a unique position to understand the changes taking place in the West.

Myra was born near Lander, Wyo., and grew up along the Rawlins road at the foot of Table Mountain. She graduated from high school in Lander in 1925.

Immediately after high school, she taught elementary school for a year in a one-room log school house. She married after that year, "and because married women weren't allowed to teach, I had to quit." Myra explains that the schools "got out of the habit of hiring married women" because they would often import single women from back East to teach so there would be a better balance of single men and women in the West.

She and her husband moved to Michigan, where they farmed for nine years. Then, she says, "The Great Depression drove us West again."

Once back in Wyoming, Myra again



MYRA CONNELL

taught school during World War II. "By then," she says, "they were only too glad to have the married women back to woman the schools."

She was in the floral business with her husband for 12 years. Later she went to work as a librarian, first in the public library and later in the grade school in Lander.

In 1964, 40 years to the day after her graduation from high school, Myra began studying elementary education at the University of Wyoming. Two years later, she received her B.A., cum laude.

Myra's first husband died and she

eventually married Tom Connell, a noted Western artist whose artwork has appeared in HCN. Tom did the sketch on the headline HCN uses for Myra's column.

In 1972, she retired from her work at the school and branched out on a new career. "I decided that my goal would be to use whatever free time I had to further the environmental movement. I was so impressed with Tom Bell's work and with the first Earth Day. I started writing for HCN two years ago this spring and I enjoy it a lot. Quite a bit of my columns are drawn from my own experiences in the West."

Myra's literary contributions are not limited to HCN, however. She has had a number of poems published, including one that was selected for *This is Wyoming: Listen*, an anthology of the best works of a number of Western writers compiled by the Wyoming Writers Association. She also published two long pieces in *In Wyoming* magazine, one on the railroad tie harvest and another about the 1917 "wolf roundup."

Myra's dedication to environmental concerns is based on a strong personal philosophy. She says, "I think we lost a lot when people moved from the country to the city. If people could go back to the land for part of their living, we'd have a much better country. But, it seems that

we're so far removed from that, you probably couldn't get people to do it or have enough land for everyone."

We at HCN are glad that Myra is willing to share her insights with us. As her column's title suggests, she adds a different, personal perspective to the paper.

If you see a story in the index that you would like another copy of, let us know. A limited number of 1977 issues are available for 60 cents apiece, including postage.

POETRY OF THE EARTH

On page 17 of this issue we are launching a new series, "Poetry of the Earth." It was inspired and edited by Contributing Editor Peter Wild.

Here's the way it happened. As we saw Wild's conservation pioneer series drawing to a close, it occurred to us that an interesting sequel might be portraits of environmentally-oriented poets. We asked Wild, who is a poet himself, what he thought of the idea.

"My own view is that there's too much jawing about poets, and too little reading of their poems," he said. "Why not let the poets of the West speak for themselves?"

So that's what the series will be — Western poets of the earth speaking for themselves. We're very pleased to open the series with a poem by William Stafford.

—the editors