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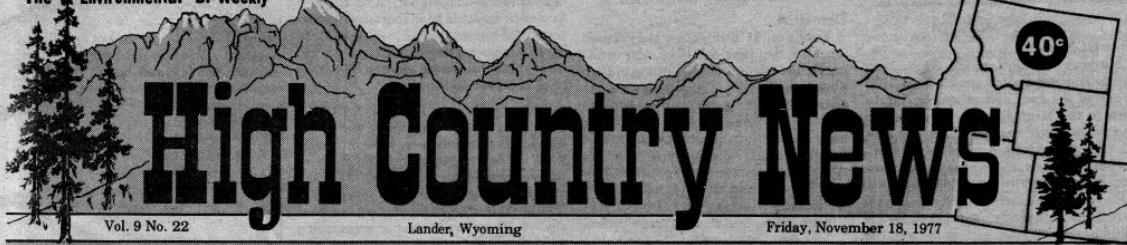
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The Environmental Bi-Weekly



Vol. 9 No. 22

Lander, Wyoming

Friday, November 18, 1977

Wildlife biologists wary of mining plans

South Wyoming may not look like much, but . . .

by Philip White

Your typical American armchair athlete and electric ping pong player, off with the wife, kids, dog, and mobile mansion on a frantic two-week vacation after a frenzied 50 weeks of work, television, and hypertension, can be forgiven for telling the fat lady playing Yahtzee in the Rawlins U-Gas-Um that those 209 miles of Interstate 80 between there and Evanston in southern Wyoming are the most monotonous, the driest, the most useless and God-forsaken stretch of vacant lot this side of the moon.

It is an arid, treeless, wind-swept landscape out there which certainly doesn't look like much, especially if you've just come from heavenly-forested-and-mountainous Yellowstone and Grand Teton National Parks.

Nope, it certainly doesn't look like much. But the ranchers and old timers who have lived in or around Rock Springs or Elmo or Superior or Wamsutter for years, the biologists at the Wyoming Game and Fish Department, and a few of America's largest energy corporations, know better than to call it useless.

Although it looks monotonous, relatively subtle changes in topography and elevation give rise to a large variety of plant communities. In the alkaline bottoms, greasewood and saltbush thrive, along with their associated grasses and shrubs. Along the flats and foothills, rabbitbrush and the shrub called winterfat have taken hold, giving way to serviceberry, bitterbrush, mountain mahogany, and snowberry on the higher slopes.

SAGEBRUSH IS KING

But the unchallenged bull goose shrub — the one that is dominant in southern Wyoming — is the sagebrush (*Artemesia tridentata*). This plant was aptly named after Apollo's twin sister, the Greek goddess of wild animals and patroness of hunters, Artemis. Several species of sagebrush do most of the work of holding the soil, stopping the wind, and retaining soil moisture so that all of the associated grasses, flowering plants, and shrubs can survive around them.

This diverse, shrub-dominated vegetation also provides food and cover for many species of wildlife. That's where Harry Harju and Dale Strickland of the Wyoming Game and Fish Department come in. They will tell you that southcentral and south-



Photo by Dick Randall

DEER MICE would proliferate if the mined areas were returned to grasses, but the deer wouldn't fare so well. Only 15%-20% of the reclaimed lands could be returned to a native condition that would benefit the major wildlife species, according to the government's environmental statements.



Wyoming Game and Fish Department photo by LuRay Parker
WHILE DEER AND PRONGHORN can utilize the new growth of forbs and grasses in the spring, it is sagebrush and other shrubs that provide them with critical winter forage.

western Wyoming support an estimated 35,000 mule deer, 37,000 pronghorn, 11,000 elk, and uncounted sage grouse. In sum, the region is home for all or part of the year to 11 species of game mammals, 25 species of game birds, 16 species of raptors, 36 species of nongame mammals, and 91 species of nongame birds.

Although it certainly looks monotonous while shooting across all that desert at the common law speed limit of 75 miles per hour, Strickland calls it a "complex natural system." Wyoming Game and Fish researchers have located 134 golden eagle nests in the area, half of which were active in 1976. The ground squirrels, cottontails, chipmunks, gophers, mice, and voles become fare for raptor-nesting hawks, eagles, and owls. A few of the rare peregrine falcons still nest out there. The 9,000 acres of prairie dog towns provide board and room for the rarest mammal in North America, the black-footed ferret, which has been seen five times in Sweetwater County since 1974, according to Bureau of Land Management (BLM) records.

The primary concern of the game and fish biologists, however, is the welfare of the big game species, because they mean big money to the economy of Wyoming. A recent study commissioned by the Wyoming Game and Fish Department shows that hunting and fishing activities (that is, consumptive uses of wildlife) generated \$82 million in expenditures and four million to

(continued on page 4)

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SENSATIONALISM

Dear HCN,

Marjane Ambler's article on environmentalists and agriculture (HCN 10-7-77) is one of the best feature articles I have seen in the High Country News in the five years I have been reading it. The article cogently addressed one of the most important Western resource management issues of today: agriculture and its future. I believe the long-term success of the land-based environmental movement in the West hinges, in large part, on the stability of agriculture as an economically and environmentally feasible enterprise. Environmentalists must actively work to help make this a reality.

Unfortunately, the feature by Bill Schneider on grizzly-sheep producer conflicts in the next issue undid, in my mind, the good intentions of the Ambler article. I felt the article was insensitive and most inflammatory, presenting sheep producers as modern-day stone age characters. Why was it necessary to give this article such prominent play? Is emotionalism and sensationalism by guest writers more important than trying to further the effectiveness of the environmental movement in this region?

I am not qualified to directly challenge the facts of Schneider's article, but I do know that eastern Idaho sheep producers, as well as federal and state wildlife managers, have been hard at work trying to find solutions to the grizzly-sheep conflicts in that part of the country. Sheep people are proud of the results.

I would hope the Ambler-Schneider articles provide the impetus within HCN to continue to wrestle with issues concerning the role the paper should play in helping further an effective environmental movement in the Rockies. I, for one, think it would be a disservice to all of us if you continue to allow articles like the one by Schneider to be printed without serious thought about what it does to the movement as a whole.

Bill Bryan, Jr.
Helena, Mont.

NEW GRIZZLY POLICY

Dear HCN,

In the recent article in HCN by Bill Schneider on the grizzly bear (10-21-77), my remarks appear to have been somewhat sensationalized. The quote, "I'm tired of being nice, getting the goddamn sheep out is the only answer" is an example. This statement is taken out of context and printed in bold face type to highlight the issue. The interview was conducted in the spring of 1976, and I cannot recall making the statement.

The statement that I made was to the effect that as long as there are sheep and grizzlies in the same area, there will be conflicts, and the only way I could see to end this conflict is to transfer the sheep to another area on the Targhee Forest.

At the time of the interview, the Idaho Department of Fish and Game had no firm policy on the grizzly. Since then, the department has opposed the U.S. Fish and Wildlife Service critical grizzly habitat designation on the basis that it needs more study to properly define the critical habitat. Current Idaho Department of Fish and Game policy is to live trap and trans-

plant any grizzly that comes in conflict with sheep.

Frank DeShon
Regional Game Biologist
Idaho Department of Fish and Game
Idaho Falls, Idaho

PORTRAYAL OF SHEEPMEN RESENTED

Dear HCN,

Your Oct. 21 front-page story, based upon a recent book Bill Schneider (with part of the book's profits accruing to High Country News), may have set back sharply efforts by many reasonable people to protect and preserve both grizzlies and sheep. It is an open question which species is more rapidly disappearing from the American scene. Neither species will benefit from such shallow, sensationalized journalism.

Your article seemed intent upon impres-

sion effort in 1976 with sheepman Ross Davis, when he assisted in the live-trapping of a bear preying upon his sheep. A second capture was made in September of this year when a grizzly attacked sheep belonging to Billy Enget while he was trailing the bands to shipping corrals in lower country. Billy cooperated and called in the trapping team. He would like to have the chance to do so again (even though shooting this particular bear would have shortened the attacks of the grizzly and prevented some 80 sheep from being terrified and so scattered throughout the rough country that they have not yet been found).

It should be remembered that most of these permittees, their fathers, and sometimes their grandfathers, have virtually lived in the mountains with the grizzlies for over half a century. They often possess more knowledge of bear habits and habitat than the biologists engaged in professional studies. These are the last of a vanishing and marvelous breed of outdoorsmen who love wilderness and living things with a passion born of living together with wildlife and sharing the wild lands of the West for generations. They are a part of the wilderness, and it is a part of them.

Many of the Targhee permittees have sizable private land holdings adjacent to the forest. In cooperation with the Idaho Department of Fish and Game, these lands have been managed to enhance winter wildlife habitat and forage for animals which live on the Targhee Forest in the summer. Grazing has been modified, where necessary, to accommodate wildlife, and so far the land owners have foregone

"He's typical sheepherder," says your story. Nonsense! What about a similar 1976 story about sheepman Ross Davis, who had to be called in to try to track down a grizzly with a wire cable snare caught around his leg because an inexperienced researcher had put out a snare without a swivel causing the grizzly to break the cable and escape?

Dave Phillips, a sheepman, rated some bold print in your story in a quotation designed to make it appear that he will not cooperate with a live-trap program. In fact, he was interviewed before the live-trapping program was developed or in place. Phillips has expressed his willingness and cooperation in giving a chance to the new approach in conflict situations.

You quote heavily from reports by Allen and Jorgenson, but completely ignore remarks or reports from the most thorough and professional research effort, the three-state, Interagency Grizzly Bear Study Team, headed by Dick Knight of the National Park Service and Steve Judd of the U.S. Fish and Wildlife Service.

For example, the 1974 Interagency Annual Report has this to say about bear mortality. "Known mortality in 1974 totaled 13 bears. Twelve of these were man-caused, and the cause of one was unknown. Of the 12 man-caused kills, 7 were bears legally taken by hunters during the Wyoming hunting season, 2 were illegal kills in Wyoming, 2 were killed in connection with control actions in Yellowstone Park, and one was a depredation kill at an outfitting camp."

You charge the U.S. Sheep Experiment Station is operating in an area in the Cen-

Readers respond
to Bill Schneider's
article on
conflicts between
sheep and grizzlies.

sing the reader that live-trapping and removal of grizzlies which prey upon livestock cannot succeed. Hence, the sheep must go. In fact, proposals to implement live-trapping and release programs were developed by U.S. Fish and Wildlife administrators, state wildlife management agencies, U.S. Forest Service officials, elected public officials, conservation organizations (such as the Idaho Conservation League), and grazing permittees upon the advice of highly qualified grizzly biologists.

The live-trap program has not had the chance to be proven one way or another. It was first tested in 1976, and again in 1977. As would be expected, some woolgrowers were highly skeptical of such a plan, but most are genuinely willing to give it a chance. These permittees will tell you, as they testified at public hearings, that conflicts between grizzlies and their lambs are not common, and become serious only for a period of time following the closure of the garbage dumps in Yellowstone Park. Then it was serious, and some sheepmen suspect that Park Service employees were purposely releasing troublesome bears, live-trapped in the park, near bands of sheep. Thankfully, we appear to be past that trying time in bear management.

Your article alluded to one cooperative



Photo by Doug O'Tooley

plowing the habitat into potato fields.

On a more general basis, the Idaho Woolgrowers Association has supported the establishment of the National Birds of Prey Area along the Snake River south of Boise (where cooperation has included sheep grazing as a useful part of the management program for raptors) and legislative protection and professional management of mountain lions, bears, and this past year, bobcats.

In each of these cases, it was cooperation between sheepmen, professional biologists, wildlife management agencies, and legislators which led to successful programs for both wildlife and livestock.

Your apparent attempts to "...get the goddamn sheep out..." and portrayal of the sheepman as an insensitive killer of wildlife, too dumb or dishonest to identify a predator-killed sheep from one poisoned by toxic plants, is inaccurate and resented.

It is convenient to your ends to relate old stories of an irresponsible act by an individual and to lead your readers to believe that the rest of the woolgrowers are of like ilk. You relate a gory story by John Cada, Montana game biologist, in which a herder wounds a grizzly and leaves him to die.

tennial Mountains, "on lands supporting a struggling grizzly population." Yet the distinguished scientist who serves as leader of the station, Dr. Hulet, has advised you that there are no reported sightings of grizzlies or wolves in the 55 years that station has managed the lands. The real intent of Bill Schneider is to reintroduce wolves and grizzlies into that habitat.

We have seen this technique used before. Unfortunately, it sells books and organization memberships to uninformed but well-intentioned citizens.

Anyone familiar with testimony presented at Department of Interior hearings this year recognizes the popularity of critical habitat proposals for the grizzly is not great. Wildlife management departments from all affected states oppose even classifying the grizzly as threatened at this time.

Former Idaho Gov. Cecil Andrus, just two days before his confirmation hearings as Interior Secretary, strongly opposed the habitat proposal at a public hearing in St. Anthony, Idaho. He expressed alarm that too many wildlife decisions were being dictated by gross, uninformed, political pressures rather than qualified professionals

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armed with factual information.

Churches, school boards, chambers of commerce, water districts, and many others were amazingly vocal in opposition. Much of the citizen opposition seemed based upon fear of the potential mischief of the Endangered Species Act itself, as well as fear for real conflicts with grizzlies and reported efforts to reintroduce grizzlies into other areas.

But almost everyone testifying did agree they wanted to protect the bears as a species, while providing the minimum possible disruption of the lives and livelihoods of affected people.

Your article has fanned the flames of hostility towards the habitat proposal and the Endangered Species Act. The many citizens concerned over potential applications of the act are watching this one. If the "goddam sheep" go, after the extensive cooperative efforts and assurances put forth by government administrators, wildlife managers, grazing permittees, and reasonable conservation groups, all other users of proposed critical habitat will expect the same treatment at some future date.

Reasonable people, who have worked hard at convincing skeptics on both sides that differences can be resolved, will have been sacrificed again by those who seem most interested in using wildlife to sell books and memberships.

We have been impressed, in recent times, by the reasonableness of the High Country News, and the efforts you have made to bring uselessly warring factions together on common ground. Right now, it looks like three steps forward, and five backward.

Laird Noh
Immediate Past Chairman
Predator Policy Committee
National Wool Growers Assn.

NEED FOR SHEEP STATION

Dear HCN,

I recently read Bill Schneider's grizzly bear story in the High Country News. As I was quoted out of context and as some incorrect information was reported, it has been suggested that I should respond to your article on grizzlies vs. sheep.

Too often people are motivated to speak, write, and act because of emotion and not because of fact.

The U.S. Sheep Experiment Station, with the help of the Forest Service, has managed the high summer range on the Targhee Mountain Range (referred to in your article as the Centennial Mountains) for over 55 years. During this period of time there have been no reported sightings of grizzly bear or wolf on our summer range.

The reference to these U.S. Department of Agriculture, Agricultural Research Service lands supporting a struggling grizzly population and the quote "extremely fragile environment completely at the mercy of man" etc. are completely inappropriate and unfair. They appear to be intended to excite the emotions of those sympathetic to the preservation of certain wildlife species.

It is very true that there is only one U.S. range sheep experiment station in the United States. The sheep industry is an important industry and a valuable renewable national resource. The sheep industry needs this experiment station to solve industry problems and to develop more efficient management methods. Currently, and for the entire 55 year existence of the sheep station, we have had no conflict with the grizzly or wolf. We anticipate no conflict unless the grizzly and wolf are introduced.

However, we have had conflict with cer-



"IT MAY BE A USELESS, GOD-FORSAKEN LAND
BUT IT'S OUR USELESS, GOD-FORSAKEN LAND."

tain environmentalists who have attempted to use the Bureau of Land Management (BLM) as a tool to remove us from our research lands. How would you react if someone tried to shoot you out of the saddle or drive you off your homestead?

A group of environmentalists from Montana accused the U.S. Sheep Experiment Station of overgrazing and mismanaging our summer range. They suggested that since we could not properly manage the range, that it should be turned over to the BLM and designated as a primitive area.

They contended that the primitive area designation would not conflict with our experimental grazing studies. However, we had read the recommendations for the area which included the introduction of grizzly bear and wolf into the area. We contended that this would certainly conflict with our interests and was not compatible with our sheep research program.

This group of environmentalists requested a tour of the summer range to check on range conditions. The range was in excellent condition, according to the Intermountain Forest and Range Experiment Station, which had earlier surveyed the range and prescribed the sheep grazing management system that we follow.

Realizing that range abuse was not a viable cause for eviction, the next approach was an appeal to us to agree to a primitive area designation. However, we were not enthusiastic because control would go from our hands, and because predators, such as the grizzly and grey wolf, would be introduced into the area and protected. How could one prevent serious predation in that situation?

Because of our commitment first to the American people and second to the sheep industry, we could not agree to the proposal made.

Contrary to your article, BLM does not maintain any authority over ARS lands.

I am very disturbed by one paragraph. It is true that the University of Idaho owns the sheep. This arrangement was made with the approval of the USDA so that all of the income could be plowed back into research. All income from the sheep is used for sheep research at the U.S. Sheep Experiment Station.

The next statement is surely a gross misunderstanding. Every sheep, with the possible exception of one lead wether, is completely involved in the research program. The lead wether is used to facilitate the movement of other research sheep. We

one is very objective about the relationship, it is entirely clear that the grizzly is not the cause of the marked decline in sheep numbers and sheep are not the cause of the decline in grizzly numbers.

Clarence V. Hulet, Location Leader
U.S. Sheep Experiment Station
Dubois, Idaho

EDITORS' NOTE:

Bill Schneider agrees with the letter-writers who say the live-trap program has yet to be proven one way or another. He says many sheep ranchers seem to support the program, and some of the men quoted in his article are among the exceptions.

Contrary to what Laird Noh says, Schneider says he is not interested in reintroducing the grizzly into the Centennial Mountains area. Several grizzly sightings there have been confirmed by Ken Greer, who is with the Montana Fish and Game Department and is a member of the Interagency Grizzly team. Introduction to the area would not be necessary anyway since bears could easily migrate from the Yellowstone eco-system, Schneider says.

Schneider says he respects the work of the Interagency Grizzly Team, and talked to many members of the team. Frank DeShon, who is quoted in the HCN article, is in the Idaho Fish and Game Department, which is a member of the team.

Despite what Noh says, Dave Phillips (who said he'd instruct his sheepherder to kill any predator jeopardizing his sheep) was interviewed only three or four weeks before the article was printed.

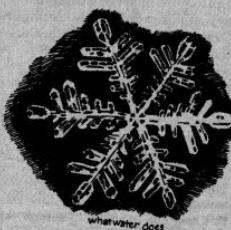
HCN stands by its decision to print Schneider's article.

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S. Wyoming.

(continued from page 1)

five million days of human recreation in Wyoming in 1975. These figures do not include the values of non-consumptive uses of game and non-game wildlife, which, Strickland estimates, far exceed the consumptive uses. "By any standard, wildlife is right at the top when you talk about the renewable natural resources of Wyoming," he says.

The department biologists will tell you that deer and pronghorn antelope are browsers, which means that they prefer to munch on the twigs and leaves of brush; their average annual diet is composed of 75% shrubs, 20% forbs, and only 5% grasses. Cattle, on the other hand, are grazers of grasses primarily. So, the mixed plant communities in southern Wyoming have for years supported several apparently compatible uses: wildlife browsing, livestock grazing, and hunting — much of it on public lands administered by BLM.

Now, however, a new factor may change this happy scene.

CHANGES COMING

Underneath all that sagebrush, among the sandstones, siltstones, and shales deposited 50 million or 100 million years ago, are several billion tons of recoverable coal. So look what may be happening out on the quiet sagebrush steppe:

—about 30 or more coal strip mines and underground mines with their offices, warehouses, safety classrooms, explosive magazines (that's not reading material) and giant electric draglines, drills, shovels and scrapers, water-wagons, front-end loaders, rear-dump trucks, bulldozers, motor graders, off-highway 120-ton bottom-dump trucks, crushing plants, storage piles, unit train loading facilities;

—rail loops and spurs, haul roads, drainage diversions, sedimentation ponds, 230-kv power lines (and more raptor electrocutions) spoil piles, more fences and coal trains, more highways and auto-animal collisions;

—and, finally, more humans in more mobile-home suburbs, putting more recreation pressure on a decreasing land base, driving more automobiles and off-road vehicles over fragile land, shooting more birds and animals for grins, bringing more dogs and snowmobiles to harass wildlife, and doing more poaching as hunting pressures increase and legal success ratios decrease.

That is the general picture presented by the two regional and about 17 site specific Preliminary Draft Environmental Statements (PDES) on coal development in southwest and southcentral Wyoming. The documents were produced by BLM and sent to a few state agencies this summer for their review. They have not been made available to the public.

The BLM-PDES express has now been derailed, however, by U.S. District Judge John H. Pratt of Washington, D.C., who on September 27 ordered BLM to again prepare and accept comments on a coal "programmatic" ES on its whole coal leasing strategy. His decision was based predominantly on the grounds that the Interior Department's first programmatic statement failed to address the question: is more coal leasing necessary now to meet national need? (See HCN, October 7, 1977.)

PDES TEAM ON HOLD

Jim Lambert, project manager for the ES team at the state BLM office in Cheyenne, said the court's decision "has caused us to shut down most of the environmental



Wyoming Game and Fish Department photo

SUCCESSFUL RECLAMATION? Diversity of vegetation is the key to a healthy and diverse wildlife ecosystem. The sagebrush plant community shown in the mid-ground supports a variety of animals, from the microscopic up to pronghorn and deer. The crested wheat monoculture in the foreground was established as re-

clamation along the Interstate 80 right-of-way north of Elk Mountain. Although effective in halting wind and water erosion, the homogeneity of this type of reclamation is a marked contrast to the native plant communities established over the centuries.

statement production for the time being. We are now working just to improve our data."

That comes as considerable relief to some of the Wyoming Game and Fish researchers who have been gathering the wildlife data for the environmental statements under contract with BLM. Prior to the decision, it appeared that BLM's pressured timetable for the ES process would preclude any serious use of the game and fish department's report.

Some wildlife areas withdrawn

The Bureau of Land Management (BLM) has released its land use decisions for southcentral and southwestern Wyoming and the Eastern Powder River Basin. These decisions are contingent upon changes made as a result of the court-ordered re-evaluation of federal coal leasing policies, however, according to BLM.

A few wildlife habitat areas have been withdrawn from coal leasing. Some have restrictions on the months when development activity is allowed, such as during nesting or critical winter months. Other areas are limited to only underground mining to protect wildlife and other uses. Most areas will remain open to coal activity. Suggestions of additional withdrawals are welcome.

OVERLAND PLANNING UNIT

In the Overland Planning Unit (Rawlins and the area southwest of there), five areas are recommended for no leasing: Muddy, Cow Creek Buttes, Sand Hills, Cedars, and the south portion of Atlantic Rim. Leasing will be considered in three areas, subject to getting more information on several factors including wildlife habitat. These three areas are Stagecoach, Cow Creek, and the Red Desert. Five areas will be leased: Red Rim, China Butte, Continental Divide, North Knobs, and the north portion of Atlantic Rim. The rest of the known coal areas will not be considered for leasing at this time due to a lack of specific information on the coal. The plan says provisions should be included to limit drilling activity in some areas to certain time periods to avoid impact on crucial big game winter ranges, and some strutting and nesting areas.

Nevertheless, Harju and Strickland of the department remain deeply concerned about the short and long-term effects on wildlife from extensive coal mining. Strickland estimates that 595,000 acres would be impacted by the 28 active or proposed coal developments analyzed by BLM in their Southwestern and Southcentral Regional PDES. This does not include proposed mines on private land, such as the Reliance and Winton proposals north of Rock Springs.

SALT WELLS AND PILOT BUTTE AREA

This area includes the Rock Springs and Green River vicinity. Two areas will be closed to coal exploration — Adobe Town and Red Creek Basin. No surface occupancy will be allowed on 2,000 acres although they are included in the areas suggested for leasing, meaning presumably that only underground mining will be allowed. These areas include raptor nesting sites, the historic Overland Stage Route, and a public water reserve area.

Copies of the five brochures containing these plans are available from the BLM, 2515 Warren Ave., Cheyenne, Wyo. 82001.

HANNA AREA

The Hanna area includes Hanna, Wyo., and the area south to the state border. Only two areas in the Hanna area are recommended for no leasing: Carbon Cemetery (for historic reasons) and parts of Hanna Basin which are close to Seminoe Reservoir or the Medicine Bow River (to protect water quality and avoid flooding). Carbon Basin and most of the areas in Hanna Basin that have been proposed for leasing will be open to leasing. In areas that are now being explored, there will be some seasonal restrictions to protect habitat.

PIONEER TRAILS AREA

The Pioneer Trails Area, in the southwest corner of the state, will be kept open for coal exploration. Mining and reclamation plans will be approved, with some stipulations to protect historic sites and trails, archeological and paleontological sites, and agricultural and visual resources of the Hams Fork Valley.

Of the total impact area, Strickland figures that 358,000 acres will be mined, resulting in the direct loss of 37,000 acres of critical pronghorn habitat, 60,000 acres of critical mule deer range, 50,000 acres of critical elk range and 48,000 acres of critical sage grouse digs. How long these losses continue will depend on shrub-type reclamation success.

These figures, according to Strickland, do not include the impacts of developments associated with these 28 leases, including roads, powerlines, fences, employee housing, and increased population density. The other coal mines proposed in these regions and the development of other minerals such as oil shale and uranium are also not considered, Strickland says.

Loss of habitat means loss of wildlife, as any ecology student knows. The magnitude of these losses in the southcentral region alone is estimated in BLM's Southcentral Regional PDES.

"A total of 40,550 acres of wildlife habitat would be lost because of all coal and non-coal-related activities for the short-term period of 1977 to 1990. These activities and those resulting from the increase in human population will cause cumulative loss for the short-term of 1,900 to 2,200 deer, 430 to 600 antelope, and 380 to 480 elk, and their respective offspring."

The displacement and mortality of wildlife during the 30 or 40 years of active mining is a grim enough prospect. The effects on wildlife, however, may last many years longer. It is apparent that the thin soils, the short growing season, the aridity, and the winds make it difficult enough for any vegetation to survive out there now, prior to mining.

We know further that mining and construction activities would, according to BLM's South Haystack PDES, impact soils by altering existing soil characteristics. The soils would be less able to sustain vegetation because of changes in organic matter content, soil microorganism composition, infiltration rates, permeability, water-holding capacities, nutrient levels, and other factors. All of these qualities have developed over thousands of years, the statement says. Thus, reclamation after mining in southern Wyoming will be tricky at best.

In fact, according to Robert Dorn, plant ecologist for the Wyoming Department of Environmental Quality (DEQ), some sites

(continued on page 5)

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BLM analyzes potential Southern Wyoming coal mining sites

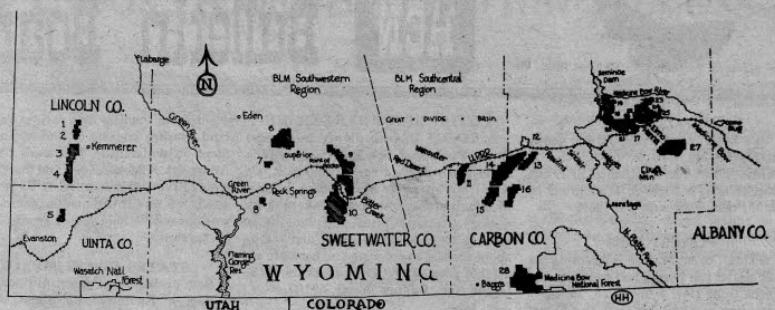
This map is taken from the BLM's Preliminary Draft Regional Environmental Statements. In the regional statements, BLM is attempting to analyze the cumulative regional impacts from about 28 active or proposed coal mines (shaded areas on the map). Some of the proposals are only potential mining areas and may never be developed. Thus, the BLM effort is only a rough approximation of regional impacts, but it is the best guess available at this time.

Only about 17 of the 28 sites are undergoing "site specific" environmental impact analysis by BLM. Most of the others (such as the sites around Hanna and the Stansbury, Rainbow, and Jim Bridger sites) are active mines now. Kemmerer Coal has a preference right for leasing coal at the Savery site, so the site will not be included in the BLM land use planning process. If the site meets the requirements for leasing, then an environmental statement will most likely have to be prepared, according to BLM.

A couple of the proposed mines are in the advanced planning stages. A 12-volume mining and reclamation plan for the Black Buttes mine, for instance, is being considered by the Wyoming Department of Environmental Quality and is now up for public review and comment. (Copies are filed with the DEQ and with Sweetwater County.) The Black Butte permit area covers 56 square miles. According to BLM's PDES on Black Butte, the mine would supply Commonwealth Edison of Chicago and Idaho Power and Light.

The Long Canyon, Savery, Carbon County, and Carbon Basin proposals would involve underground mining. The Vanguard mine is an active underground mine. Most of the others are, or would be, conventional strip mines.

Much of the private land involved in these proposals is owned by the large



KEY

Name of mine	Companies involved
SOUTHWESTERN:	
1. North Block	Kemmerer Coal
2. Twin Creek	Rocky Mtn. Energy (RME)
3. South Block	Kemmerer Coal
4. North Haystack	FMC Corp.
5. South Haystack	RME
6. Long Canyon	Sun Oil
* 7. Stansbury	RME
* 8. Rainbow	Columbine Mining Co.
* 9. Jim Bridger	Pacific Power and Light (PPL)
10. Black Butte	Peter Kiewit Sons and RME
SOUTHCENTRAL:	
11. Cherokee	PPL
12. North Knobs	Energy Development Co. (EDC) & RME
13. Continental Divide	EDC & RME
14. Red Rim	EDC & RME
15. China Butte	Arch Minerals & RME
16. Atlantic Rim	RME and Drummond Co.
* 17. Hanna South	Arch Minerals
* 18. Medicine Bow	Arch Minerals
* 19. Medicine Bow Exp.	Arch Minerals
* 20. Seminoe I	Arch Minerals
* 21. Seminoe I Exp.	Arch Minerals
* 22. Seminoe II	Arch Minerals
* 23. Seminoe II Exp.	Arch Minerals
* 24. Carbon County	RME
* 25. Rosebud	Peter Kiewit Sons
* 26. Vanguard and Rimrock	EDC
* 27. Carbon Basin	Nuclear Resources Inc.
* 28. Savery	Kemmerer Coal
* Active mine	

(continued from page 4)

"have such poor prospects for reclamation that we may have to simply prohibit mining on these sites."

The reclamation plans outlined in the BLM's state that "seed mixes to be used in reclamation would include native vegetation, to the extent possible, and would be designed to obtain a satisfactory balance of grasses, forbs, and shrubs." (Atlantic Rim PDES)

But, alas, designing a seed mixture and returning a diverse shrub-type vegetative cover to mined lands are two different things, according to those same impact statements:

"Vegetative type conversion to grassland from sagebrush, mountain shrub, and saltbush is likely to occur on the reclaimed areas since it would be difficult to reestablish the plant species indigenous to the area....Reestablishment of native species is expected to occur through natural succession over the long-term (not less than 30 years)." (Red Rim PDES)

"A perennial grass cover would be established initially to retard loss of topsoil. Shrubs would not be established for many years due to competition for water and nutrients and because of shrubs' slower growth." (Carbon Basin PDES)

DEER MICE WILL PROSPER

According to Strickland, over 90% of the reclamation plans received by DEQ list livestock and wildlife "grazing" as the "post reclamation land use objective."

True, the grasses will be much more productive for cattle and for deer mice. But the BLM southcentral PDES indicates that a near-monoculture of grasses on the reclaimed lands would have a long-term negative effect on wildlife:

Only 15-20% of the reclaimed lands could be returned to a native condition that

granted to the railroad by the federal government 110 years ago to encourage the construction of the transcontinental railroad. The "checkerboard" pattern of these al-

ternating public and private sections may make mining on most of the private lands uneconomical without BLM and U.S. Geological Survey approval to mine the public sections.

(Here, the game and fish department, in its comments on the statement, recommended insertion of the words "if ever".)

The southwestern PDES carries the same message: "adequate habitat would not be restored for antelope, deer, and sage grouse for a long-term — 20 to 50 years."



Game and Fish photo by Greg Ray

ASSESSING THE VEGETATION. Wyoming Game and Fish Department staff biologist Harold Harju (right) and special projects biologist Greg Hallsten review range transects to assess the species, density, and condition of vegetation within a 67,000 acre area being considered for coal leasing.

These probably could not be returned for 50 or more years following reclamation, according to the statements.

The southwestern PDES carries the same message: "adequate habitat would not be restored for antelope, deer, and sage grouse for a long-term — 20 to 50 years."

According to Dorn, DEQ has a "fairly" consistent policy on reclamation: "If it is public land, we require industry to put back what was there before mining. If it was 90% sagebrush, we expect them to eventually return the 90% sagebrush. If it is private land, we will comply with what the owner wants."

However, these requirements don't guarantee the shrubs will ever be established. "Our one big problem now is that the seed sources are hard to find for most of these shrubs, although we are starting to locate some sources. Even so, we have little information available on how to handle the seeds for each individual species to insure maximum viability," Dorn says.

WHAT IS WILDLIFE WORTH?

Harju feels that both BLM regional statements fail to assess the real economic impacts of these animal losses. "If you lose seven antelope does this year, the next year

(continued on page 6)

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HCN

Bulletin Board



PEDAL POWER

A new book called *Pedal Power* shows do-it-yourselfers how to use bicycles to generate power. The book, edited by James A. McCullagh, is \$4.95. It is published by Rodale Press, Emmaus, Pa. 18049.

FOREST JOBS

The U.S. Forest Service is accepting applications for temporary and seasonal employment from Dec. 1 until Jan. 15. More information is available from any Forest Service office.

S. Wyoming . .

(continued from page 5)

it becomes a loss of 21 since each healthy doe would have had twins. BLM should figure the loss of future generations, plus the offspring of future generations, and so forth, projected over 50 years. These losses represent a huge cost to the state from coal development."

The regional environmental statements forecast a population increase of 50,000 people by 1990 in southern Wyoming, half of which would be directly attributable to coal mining. The southwest PDES indicates they won't all be harmless little old ladies:

"Perhaps more important over the long-term is the effect of increased population. Human activity would result in wildlife harassment and animal loss owing to increased recreation pressure. Many species (elk, coyote, fox, and raptors) would retreat from areas of extensive human use, even if no actual physical habitat destruction takes place. Some species populations would be reduced and would never recover because of permanent alteration or loss of habitat."

To minimize wildlife losses from all causes, Strickland says his department has recommended that "high density wildlife habitat, habitat critical to game populations and endangered and threatened species, unique habitat (e.g. rim rocks, marshes, etc.), and flood plains" be designated as unsuitable for mining.

The new federal strip mining bill provides for assessing areas, such as natural systems that would be "significantly damaged" by mining. The federal government is to assess all federal lands and lands over federal coal, and the state governments are to assess all other lands.

CERTAIN ADVANTAGES

Besides keeping the electric can openers of America turning, there are certain other advantages to all those coal mines out there. According to BLM's southwestern PDES, the mines will provide a new recreation resource with tons of potential:

"There would be increased recreation capabilities in other areas, such as the human interest values generated by surface mine development... The new surface mine operations could become significant recreation attractions for viewing and sightseeing."

Yep, a strip mine photo overlook might be just the thing to relieve the monotony of the bermuda shorts-and-instant crowd heading back to Poughkeepsie. And for the residents of Wamsutter and Elmo and Baggs, strip mine watching might be just the thing to do in the not too distant future.

That and huntin' deer mice.

CUSTER STATE PARK GUIDE

A 64-page *Introduction to Custer State Park and the Southern Black Hills* was published this summer. It is a small, but attractive book, which includes information about the South Dakota park's geology, mammals, birds, and plant life, as well as its camping, fishing, and hiking spots. Details on ordering the book are available from RAWCO Publishers, 1739 Grand Ave., Billings, Mont. 59102.



ABBEY AT WILDERNESS MEETING

The Montana Wilderness Association annual meeting is in Livingston, Dec. 2 and 3. The list of speakers includes author Edward Abbey, Wilderness Society President Celia Hunter, Montana Gov. Tom Judge, Rep. Max Baucus (D-Mont.), and Pete Sorenson, special assistant to M. Rupert Cutler, assistant secretary of agriculture. These and other speakers will

discuss the roadless area review, railroad land grants, impacts of timber management on watersheds, Montana's Natural Areas Act, wilderness use, and the Yellowstone River. Registration is \$5 without meals or \$13 with three meals included. All sessions will be held at the Paradise Inn in Livingston.

STATES ASSESS IMPACT

Both problems and opportunities are discussed in "Environmental Impact Assessment: Policy Considerations for the States," a study funded by the National Science Foundation for the Council of State Governments. Both Utah and North Dakota are discussed as innovators in environmental analysis at the state level. The 42-page booklet is available from the Council of State Governments, P.O. Box 11910, Iron Works Pike, Lexington, Ky. 40511 for \$3. Quantity discounts are available.

YOUTH CONSERVATION CONTEST

Dinner with the governor and a \$50 U.S. savings bond await the winners of an Energy Conservation Contest directed by the Wyoming Council for Children and Youth. The contest is open to Wyoming children ages 6 to 13, who are asked to make energy conservation posters as en-

tries, and teenagers from ages 14 to 19, who will participate in an essay contest. Entries are due Feb. 15. For more information contact the Wyoming Council for Children and Youth, University of Wyoming, Room 415, Old Main, Laramie, Wyo. 82071.

UTILITY RATE FORUM

A two-day conference on utility rates has been announced by the Colorado Utilities Taskforce, Mountain Plains Congress of Senior Organizations, and Colorado Congress of Senior Organizations. The first day of the conference will be at the Quality Inn in Denver at East 18th Ave. at Sherman St. On Dec. 7 participants will attend the first day of public hearings before the Public Utilities Commission on basic rate structures of electricity and natural gas.

SUBDIVISION COSTS

Maine officials now have a simple way of estimating the economic impact of subdivision development and open space preservation, according to *Maine Times*. The system is detailed in a manual prepared by the Allagash Environmental Institute entitled: "Comparative Economics of Residential Development and Open Space Conservation." It is \$4 from The Maine Coast Heritage Trust in Bar Harbor, Maine.

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Nov. 18, 1977 — High Country News-7

Shale firms bypass Colorado permit process

by Dan Whipple

Two Colorado environmental groups are charging that the Colorado Mined Land Reclamation Board (MLRB) "is in violation of the law and is unwilling to enforce the law," because the agency won't require the two oil shale projects in the state to obtain mining permits for their current phases of operations.

The companies are apparently taking advantage of the confusion among two state agencies and one federal one about whether mining has actually begun.

The Colorado Open Space Council Mining Workshop (COSC) and Friends of the Earth (FOE) contend that the operations being conducted on the Rio Blanco Oil Shale C-a tract and on Occidental Petroleum-Ashland Oil's C-b tract constitute "mining" under the Colorado Mined Land Act. Both the state attorney general's office and the staff of the MLRB concurred in that opinion, but, at a special hearing, the seven-member MLRB board did not find the companies in violation of the law due to "extenuating circumstances."

The mining permits are required so that the state can ascertain the extent of the work to be conducted on the site as specifically as possible, and whether the work will be carried out within the requirements of state law.

The environmentalists claim that, under Colorado law, the activities currently underway at the sites constitute "site preparation," which is clearly defined as mining in the statutes. C-a is preparing to drill a 15-foot diameter shaft to a depth of 900 feet, in preparation for the underground extraction of oil from the shale. The C-b operators will drill four shafts, two of which will be 30 feet in diameter and extend to a depth of nearly 1,000 feet. Road construction, site development, and the preparation for commercial development are underway at both sites.

FOE's Kevin Markey says, "The law is clear. These mining operations require a permit. Construction and site development are mining under the law. Occidental itself admits in its detailed development plan that 'the construction period of the full-scale commercial facility will begin with shaft sinking in September 1977 and end in September 1982.'"

The companies now claim that the digging of these shafts is prospecting work —



Photo courtesy of Friends of the Earth, COSC Mining Workshop
EARTH MOVING EQUIPMENT at the C-a oil shale tract in Colorado. Rio Blanco uses the equipment for site preparation, not simple exploration work, two environmental groups claim.

"We described the shaft-sinking in the application for a prospecting permit. What they are trying to do now is force a narrower interpretation of the law." Lieber says that under Rio Blanco's interpretation of the law, a prospecting permit won't be needed until next fall.

The Mined Land Reclamation Board held a special meeting on Nov. 14 to consider the arguments. The board's staff felt strongly that Rio Blanco is doing site preparation work, which constitutes starting construction, according to staff member Dean Massey. However, the companies had asked for permit information several months ago, when there was confusion at the agency about the requirements. The board ruled that, in view of these "extenuating circumstances" — the confusion at the agency — the companies could proceed with their work, but should apply for permit applications now. The board also said that, in the future, a mining permit would be required under similar circumstances.

COSC and FOE contend that, while the board's decision covers its own errors, it does little to enforce the law. Markey says, "The decision means nothing. These are the only two oil shale projects likely to be in the state for the foreseeable future."

FOE and COSC are also contesting the decision of the state Air Pollution Control Division not to require the companies to get state air quality permits on essentially the same grounds. The air quality division apparently disagrees with the MLRB about whether mining has begun. It says that mining won't begin until the shafts are completed and "drifting" — construction of the retorting rooms — begins.

The division issued a fugitive dust permit on Aug. 30 to the companies, covering the dust that will be raised by clearing 30 to 40 acres of land for the initial site. In a letter to division director Richard Auberle, FOE and COSC say that "since retorting facilities are under construction, an additional permit for a new direct air contamination source is required."

The state Air Pollution Control Division argues that no additional permit is required at this time. But, since the fugitive dust permit does not cover all of the present activities, the state will "clarify" — or, alter — the permit to cover these operations, according to staff member John Plog.

The existing permits apparently need a lot of clarification. The fugitive dust permit

was issued on the basis of how many acres would be disturbed by operations, not by how much pollution would be emitted into the air from those operations. Plog says, "The fugitive dust permits were issued before we knew how much dust there would be."

The development phase permits won't be required until next year, according to Plog. Then both the division and the companies

will be able to determine the characteristics of the rock formation and to better estimate emissions, he says. "Right now, it's mostly guesswork."

The "guesswork" is apparently good enough for the federal Environmental Protection Agency, however. EPA will require the operators to get air quality permits now. Public hearings have been scheduled on Dec. 5 and 6, but an EPA spokesman says the agency doesn't anticipate any problems with the granting of the permits. The companies, however, fear that delays are going to result from EPA's decision.

The two environmental groups are very concerned about the state's neglect in enforcement of the reclamation and air quality laws. COSC's Brad Klaefehn says, "We don't feel that the companies have any grounds for delaying their applications. If this is their idea of meeting 'all the state environmental laws and standards,' as they promised, they are not off to a very auspicious start."

Markey says that they are undecided about whether to appeal the state decisions.



HCN BOOKS

CONDOMINIUM

by John D. MacDonald, J.B. Lippincott, Philadelphia, 1977. \$10.00, hard cover, 447 pages.

Review by Peter Wild

When Thelma Mensenkott turns onto the Jersey Turnpike for the last time, she feels as if she is "being yanked away from the place where her protective coloration worked." Poor Thelma, she tends toward madness anyway. How quickly some Americans abandon home, family, and familiar surroundings for the bright dreams that the retirement industry dangles at the end of their working lives.

This retirement dream happens to be a condominium in Florida — though for all its plastic lack of individuality it might as well be in Phoenix or Telluride. Most of its eager residents have sunk the last of their savings into acting out visions of sunny days and balmy nights. They soon learn, however, that the multi-story, spanking-new monster is falling apart from its penthouse (containing, of course, an eccentric millionaire and his lascivious honey) to its friable foundations. Burning with self-righteous indignation, the "suckers," as the local real-estate salespeople call them, decide to organize. Naturally, there's little the insurgents can do against the bodyless corporation that has taken them for the last financial ride of their lives.

So far, so dull. But there's more. Through a web of subplots, we meet John Birchers, freaky environmentalists, hitmen, and silky-sleazy contractors who go hopping in

and out of bedrooms, boats, and corporate boardrooms in an orgiastic panoply of John D. MacDonald personae.

And then there's — yes, we could see it coming since page 24, where Gus Garver discovers ominous cracks in the seaside rabbit warren — The Hurricane. This is nature's revenge, huffing and puffing across the sea toward Golden Sands, Azure Breeze, and all the other upright junk strung along the once pristine Florida beach.

One must admit to a certain vengeful exhilaration as those steel and glass babies begin to sway. Kitschy, yes. MacDonald has at least three times the characters and twice the bulk he needs for a tight, no-spare-parts novel. Still, if you plan to be snowed in this winter — or if like me you get occasional hunger pangs for pure pulp — **Condominium**, with its biff, bam, boom, and obvious environmental moral, might be a good book to have around, just for the sheer inane fun of the ride.



What's cooking?

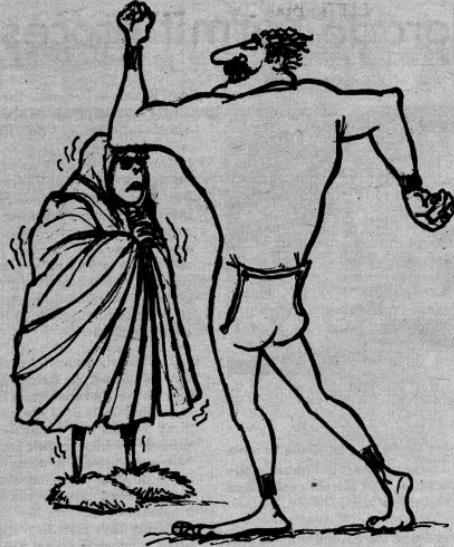
This Thanksgiving when people ask what's cooking, go ahead and tell them of your culinary efforts and exquisite elixirs. (And then you could casually mention the West is being plucked, trussed, and served up as the main course for the nation's energy appetite. If that gets a discussion going, slip your friend a High Country News subscription blank. HCN can help your friend monitor the developing West.)

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8-High Country News — Nov. 18, 1977



A MODEST PROPOSAL

music and words by Fred Small

I re-member well when but a child of tender years The day that I dis-
cov-ered the cata-log from Sears. The peo-ple in the pic-tures, they made me stop and
stare: whod have guessed that they'd be dressed in thermal under-wear? Un-der-wear!
long un-der-wear! It makes the foulest weath-er feel like fair! It's ten be-low and
icy winds blow whistling through the air— Let it storm, Jim toast-y warm in—
side my un-der-wear!

From the collection "Aquifer" © Fred Small 1977

Jimmy says to set our thermostats at sixty-five. Paul Newman wears it all the time,
In skimpy briefs and brassieres and Redford he does, too.
you will not survive.

The Lord in all his wisdom Farrah Fawcett swears that
gave us more than skin and hair: it's the only thing to do.
He gave us wit, ourselves to fit Lovers, if you think
with thermal underwear.

Underwear! Long underwear!
Slip inside and leave behind your cares.
The oil and gas kingpins will rant and tear their hair—
Who needs them?
We've got a friend in thermal underwear!

Underwear! Long underwear!
Beneath our clothes, without it we are bare.
Plutonium is perilous and coal pollutes the air:
The energy source that's best, of course, is thermal underwear!

BREAK UP THE CIRCLE

words and music by Fred Small

Simply

[Chorus] Break up the cir-cle of life with-out end-ing,
wait til our im-age is all that remains. Tear from the soil—
the nourishment of ages Steal from our children the blood
of their veins) Watch the con-tinent a-ri-
sing as if fresh-born from the sea.— ripe for
the goodly enter-prise of peoples from the old world torn
free — vast as our hopes, dark as our fears, with
wealth e-nough to share be-yond the years.

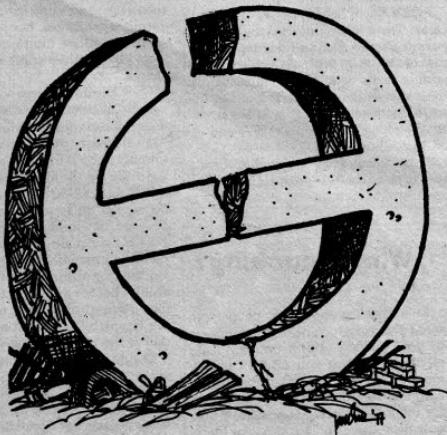
From the collection "Songs for the Land and its People" © Fred Small 1975

Lay your imprint on the land,
that it may reveal your faith.
By the power of your proud hand
new fences strong and straight.
Seize the rivers as it flows,
the bird as it flies;
Catch a glimpse of wonder
before it dies.

CHORUS

As disease and ignorance gives way
to boredom and despair
And the force of eons is scattered
upon the dark'ning air—
Escaped at last from death,
rush to its embrace;
Implicate all life
in the doom of your race.

CHORUS



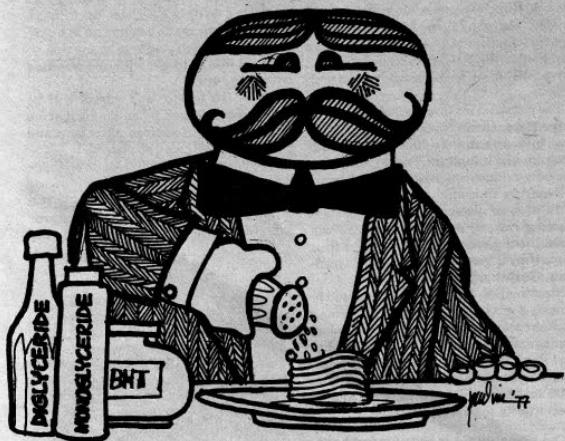
Doom ditties

The environmental songs of Fred Small

Words and Music

to the songs on this page

© by Fred Small

**PRINGLE JINGLE**

words and music by Fred Small

Bouncily

[Chorus] Pringle's Newfangled Po-ta-to chips! They're crun-chy so
munchy - They'll make you smack your lips. A boon to the con-sum-
er a tri-umph fur man- To fit so many po-
ta-to chips in a tennis ball can!] A mis-shap-en po-
ta-to chip can ru-in your whole day ours are per-fect ov-
als, i-den-ti-cal in every way None is too
greas-y None is too brown Our re-hy-drated po-
ta-toes make the best chips in town!

from the collection "Soundings" © Fred Small 1975

CHORUS

All this may sound incredible,
But wait — there's even more:
You can take our chip where potato chips
Have never been before!
Stuff 'em in your knapsack,
Not one will break.
And you can leave the can at the campsite
Or floating in the lake!

CHORUS

Four and one-half ounces
Only fifty-seven cents—
We only use the finest
Ingredients.
Mono-and diglycerides,
BHA—
They can sit on the shelf for nineteen weeks
And you can buy them anyway!

CHORUS

Nov. 18, 1977 — High Country News-9

LITTERBUGGING

words and music by Fred Small

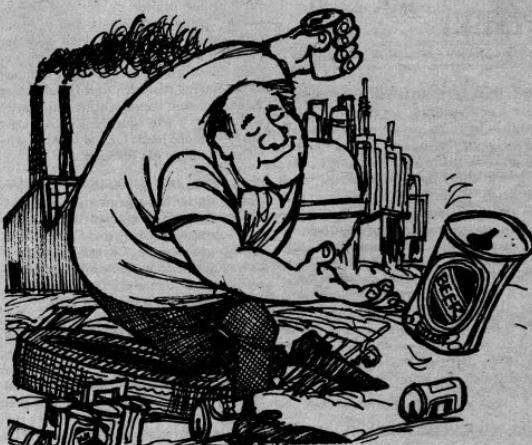
Air pol-lution's fine and dan-dy P-C-B Is just like candy, nuclear pow-er's
mighty handy but lit-ter is a sin! The mean-est, nast-i-est,
Kil-ler sifit as-bes-tos or the oil-slick spiller, but the work-ing slob who
drinks his Mill-ter and mis-ses the ref-use bin [So keep America Beau-ti-ful! Pitch
chorus]
in and do your duty- ful! Since peo-ple start pol-lution, they can stop it
It all de-pends on you and me—don't put the blame on in-dustry, where
waste is just an-oth-er word for prof-it.]

from the collection "Spring Flood" © Fred Small 1976

Consume now, before it's too late!
Returnables are out-of-date—
Free enterprise can't tolerate
A no-deposit ban.
Armageddon's nearly on us—
Get the Boy Scouts and Kiwanis!
Volunteer and join the chorus:
Throw it in the can!

CHORUS

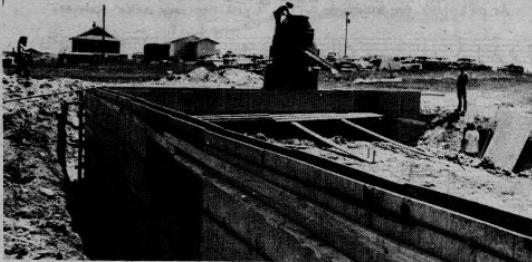
As the midnight bell is tolling,
Press releases keep on rolling,
Somehow rather less consoling
As we drown in shit.
Businesses throughout the Nation,
Preaching their self-exculpation—
Blaming the proliferation
Of every litter bit!

CHORUS

Cartoons by Rob Pudim

10-High Country News — Nov. 18, 1977

Methane-powered greenhouse faces first winter



THE 5,000 SQUARE FOOT GREENHOUSE was built with mainly volunteer labor for a materials cost of \$30,000. The photo above shows the work that was done this spring pouring the foundation.

A 5,000 square foot solar-reliant greenhouse in Cheyenne, Wyo., is just about ready for planting. It will be one of the first commercial buildings in the country to utilize a methane digester. The biggest hurdle to getting it built has had nothing to do with its solar and methane systems, however.

"The biggest job has been organizing the community," says Gary Garber, who is directing the project for the Community Action Program of Laramie County.

The community, in turn, has made the building possible at the low cost of about \$6 per square foot. Garber says he's had support from the Laramie County Commissioners, senior citizens, trades people,

laborers, and building supply firms. Even the land for the project three miles east of Cheyenne was donated.

Soon, Garber says, the greenhouse will be producing up to \$20,000 worth of vegetables. A volunteer staff of about 70 senior citizens, directed by a full-time greenhouse manager, will keep things growing.

The produce will go first to the greenhouse's volunteer workers, then to the local Meals on Wheels program and the Cheyenne Housing Authority for distribution to the poor and the elderly. Any excess vegetables will be sold to the public.

"Anybody who likes to eat will be out here buying groceries," says Glenn Vosler, greenhouse manager.

The project was designed and directed by a corps of 30 local volunteers, including four high school students, trained at a one-week workshop by the Domestic Technology Institute (DTI). The group had the help of three experts in alternative technology: Malcolm Lillywhite, a solar physicist and founder of DTI; Fred Varani, an engineer with Bio-Gas of Colorado; and Dave Elfring, an architect who works with DTI.

The construction team included two paid carpenters, Glenn Vosler and Paul Hansen, and as many as 50 summer youth workers and volunteers. The team also included a volunteer plumber, Mollie Rivera.

Even the finishing touches will be the work of a volunteer crew. For three days starting Nov. 30, a group of about 20 will build the digester tank. In return for their help, they'll gain knowledge and experience, Garber says.

Starting Dec. 5, the first planting will be done by a group of 60-70 people attending a workshop on solar collectors, greenhouse management and production, and food drying. Registration for the week-long workshop will be on a sliding scale ranging from \$100 to "four packs of seeds," depending upon ability to pay, says Garber.

The greenhouse has been funded hand-to-mouth. Community Action of Laramie County initially received \$15,000 for materials from the U.S. Community Services Administration (CSA). When that money ran out this summer, the project was granted \$2,000 from the Laramie County

Commissioners. This fall, broke again, the project received a "continuation grant" for \$13,000 from CSA.

That's almost all the money they need. The structure is finished. It lacks only an insulating cover to keep heat loss through the clear fiberglass to a minimum at night. But Garber doesn't seem to be worried.

"We'll just start out with cold-weather crops," he says.

Crops like lettuce and carrots will be planted soon. Later, when the insulating cover is finished, tomatoes, cucumbers, and green chiles will also be planted.

The greenhouse is divided into three large chambers with 1,500 feet of growing space each. This makes it possible to run the greenhouse at different temperatures and grow both warm weather and cold



SOLAR HEAT for the greenhouse will be stored in 200 steel 55-gallon barrels filled with water.



The HCN Hot Line

energy news from across the country

COAL POLICY SHIFTS? Interior Secretary Cecil Andrus casually announced what may be some important shifts in federal coal policy at the annual Coal Conference and Exposition in Louisville, Ky., Oct. 18. In the short term he predicted, coal production will continue to come from private and state lands in Eastern and Midwestern states, rather than from federal lands in the West. He also said that "with few exceptions," the Administration does not intend "to lease federal coal in the foreseeable future where the federal government does not own the surface above the coal." Such a policy could have a profound effect on some Western states. In North Dakota, for instance, 4.5 million acres of federally-owned minerals lie under private land.

STILL NO ENERGY BILL. The House-Senate conference committee working on the national energy bill hopes to complete its work before the end of the year, but that may mean mid-December or even Christmas Eve, according to Sen. Henry M. Jackson (D-Wash.), chairman of the Senate Energy Committee. The most controversial differences between the House and Senate versions of the bill remain to be resolved. In his energy message Nov. 8, President Jimmy Carter linked the country's economic problems with its failure to take prompt action to solve energy problems.

BREEDER CALLED OBSOLETE. While remaining committed to "strong research and development program in advanced nuclear technology," President Jimmy Carter vetoed a bill that would have authorized \$80 million for the Clinch River breeder reactor. Carter says the project is "technically obsolete and economically unsound." Carter's veto does not mean the end of the project, however. Congress has added the breeder appropriation to the Energy Research and Development Administration appropriation bill. Carter will either have to veto the ERDA budget bill or impound funds for the breeder, if he wants to finally get his way.

GAS PIPELINE GO-AHEAD. President Jimmy Carter has signed a joint congressional resolution that gives final approval to a route across the U.S. and Canada for an Alaska gas pipeline. Carter initially approved the route in September in an agreement with Canada. Pipeline construction is scheduled to begin in 1980.

INSULATION CONSULTATION. Someone in Kansas and Missouri is using apparently fraudulent tactics to sell home insulation. The Federal Energy Administration reports that homeowners have been called by a person purporting to be a representative of the government, usually the "President's Energy Conservation Council." The homeowner is told that he or she will receive a \$100 to \$400 tax credit following the installation of insulation by a certain company. An appointment is made, and the installer assures the homeowner that he will receive a certificate guaranteeing the larger \$400 tax credit. However, the legislation guaranteeing that tax credit has not yet become law, and no certification would be necessary to obtain it. FEA also warns that no insulation contractor can claim affiliation with the government.

Classified ad rate is 10 cents a word, \$1 minimum, no billing. Deadline is Tuesday of publication week.

POSITIONS. The Powder River Basin Resource Council, a citizens' resource conservation organization concerned with energy development in eastern Wyoming, plans to hire three field organizers this winter. Energetic, enthusiastic people with a potential for leadership are desired. Rewarding work, invaluable experience. Send resumes to PRBRC, 150 W. Brundage, Sheridan, WY 82801.

COMMUNITY ORGANIZERS - ACORN. The most successful community organization in the country, has openings for organizers in eleven states (AR, TX, LA, TN, MO, SD, FL, CO, PA, NV, IA). ACORN is working for political and economic justice for its low to moderate income membership. Issues range from neighborhood deterioration to utility rates, taxes, health care etc. Hard work, low pay — enduring rewards. Training provided. Must be interested in social change. Contact: ACORN, 523 W. 15th St., Little Rock, Arkansas 72202 (501) 376-7151.

PIANOS AND ORGANS. used and new — some repossessions now available. An "Organ and Piano Mobile Showroom" will soon be in your area with the best prices in the state on Wurlitzer, Lowrey, and Thomas pianos and organs. If interested write: Wyoming Mobile Division, Home Entertainment Center, Box 947, Vernal, Utah 84078.

Classified Ads

PLACEMENT SERVICE. Organizers Clearinghouse, operated by the Western Office of The Youth Project, is a job and internship placement service connecting non-profit community organizations looking for staff with organizers looking for work. Our organizational clients are located in the Western Region of The Youth Project, including most of the states west of the Mississippi River, Alaska and Hawaii. Contact: Organizers Clearinghouse, The Youth Project, 149 Ninth Street, San Francisco, California, 94103. (415) 626-5570.

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weather crops simultaneously.

The middle chamber, which is designed to be the warmest, will use methane gas from the digester as a backup to the solar heat. Chambers to the west and east will be backed up by wood stoves.

Some of the light transmitted through the greenhouse fiberglass hits the black surface of 200 55-gallon steel barrels filled with water. The black surface changes the light to heat, most of which is absorbed by the water. When the sun goes down and the greenhouse cools off, the barrels will begin to give off the heat they've stored up during the day.

While the entire sloping south side of the structure is covered with fiberglass, the north, east, and west sides are solid — and filled with eight inches of fiberglass insulation. The solid portions of the ceiling contain 10 inches of insulation. To allow for these thicknesses, framing was done with two by eights on four foot centers.

"This is a demonstration of a new energy-conserving building method," says Garber, "as well as of passive solar heating."

The methane digester is designed to process 150 pounds (dry weight) of dairy manure and garden wastes per day. It will produce not only burnable methane gas, but also carbon dioxide, which is needed by the plants, and sludge, which will be used as fertilizer.

A small grant from a Montana group, the Center for Social and Environmental Concerns, will pay for establishment of an alternative energy library in a small room along the north side of the greenhouse.

"We hope anyone in the community interested in solar energy will check out our energy park to avoid mistakes and pick up some helpful ideas," Garber says.

Community Action of Laramie County is



MOLLIE RIVERA volunteered her services as a professional plumber for the Cheyenne commercial greenhouse project.

a federally-funded group with the mission of helping low-income people. It has had a winter's experience with three smaller solar greenhouses with no source of back-up heat. They were built last year with the help of 15 teenagers from low-income families. Each of these 16 by 10-foot structures made it through sub-zero temperatures without killing any of the plants inside, Garber says.

Now, on the threshold of commercial greenhouse production, Garber is confident that the group's newest, largest greenhouse will be equally successful.

"Don't let somebody tell you you can't do it," he advises others embarking on low-cost, do-it-yourself solar energy projects.

Garber's boss, Al Duran, is proud of the project. He says it shows that there are ways for communities to solve environmental and economic problems without government help.

recreational values of these areas." For more information contact the Forest Supervisor, Gila National Forest, 2601 N. Silver, Silver City, N.M. 88061.

ENERGY EXTENSION SERVICES. Two grants have been awarded in this region for Energy Extension Services from the federal government. In Wyoming, the program will focus primarily on single family residences, which will be encouraged to use solar and wind power. In New Mexico, solar energy and conservation information will be provided to homeowners, small businesses, and farmers.

SITING COSTS CHANGE PLANS. Utah Power and Light Co. says it will be building two new power generating units in Utah instead of in Wyoming, due partially to the cost of plant siting permits in Wyoming. Plant siting requirements are less stringent in Utah. The utility said it would also be cheaper to use its own coal at the Emery, Utah, site than to use Wyoming coal. Utah Power has not rejected the possibility of adding two units later to the Naughton plant at Kemmerer, Wyo., which now has three units.

GILA GEOTHERMAL. Geothermal power development may threaten portions of the Gila Wilderness in New Mexico and potential wilderness lands nearby, according to the New Mexico Wilderness Newsletter. The U.S. Forest Service has prepared a draft environmental statement on whether or not these areas should be offered for commercial leasing. The newsletter, published by the New Mexico Wilderness Study Committee (Box 38, Glenwood, N.M. 88039), warns: "Exploration and clearing, road construction, pipelines, powerlines, pollution, etc., would have destructive impacts on the superb wilderness, wildlife (bighorn sheep), scenic, and



energy news of the Rockies and Great Plains

NUCLEAR VETO KILLS COAL FUNDS. President Jimmy Carter's recent veto of the Clinch River breeder reactor legislation also killed a program which would have provided federal funds to build a coal gasification demonstration plant. Among the firms upset with Carter's move was ANG Coal Gasification Company, which has proposed a large gasification plant north of Beulah, N.D. "The project hinges on federal financing," according to a spokesman for ANG. He says there's no other way to raise the \$500 million in capital required for the first phase of the plant.

SOLVENT MINING IN UTAH. A University of Utah study says that solvent mining for coal could present a significant breakthrough for coal production in the state. Solvent mining involves converting coal to liquid underground and pumping it to the surface. The study says that this process would enable greater recovery of coal and reduce sulfur and ash content, while increasing the heat value by as much as one-third. Only about four percent of the state's 28 million tons of known coal reserves can be mined with existing technology, according to the Deseret News.

Nov. 18, 1977 — High Country News-11

Herschler debunks 'use it or lose it' water rights theory

Wyoming Governor Ed Herschler surprised environmentalists at the Wyoming Water Development Association meeting Nov. 14 by speaking out against the "use it or lose it" theory of water development. Herschler also said he thinks Wyoming law could be used to protect minimum flows.

"Water projects should not be built unless there is a specific demand for that water," he says, not built simply because downstream states will steal Wyoming's water if it isn't put to use here. "All water flowing from the state is controlled by interstate compacts and decrees which protect our water rights whether or not we use it."

In Wyoming, he says, the feasible projects have already been completed. He investigated the matter after the 1977 legislature voted to allocate some of the severance tax funds into the water development fund, partially because the legislators were told that many projects have not been built because of lack of funds. However, the Interdepartmental Water Conference told him projects aren't being completed because of problems with economic feasibility, land and water availability, environmental considerations, uncertain demand, and legal disputes — not money.

Herschler says it's "proper" for the state to encourage water projects. However, he would oppose efforts to form a state water development agency with its own funding powers. He wants participation by the legislature, the public, and the governor in any decisions on new water projects.

He says the present law helps insure that water projects will be for multiple use and that public funds won't be used to underwrite "wealthy private industry. . . . Coal taxes shouldn't be used to subsidize the companies that pay them."

Referring to the question of federal vs. states' rights, he says that one of the biggest criticisms the federal government makes of state water laws is the lack of protection for minimum flows. The Wyoming Legislature has repeatedly rejected attempts at legislation. Herschler believes, however, that under Wyoming water law, the state engineer must consider broad public interests, which he interprets to include consideration of in-stream flows. To further protect minimum flows, he thinks the legislature "may well be advised to further amend laws."

However, he thinks the legislature should consider projects on a case-by-case basis before granting water rights just for minimum flows.

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Water Quality Division

On December 8, 1977, at 9:00 AM, at the Natrona County Public Library, 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 I — Quality Standards for Wyoming Surface Waters

Chapter IV — Regulations for Spills of Oil and Hazardous Materials into Waters of the State of Wyoming

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

The Water Quality Division
Wyoming Department of Environmental Quality

Hathaway Building
Cheyenne, Wyoming 82002

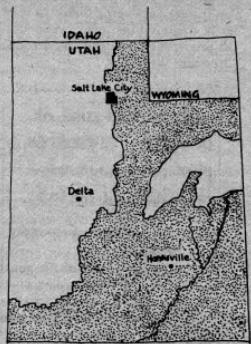
Oral statements from the public and interested local, state and federal agencies will be received in the following order:

Chapter IV — 9:00 AM

Chapter I — Upon completion of comments on Chapter IV

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 December 8, 1977, to:

Mr. Robert E. Sundin
Director
Wyoming Department of Environmental Quality
Hathaway Building
Cheyenne, Wyoming 82002



12-High Country News — Nov. 18, 1977

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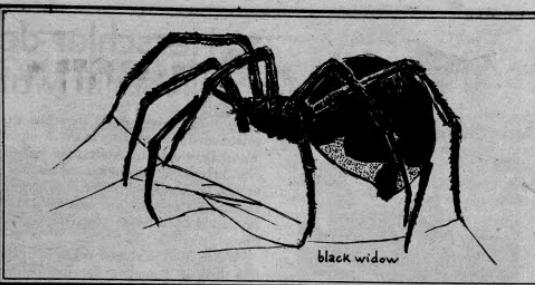
by Myra Connell

At our house, spiders go unmolested. Now and then one gets in the bathtub and is unable to get out. I presume he gets in by lowering himself from the ceiling on his dragline. Apparently he breaks the line, then cannot climb the slippery tub. I place a piece of tissue over him, pick him up gently and take him outdoors.

I haven't always been so considerate. In the 1940s I taught a country school in Hot Springs County, Wyo. It was old fashioned, with the indispensable little buildings at the back of the playground marked "girls" and "boys." The first day the children eagerly informed me that there were black widow spiders under the seat of the boys' toilet.

I investigated. It appeared the kids were right. Numerous webs were inhabited by jet-black shoe-button spiders. Too timid to examine them closely, I took the kids' word for it that they were black widows. Since I was at a loss to know what to do, the kids rescued me. They said my predecessor had placed wads of newspaper in the space and then set them on fire. I did likewise, and it worked.

Like most people, at least at that time, I believed the bite of a black widow to be deadly. Later, somewhat better informed, I



learned that only 55 deaths resulted from 1,300 cases of black widow bites in more than 20 years — from '26 to 1943. Willis J. Gertsch, an outstar arachnologist, says that poisonous snakes cause more deaths in a single year than "are credited to the black widow in more than 200." Amazingly, black widows may have saved more American lives than they have destroyed, since their silk was used for cross "hairs" in telescopic sights during World War II.

Still, if I were confronted again with nests of black widow spiders in an outdoor toilet, I'm afraid I would have to react in a similar way.

However, in the intervening 30 years increased awareness has led me to regard spiders as benefactors and friends.

When I get down on hands and knees to trim the grass along the house foundations, hundreds of spiders seek cover, but never once have I been bitten. Our cellar-way

gets messy with webs which are a little hard to ignore, especially since my neighbor criticized me for allowing such repellent things to accumulate. I never succeeded in convincing him that spiders are our allies in the never-ending battle against insects. He could not shake off the unholly fear that parents instill in children who run screaming from a small spider

whose deepest instinct is only to catch enough food to survive.

W. S. Bristow, an authority on spiders in the British Isles, estimated that these most hated creatures destroy 200,000,000,000 insects annually in England and Wales. A count made in one grassy acre in England found two million spiders. One scientist states the case for spiders thusly: "If it were not for the number of spiders everywhere, all living creatures, except leaf-eating caterpillars, might starve."

Among the most interesting spiders are the orb spinners, world's first builders of suspension bridges; the trap door spider who holds his spun door fast against enemies; the bolas spider who captures his prey by throwing a "lasso"; the fishing spiders who cut-angle human anglers; the "star boarder" who lives on insect-eating plants and eats free from their table.

While love cannot supplant hate on command, respect must follow an awareness of the ways of spiders.



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Eavesdropper

environmental news from around the world

LOONEY LIMERICKS

by Zane E. Cology

"Let's go West," said Tourist McQueen — "I hope to breathe air that is clean."

But his hope was unfounded —

He was always surrounded
By the fumes from his large limousine!

CONTAMINATED BIRDS FOUND. Geothermal project scientists in California have found very high concentrations of lead, arsenic, selenium, and cadmium in the bodies of ducks and geese shot in the Imperial Valley. In some cases, one biologist says, lead concentrations were so high that the birds should have been dead before they were shot. The source of the poisons is unknown, but these trace elements can be a by-product of geothermal energy development. The Imperial Valley is one of the nation's largest geothermal resource areas.

BOWHEAD WHALE HUNTS. The U.S. Supreme Court has upheld a lower court order that bans American Eskimo hunting of the bowhead whale for one year. Chief Justice Warren Burger failed to overturn the ruling on appeal without additional comment. The Eskimos claim that the ban robs them of their prime source of protein and does great harm to their culture. Authorities estimate that there are between 600 and 2,000 bowheads left. The State Department says that to allow even limited hunting by the Eskimos could have grave international consequences in the future protection of endangered species through international agreement. The eskimos killed 26 bowheads during the spring hunt this year and another 78 were wounded but could not be retrieved.

WATER USE TABULATED. The U.S. Geological Survey says that the average American uses 172 gallons of water daily, and that use is on the increase. The average use of water from public supplies — industrial and commercial uses — is also on the increase. USGS says that total average water use was about 420 billion gallons of water daily, or 1,900 gallons per person. This water was used for public supplies, commerce, industry, irrigation, and rural water supplies.

SULFUR OUT, SULFUR IN. Power plants have been so successful in removing sulfur dioxide from stacks that they are being forced to return some of it so that their electrostatic precipitators, which remove fly ash, will work properly. A certain amount of sulfur is required in the stack gasses to create the proper electrical charge that traps the fly ash. So, some power plants are being forced to burn sulfur to create sulfuric acid, which provides the proper electrical charge, according to Chemical Week.

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Nov. 18, 1977 — High Country News-13



Western Roundup

HCN

House passes Montana wilderness bill

After near defeat, Montana environmentalists succeed in pushing nearly a million acre wilderness study bill through the U.S. House and onto the President's desk. Labeled one of the biggest wilderness fights in recent years, the bill includes nine areas that will be studied for five years.

Afraid of weakening amendments, the environmentalists opted for a suspension of rules in the House, which meant that no amendments could be added, but also meant that a two-thirds majority would have to support the bill. One month ago, the effort almost back-fired when the bill was killed because they were 18 votes short of the two-thirds majority needed. However, the bill was rescued. Sen. Lee Metcalf (D-Mont.) had already succeeded in getting the bill through the Senate.

Environmentalists hope that the bill will

protect the Taylor-Hilgard wilderness study area in the Madison Range, where a 160 kilovolt power line is proposed to serve the Big Sky ski area. The decision will depend upon whether or not the Forest Service determines that the line would sacrifice the wilderness value of the area.

In addition to the Taylor-Hilgard area, other study areas are the West Pioneers, Sapphires, Big Snowies, Middle Fork of the Judith, Mt. Henry, Scotchman Peaks, Hyline-Porcupine-Buffalo Horn, and Bluejoint.

Meanwhile, a final decision on the Endangered American Wilderness bill is being held up by the conference committee's disagreements on the Fryingpan-Arkansas area in Colorado. Other major decisions on the bill have been made.

False alarm raises nuclear security fears

The inadvertent tripping of a radiation alarm at the Idaho National Engineering Laboratory, a federal nuclear testing facility, prompted criticism of the evacuation procedures by employees. Associated Press reports that one employee said that if there had been a radiation leak, "We'd have all been dead."

The alarm was not a drill, but the reason it went off hasn't been determined, according to a Department of Energy (DOE) security official. He said that the evacuation was completed in five minutes. However, evacuation of one building was slowed by

chains locking exit doors and bus drivers reportedly treated the evacuation as though it were a drill, driving back to the site after going only about a mile from the facility. An employee also said that the bus drivers took the wrong route, driving with the wind instead of into it, which, under actual conditions, would have blown the radiation in the direction of the evacuating people.

The DOE security official discounted the employees' version of the story, saying that it was impossible for the participants to judge the efficiency of the evacuation.

State legislators warn of timber 'lockup'

A task force of legislators from five states has urged their governors to call a summit conference to head off an "impending lockup" of public timber by the Forest Service's roadless area review (RARE II). The legislators say that 40 million acres of timber will be removed from commercial sale until 1985 and that Forest Service assurances that the review won't take that long are "absolutely false."

The Western States Legislative Task Force, composed of state legislators from California, Idaho, Montana, Oregon, and Washington, say that the governors have paid inadequate attention to wilderness issues and should get involved "so we don't have to play this seven-year waiting

game," according to Oregon state Sen. Ted Hallock. The task force urged the summit meeting to be held in December in Olympia, Wash.

The Forest Service also came under criticism from Montana Fish and Game Department Director Robert Wambach, but for exactly opposite reasons. In an article in *Montana Outdoors*, Wambach says that the Forest Service pays too little attention to multiple use concepts and concentrates too much on timber production. He also says that the agency uses uneconomical methods of timber management. Wambach says the Forest Service must "develop realistic bases for management suited to society's changing value systems."



RIVER WILDERNESS AREAS are being considered along both the Green and the Yampa River Canyons in Dinosaur National Park in Colorado.

Green, Yampa river plans considered

The National Park Service is currently wrestling with river management plans for the Green and Yampa Rivers in Utah and Colorado. The agency has released an environmental impact statement of five possible plans within Dinosaur National Monument.

The Park Service has proposed 80% of the monument, or about 165,000 acres, for wilderness designation. The core of the proposed wilderness are the Green and

Yampa River Canyons, which attract 17,000 white water boaters annually. The Park Service has placed a limitation of 17,000 boasters annually and introduced a campground reservation system within the areas.

The five management plans are alternatives to the current system of limitations. Workshops have been scheduled in Utah, Arizona, and Colorado to discuss the alternatives.

Corps studies new Missouri River dam

The Army Corps of Engineers is proposing a bank stabilization program and a regulation dam along the Missouri River in North Dakota. The dam is intended to increase hydroelectric power generation at Garrison Dam and the stabilization program is apparently designed to garner the support of the state's congressional delegation. Sen. Milton Young (R-N.D.) had told the corps that he would not support the dam project unless the bank stabilization was included.

Several environmental groups, have asked for local public hearings on the proposal, though they have not announced any opposition to the proposal. The North Dakota Game and Fish Commission has told the corps that it opposes the plan, according to the *Hazen Star*. The state water commission objects to the flooding of more native bottomland for the dam project.

The corps envisions five hydroelectric projects on the Missouri, according to the project review report. This would add 457

megawatts of power to Bureau of Reclamation power sales. The Garrison Dam would supply about half of that power, making the powerhouse capable of producing a total of 672 megawatts, up from its current 400 megawatt capacity.

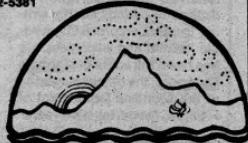
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14-High Country News — Nov. 18, 1977

STATE OF WYOMING PUBLIC NOTICE

PURPOSE OF PUBLIC NOTICE

THE PURPOSE OF THIS PUBLIC NOTICE IS TO STATE THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER DISCHARGE PERMITS UNDER THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 (FWPCA), P.L. 92-500 AND THE WYOMING ENVIRONMENTAL QUALITY ACT (36-502 et seq., WYOMING STATUTES 1957, CUMULATIVE SUPPLEMENT 1973).

IT IS THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER DISCHARGE PERMITS TO (1) ONE COMMERCIAL DISCHARGER, (2) ONE INDUSTRIAL DISCHARGER AND (2) TWO OIL TREATER ENCLASERS, TO RENEW (2) TWENTY-FIVE OIL TREATER DISCHARGE PERMITS; AND TO MODIFY (2) MUNICIPAL DISCHARGE PERMIT WITHIN THE STATE OF WYOMING.

APPLICANT INFORMATION

(1) APPLICANT NAME: CARTER OIL COMPANY
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330 NORTH MAIN STREET
SHERIDAN, WYOMING 82801
FACILITY LOCATION: SOUTHEAST OF GILLETTE,
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APPLICATION NUMBER: Wy-0027430

This facility is a proposed 250 family unit subdivision to be located in Section 31, T50N, R72W, Campbell County, Wyoming.

Proposed wastewater treatment will consist of an aerated 3 stage lagoon system with a sedimentation basin and two polishing ponds. There will be a discharge off of each polishing pond to an unnamed tributary of Donkey Creek (Class III stream).

The discharge must meet Best Practicable Treatment Standards for lagoon systems effective immediately upon discharge. A strict fecal coliform limit of 200-400 organisms per 100 ml has been set on the discharge along with a residual chlorine limit of 2.0 mg per l.

Quarterly self-monitoring and reporting will be required once the treatment facility is completed (approximately December, 1978).

The permit will expire December 31, 1982.

(2) APPLICANT NAME: FMC CORPORATION
MAILING ADDRESS: P.O. BOX 979
APPLICATION NUMBER: GREEN RIVER, WYOMING 82935
Wy-0027431

FMC Corporation operates a pumping station on the Green River east of the Company's trona plant in Sweetwater County. The pumping plant feeds raw water from the Green River to the trona plant, however, during times of heavy turbidity in the Green River, the water is first routed to a series of four settling basins before being pumped to the plant. Under present operations these settling basins are cleaned by flushing water through the basins and back to the Green River. There are a total of eight separate pipes discharging to the River, three settling basin underdrains and five valve pit drains.

Proposed permit will allow FMC to continue present operation of this facility through June 30, 1978. After June 30, 1978, any discharge to the River must conform with treatment considered by the Department to be best practicable for this type of facility (a limitation of 30 mg per l for total suspended solids will be required). The permit also contains a schedule for submission of preliminary plans and final plans and specifications. In addition, the Company is required to report the quality of the discharges and report the results on a quarterly basis. The permit will expire December 31, 1982.

(3) APPLICANT NAME: J.W. GIBSON
MAILING ADDRESS: P.O. BOX 237
FACILITY LOCATION: HENDERSON, COLORADO 80640
APPLICATION NUMBER: NW, SECTION 18, T2N, R1W, ALBANY COUNTY, WYOMING
Wy-0027432

(4) APPLICANT NAME: GULF COAST INDUSTRIES
MAILING ADDRESS: 121 E KATY FERRY, SUITE 300
HOUSTON, TEXAS 77079
FACILITY LOCATION: SPEAR LEASE M-1-A, NEW
MEXICO, SECTION 18, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027433

(5) APPLICANT NAME: ALTTEX OIL CORPORATION
MAILING ADDRESS: 640 GUARDIAN BANK BUILDING
RIVERSIDE, CALIFORNIA 92301
FACILITY LOCATION: DENVER, COLORADO 80202
ELK MOUNTAIN LEASE
NATIONA COUNTY, WYOMING
Wy-0027434

(6) APPLICANT NAME: AMOCO PRODUCTION COMPANY
MAILING ADDRESS: P.O. BOX 1680
RIVERTON, WYOMING 82901
FACILITY LOCATION: CROOKS GAP UNIT, NW, SECTION 18, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027435

(7) APPLICANT NAME: ATLANTIC RICHFIELD COMPANY
MAILING ADDRESS: 1600 LINCOLN STREET, SUITE 601
DENVER, COLORADO 80265
FACILITY LOCATION: EAST UNIT, BIG MUDGY FIELD, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027436

(8) APPLICANT NAME: SOUTHERN OILFIELD FIELD
MAILING ADDRESS: 1000 17TH STREET, SUITE 1000
DENVER, COLORADO 80265
FACILITY LOCATION: WEST OILFIELD BLOCK B UNIT, STATE
WATERFALL FIELD, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027437

(9) APPLICANT NAME: BERMERES OIL COMPANY
MAILING ADDRESS: 1000 17TH STREET, SUITE 1000
DENVER, COLORADO 80265
FACILITY LOCATION: FOHOM SPIDER FIELD, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027438

(10) APPLICANT NAME: CONTINENTAL OIL COMPANY
MAILING ADDRESS: 121 NORTH DURBIN
CAMPBELLSVILLE LIFE BUILDING
CAMPBELLSVILLE, KY 42031
FACILITY LOCATION: SOUTHERN OILFIELD BLOCK B UNIT, STATE
WATERFALL FIELD, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027439

(11) APPLICANT NAME: HUBERAT P. DANIEL
MAILING ADDRESS: 1000 17TH STREET, SUITE 1000
DENVER, COLORADO 80265
FACILITY LOCATION: IRON CREEK UNIT, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027440

(12) APPLICANT NAME: GARY OPERATING COMPANY
MAILING ADDRESS: P.O. BOX 19
JONES LEASE, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027441

(13) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: FOWLER LEASE, NEW, NEA, SECTION 7, T2N, R1W, CROOK COUNTY, WYOMING
Wy-0027442

(14) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: HARRISMAN, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027443

(15) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: HARRISMAN, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027444

(16) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: HARRISMAN, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027445

(17) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: HARRISMAN, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027446

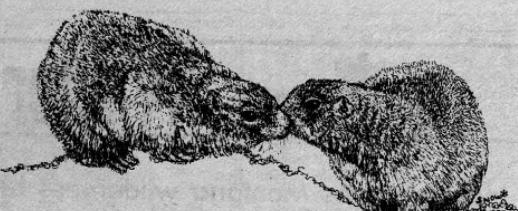
(18) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: HARRISMAN, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027447

(19) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: HARRISMAN, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027448

(20) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: HARRISMAN, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027449

(21) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: HARRISMAN, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027450

(22) APPLICANT NAME: HARRISMAN
MAILING ADDRESS: P.O. BOX 77
CASPER, WYOMING 82601
FACILITY LOCATION: HARRISMAN, NEW, NEA, SECTION 12, T2N, R1W, NATIONA COUNTY, WYOMING
Wy-0027451



All facilities are oil production units located in Albany, Carbon, Natrona, Fremont, Crook, Niobrara, Campbell, Johnson, Weston and Converse Counties, Wyoming. All produced water is separated from the petroleum product through the use of heater treaters and skin ponds. The Atlantic Richfield Wy-0000710 and Wy-0000728, Conoco, K & W and Terra facilities discharge only in emergency situations. Under normal conditions there is no discharge at these units.

Wyoming Produced Water Criteria must be met immediately upon discharge for all the facilities with the exceptions of Amoco Wy-000224, which has been given a total dissolved solids limit of 8,000 mg per l and a chloride limit of 4,000 mg per l and Gary Operating Wy-002631 and Union Wy-0001121, which have both been given total dissolved solids limits of 7,500 mg per l and chloride limits of 3,000 mg per l. These facilities were given higher limits due to the extreme aridness of the areas and the water beneficial use by wildlife.

All discharges are to Class III waters of the State with the exceptions of Amoco Wy-000224, Kimball Wy-0022641, Atlantic Richfield Wy-0000710 and Wy-0000728, and Conoco Wy-0000914, all of which discharge directly to Class I streams. Vance Katherman Wy-0001227 discharges to the North Fork of Casper Creek (Class II stream).

Semi-annual self-monitoring and reporting will be required for all parameters with the exception of oil and grease, which must be monitored quarterly.

The expiration dates correspond to the expiration dates of other oil treater facilities in the same areas.

Chapter VII of the Wyoming Water Quality Rules and Regulations infers that all produced water discharges with total dissolved solids concentrations of 5,000 mg per l or less are beneficially used.

(22) PERMIT NAME: TOWN OF HUDSON, WYOMING
MAILING ADDRESS: P.O. BOX 35
HUDSON, WYOMING 82255
PERMIT NUMBER: Wy-0020664

The wastewater treatment facilities serving the Town of Hudson, Wyoming, consist of a 2 cell lagoon system in which the first cell is aerated. Discharge is to the Pop-Age River (Class I stream) via an unnamed drainage.

Proposed permit modification will include the following:

1. Requirement that National Secondary Treatment Standards be achieved effective immediately for all parameters except fecal coliform bacteria. Past monitoring data indicates that these standards are now being achieved.

2. Requirement that upon receipt of Federal construction grant funds that the facility be upgraded to meet fecal coliform bacteria standards.

3. Requirement that self-monitoring of the effluent be increased from quarterly to monthly with reporting of results quarterly.

The proposed permit is scheduled to expire December 31, 1982.

STATE EPA: INVESTIGATIVE DETERMINATIONS

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

PUBLIC COMMENTS

Public comments are invited any time prior to December 19, 1977. Comments may be directed to the Wyoming Department of Environmental Quality, Water Quality Division, Permits Section, Hathaway Building, Cheyenne, Wyoming 82002, or the U.S. Environmental Protection Agency, Region VIII, Enforcement Division, Permits Administration and Compliance Branch, 1860 Lincoln Street, Denver, Colorado 80225. All comments received prior to December 19, 1977 will be considered in the formulation of final determinations to be imposed on the permits.

ADDITIONAL INFORMATION

Additional information may be obtained upon request by calling the State of Wyoming, (307) 777-7781, or EPA, (303) 327-3374, or by writing to the aforementioned addresses.

The complete applications, draft permits and related documents are available for review and reproduction at the aforementioned addresses.

Public Notice No: Wy-77-014

Bill Schneider
Where
the
Grizzly
Walks

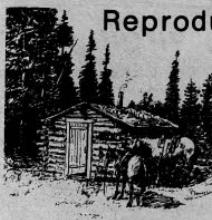


Where the Grizzly Walks by Bill Schneider is a history of the big bear's struggle for existence. The author reveals who is to blame for the silvertip's plight and outlines a strategy for the bear's salvation.

The book is more than a story about bears; it concerns people, their life styles, their government, their land, and their dreams.

Bill Schneider has written extensively on conservation in dozens of periodicals. His writing focuses on protecting wildlife habitat and wilderness. He has been the editor of *Montana Outdoors*, the official magazine of the Montana Department of Fish and Game, for eight years.

Doug O'Leary photo
Mountain Press publishing company of Missoula, Mont. is sharing the profits on sales of this book with HON. To order, send \$9.95 to HCN, Box K, Lander, Wyo. 82520. Price includes postage. Order form on page 15 of this issue.
256 pages, illustrated, clothbound



I. "TIME FOR A BITE OF GRUB!"



II. "A FRIENDLY GAME OF POKER"

Reproductions of pen and ink drawings

by Thomas Connell

Tom's work centers largely on the early days of the West. The days of starting with nothing, the beginning of the creation of a Western heritage. Tom has his work on display in his new studio at 805 Amorette in Lander. Stop by and visit for a spell with the "homestead artist," as he is called.

Reproductions of three of Tom's works are being offered through HCN's gift shop. They can be purchased either as 7½ by 8½ inch black and white prints or as 4½ by 5½ inch sepia and white notecards. The prints are reproduced on talisman, textured finish, cover paper. The notecards are teton-text paper. The prints sell for \$2.00 each or a set of three for \$5.00. Postage is included.

The notecards are packaged 12 to a pack with envelopes. Four cards of each design are included. Cost is \$3.00 per package plus 50 cents for postage and handling. Please use the combined order form found on this page. Order prints by their numbers. Thank you.

Seasonal profiteering

Special Edition



\$1.50

A roundup in magazine format of HCN's formative years, 1969-1975. News stories on the people, wildlife, lifestyles, and politics of the Rocky Mountain West. Glossy cover, 48 pages, 10 by 14 inches.

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You can give a friend everything from the jitters to an increased awareness of the Rocky Mtn. Great Plains West by sending a HCN gift subscription. We send a separate card bearing your name telling your friend of the gift.

Be sure to include your name so that we can send the gift card.

Holly Merrifield, wildlife artist and friend, has designed these notecards for High Country News. These cards were so popular last year, we're trying them again. Ready for your personal notes, Moose

Greeting Cards

the cards are 3½ by 7 inches on ivory stock with gold envelopes. Designs are in wheatfield gold. A handsome complement to any message.

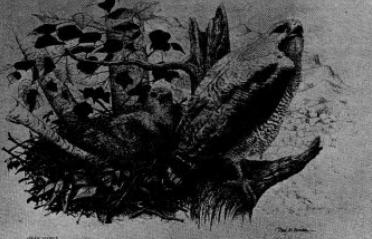
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Moose

(Please specify Moose or Eagle when ordering.)

Prints

Paul M. Breeden



Gray Hawks, 17 x 22 in.

Paul M. Breeden is a noted calligrapher and illustrator. His paintings and drawings have appeared in Audubon, Defenders of Wildlife, and National Geographic magazines to name but a few. Breeden and his agent, Singing

Sparrow gallery, are generously giving any proceeds from prints sold through HCN to HCN. Each print is from a series of 500 signed and numbered prints. Sets of matched numbers are available upon request at no additional charge.



Great Horned Owl 19 x 24½ in.



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To order, use form below. (Available also is Mountain Lions, 17 x 22 in., \$30. Shown in Nov. 4th issue.)



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Alpine Country — 128 pages, size 10½ x 13½ in., 12,000 words of text, 101 illustrations, full color. Photography by Don Lowe, text by David Summer. \$22.00 until January 1, 1978, then \$25.00.

Charles Belding and his Graphic Arts Publishing Company of Portland, Ore., have generously allowed High Country News all the retail profits on the sales of books described here.



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Price includes postage.
(See ad on page 19.)
books at \$9.95 each.

16-High Country News — Nov. 18, 1977

Cutler: wilderness areas don't have to be pristine, virgin

by Dave Foreman
(Second of a two-part article)

Officials from the Forest Service and the Bureau of Land Management (BLM) sometimes argue that over-eager citizen conservationists are degrading the National Wilderness Preservation System by fighting to include inferior areas in it. They argue that dull, uninteresting, commonplace areas will degrade the system. This part of their argument was dealt with in an article in the last issue.

The more common half of the argument, which is enshrined in countless Forest Service documents, is that wilderness areas must be pure, pristine, and virgin. Is there an old, overgrown jeep trail in the area? It's a sign of man, and the area doesn't qualify. Was there some selective tie-hacking in the area before the turn of the century? Human intrusion, it's not wilderness. Did a prospector once sink an exploratory shaft back up in a canyon? The wilderness character of the surrounding 20,000 acres has been irretrievably lost.

Does this sound farfetched? It isn't. There have been dozens of such real life examples of the Forest Service disqualifying areas from wilderness consideration for such contrived reasons.

Thanks to the new Administration of Jimmy Carter, however, we may well be free of the onerous burden of the "purity" complex at the higher levels of the Forest Service. Assistant Secretary of Agriculture Rupert Cutler's new direction to the Forest Service seems to toll the death knell for official "purity." Dr. Cutler has said to Congress:

"We also have an opportunity to include in the wilderness system lands not entirely free of the 'marks of mankind,' but fully capable of providing, in the long-term, wilderness benefits to many people. In considering such lands for wilderness designation or study, we will look openly at the features or uses traditionally considered to be nonconforming."

Nonetheless, it sometimes takes a long time for new ideas to trickle down through the Forest Service bureaucracy to the lower levels of district rangers and even forest supervisors. So we may continue to

encounter "purity" stumbling blocks at the local level.

Therefore, it is useful to look at how Congress stands on the issue of "purity" requirements for the wilderness. Members of Congress are, after all, the final arbiters of wilderness qualification. Congress has had a running feud with the Forest Service over the interpretation of the Wilderness Act on this question.

Rep. Morris Udall (D-Ariz.), now chairman of the House Interior Committee, recently said, "This whole purity theory originated with the Forest Service. It has been repeatedly rejected by the Congress. In every test, Forest Service claims that areas are not suitable for these reasons have been rejected. Most notable was our complete repudiation of the Forest Service view that no areas in the national forests in our Eastern States could be designated as wilderness...."

"It would be nice to have our national wilderness preservation system absolutely



Drawing copyrighted by Carol Snow

MARKS OF MAN? Wildlife doesn't seem to be very discriminating about some "marks of man." The Forest Service, however, has tended to rule that areas with stumps or evidence of old tie-hacking isn't appropriate for wilderness designation.

Dear Friends,

Is our audience broadening? Are we starting to reach not only greater numbers of people, but also a wider variety of points of view? From the arguments presented in the letters section on page two in recent months, it would seem so. In fact, page two is becoming lively enough that we think it's time to lay down a policy, so readers can understand how HCN handles letters.

Before shaping a formal policy, we looked to our friends and publications for ideas. The most unusual policy we discovered was that of a muckraking publication called *Scandinian's*. Its editor announced in the first issue that he would charge readers 25 cents per word to publish their letters, according to a recent *L. A. Times* story. "Letters which we find particularly dumb, boring or offensive will cost \$1 per word," he said, "and will only be put into type after the writer's check clears the bank." Apparently the letters business was not lucrative, however. The *Times* says that this publication folded in less than a year.

HCN's policy, while not as interesting as *Scandinian's*, is somewhat more

moderate and respectful, we hope.

We reserve the right to edit letters so that we can fit a representative sample on the page. We encourage short ones—under 250 words. We do not set an absolute length limit, however. That decision is left up to our judgment about the significance of the subject and how much space it takes to convey an individual's major points.

In our latest batch of letters, for instance, readers were very concerned about grizzlies. We thought it was our responsibility to respond to that concern by providing more than the usual amount of space for letters. We threw our normal limits on letter length out the window.

If we can't print all the letters we receive, we will either hold some over for the next issue or choose among them. In choosing, we give highest priority to those letters that broaden the point of view we've presented on a subject or that correct factual errors. (Hard as we try to insure accuracy, we can't pretend to be infallible. We appreciate it, despite our embarrassment, when you take the time to set the record



Guest opinions printed in High Country News do not necessarily represent the opinions of the editors.

pure and completely free of any sign of the hand of man. But the fact is that we are getting a late start in this business of preserving America's wilderness. . . . We cannot have perfection."

In a recent discussion of the issue, Sen. James Buckley (R-N.Y.) pointed out the actual language of the Wilderness Act, which says candidates areas must be "without permanent improvements" and "with the imprint of man's work substantially unnoticeable" (emphasis by the Senator).

Where there have been differences between agency and citizen conservationists' wilderness proposals, Congress has tended to agree with the citizens in the majority of cases. Congress has also included quite obvious impurities. The Great Swamp National Wildlife Refuge Wilderness of New Jersey, which had a paved county road splitting it, was designated by Congress (with the road) after the county closed the road. Bandalier National Monument Wilderness (New Mexico) includes the ruins of several small cities housing thousands of people 700 years ago.

Why, then, does the Forest Service have their hang-up on purity? I'd like to toss out three reasons for consideration. One, perhaps the most important, is their fear that too much national forest land will

qualify for wilderness if they relax their rigorous standards.

In the 1973 hearings, Forest Service Chief John McGuire said, "We have had to make some kind of arbitrary distinctions between lands that are suitable and lands that are not suitable. With our puristic, narrow, discarded interpretation, we still come up with something like 70 million acres out of 130 million. If you extend it to the East, you get half of the forest system qualified for wilderness."

Sen. Floyd Haskell (D-Colo.) replied, "I think the cat is now out of the bag. I couldn't understand until you made your last remark, how you could possibly interpret your definition of wilderness the way you do." The Senators then told the Forest Service that they, the members of Congress, not the Forest Service, would determine how much wilderness was necessary and should be designated.

So, in answer to the question, "Are we degrading the wilderness system?", my answer is a firm "NO." I see only two ways in which we can indeed degrade the National Wilderness Preservation System.

One would be to relax the management standards for an area after it is in the wilderness system — to allow roads, timber cutting, etc. The other would be to form a less than adequate wilderness system — one deprived in acreage, number of areas, and variety of ecosystems and experiences represented.

The only way America can have a quality wilderness system, of which we can be proud, is by creating a large and representative National Wilderness Preservation System — containing several examples each of all our historic American ecosystems, areas both splendid and modest, and containing as much total acreage as we can.

Wilderness designation and wilderness management as outlined in the Wilderness Act are the best way yet devised by man to insure that Americans of this and future generations will have an enduring resource of wilderness.

Dave Foreman is the Southwest representative for The Wilderness Society.

straight. Occasionally, to save space or insure clarity, we may choose to print a correction rather than a letter. We also edit letters for spelling, punctuation, libel, and obscenities.

We try to send a personal reply to all letter writers who ask us a direct question, whether or not we have chosen to print their letters.

Most published letters, we believe, should be run without comment from us. After all, in most cases we've already had our say. Readers can make their own judgments about the merits of various arguments. We do add editors' notes under some circumstances, however: 1) if we believe factual material printed in the letter is incorrect, or 2) if the reader asks us to state our policy on a subject.

We also occasionally give the author of an article a chance to reply, if we feel that doing so would clarify the issues. We try not to be over-indulgent toward our writers, however, by letting them use up space to restate what has already been said in an article.

We encourage you to write letters. They keep records straight and the

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