



BATTER UP! Softball and baseball are in full swing in Wheatland this summer. The sports are helping to bring new and old residents together in the power plant

os by Platte County Rec



The life of the boomer-see story on page 16.

Wheatland strives for boom town perfection

Just what is a "model boom town"? Does Wheatland, Wyo., qualify? About 2½ years ago, city and Missouri Basin Power Project officials told a visiting HCN reporter they were determined that when the coal-fired Laramie River power plant was built, Wheatland would prove that proper planning and a liberal dose of money could preserve a town's quality of life during rapid growth (see HCN, 1-28-77). In May of this year, when the work force was nearly at its peak, HCN returned and talked with the planners and with both new and old Wheatland citizens. Some of them didn't want their full names used so they are referred to by first names. Their story is one of cooperation, occasional conflicts and lots of surprises—a story most Wheatland residents are determined will have a happy ending.

by Marjane Ambler

Wheatland, Wyo. — Ask the people here what it's like to live in the midst of a boom, and you get a variety of answers.

To City Clerk Jim Dunham, it's

To City Clerk Jim Dunham, it's meetings—lots of meetings, a bigger office, a bigger budget and phones that never stop ringing.

Greed. That's how Tom, a construction worker, typifies every boom town he's been to, and Wheatland, with a 1,500 megawatt coal-fired power plant and associated dam under way, is no exception as far as he's concerned. It's 90 cents now for a beer that was 65 cents when he arrived a year ago.

His motel room has gone from nine dollars to \$23 a day.

For Ruby Preuit, head librarian, the boom has brought a new role. Many people who come to the library now never take out a library card; they come to sit and read and receive a kind word or a smile. "I think," she adds in a conspiratorial tone, "we offer the bars just a little competition."

Schuyler Lucas, recreation director, is excited about having enough players for 62 softball and baseball teams. He's also pleased that construction workers volun-teered to build more playing fields last year

and several of the subcontractors from the plant loaned their equipment.

Acres and acres of productive wheat land that went under concrete for Black Mountain Village where the construction workers live. That's what Tyler Dodge, a local farmer, sees when he thinks about the

farmer, sees when he thinks about the boom.

To Police Chief Buck Evans, it means recovering a stolen mini-bike and then discovering the owner left town a week ago without leaving a forwarding address.

And for Steve Haeberle, realtor, it's the excitement of seeing many of his former classmates find work here and bring their families back to town.

While their experiences differ, all of the townsfolk interviewed by HCN take pride in the way they have worked together with officials of the Missouri Basin Power Project, the consortium of public utilities building the plant, to prepare for growth. While Wheatland itself has escaped many problems usually associated with rapid growth, few of the measures taken have helped the farmers, many of whom

(continued on page 4)

Could energy seekers make Old Faithful falter?

Geothermal exploration near Yellowstone

by Philip White

by Philip White

A hot spring of controversy is welling up around geothermal exploration and development proposals for the forested 500,000-acre Island Park Geothermal Area, which abute the southwestern border of Yellowstone National Park in Montana, Idaho and Wyoming.

Targhee National Forest officials, who manage nearly all of the presently undeveloped IPGA, are being pressured by more than 70 "interested parties" for permission to drill deep wells in a search for water hot enough (300-400 degrees F.) to power electric generating plants.

Since geothermal energy, unlike fossil fuels, loses its heat through transportation, the energy must be exploited near the wellhead. Such development in the IPGA "would introduce industrialization into a forested setting," according to a draft environmental statement on the proposals and could cause substantial impacts on accenery and wildlife. Nearly a third of the IPGA has been recommended as critical habitat for grizzly bear. Trumpeter swans are common residents as well.

These drawbacks, however, probably would not outweigh the national commitment to developing domestic energy supplies were it not for one major wrench in the IPGA works:

The IPGA's eastern boundary is within 15 miles of the world's greatest geyser fields and only 13 miles from one of the (continued on page 6)

(continued on page 6)



ENVIRONMENTAL DOUBLE TALK

Dear Editor

I read with interest your all-too-short May 4 coverage of an environmentalist chal-lenge to a 100 kilowatt solar energy plant in Natural Bridges National Monument in southern Utah.

southern Utan.
Why should this Committee to Protect
the Environment voice such a protest when
we've all been told that solar power is clean
power? Is it, in fact, not nature's own power
source and thus environmentally accepta-

source and thus environmentally acceptable without question?
Certainly this apparent display of environmental double talk deserves more coverage — or is it simply a fact that such groups are against all forms of energy development as I have suspected for the past five years?

Larry Kline Lakewood, Colo.

VISUAL MIRROR

Dear HCN:

After reading Hannah Hinchman's "Afield" in the May 18 issue, I found myself going to my living room wall to bring down a landscape painting which I purchased from sculptor and artist Joe Back of

Mitigation money isn't everything

The town of Wheatland, the Missouri Basin Power Project and the Wyoming Industrial Siting Council deserve praise for their successes in de-booming the social impacts in Wheatland.

However, MBPP's experience with the Laramie River Station and the associated Grayrocks Dam also illustrates problems caused by the fact that Wyoming's Industrial Siting Act is not really a siting law. The siting administration was not involved until after the site had been chosen.

Despite all the other judicial and administrative bodies that reviewed the pro-

ministrative bodies that reviewed the project, none had any real voice in the decision of where the project would be located. That

Dubois, in 1970. It was the same Whiskey Mountain described so vividly in the arti-

My only visits to Whiskey Mountain My only visits to Whiskey Mountain have been through the painting and fantasy. The painting is a visual mirror of Ms. Hinchman's words describing cloud formation. "Clouds boil up over the divide and would begin advancing toward us, but not in a predictable way."

The painting, unimpressive when viewed close up, takes on a magic manifestation as the observer steps back a few paces. Then, there is an eternal quality of pristine realism as all the elements in it come into focus.

focus.

If I may be permitted an allegory, I think that this is a good example of what High Country News has meant to many people. It has been a rare publication for these times, one which brings environmental perspective together through the words and pictures of talented observers of nature, courageously and unabashedly, in a time when such accomplishments are both difficult and rare. difficult and rare.

ecision was made by the project's board. Basin Electric Cooperative, the project manager, says its Environmental Re-

manager, says its Environmental Re-sources Group participated in the decision. However, many of the environmentalists who comprised the group's membership say they had no influence on siting. When members brought up dam design questions and water supply questions, they were ig-

As a result of its choice, MBPP has spent hundreds of thousands of dollars to miti-gate impacts that might not have been

gate impacts that might not have been necessary if the plant had been located nearer to a large population center.

Those costs are minor in comparison with the money it is spending to solve water problems. More than seven million dollars is going into a whooping crane trust, fund to protect wildlife along the Platte River and to mollify the state of Nebraska. Hundreds of thousands more have been

spent on litigation because the project is aking agricultural water.

Then we must add the cost of transmit-

ting power to customers hundreds of miles away and of right-of-ways over agricultural land, which is lost to those transmis-

The people who buy MBPP's electricity, of course, ultimately have to pay these

Perhaps thorough, independent review wouldn't have revealed all of the expensive problems that MBPP has encountered as a result of choosing this site. But such review might have predicted enough of the prob-lems to swing the decision to another site.



ddress. ite Box K, Lander, Wyo., 82520

The Rhabarb Flower Bud

"Open mouth of my soul uttering gladness, Spes of my soul seeing perfection,
Natural life of me faithfully praising things,
Corroborating forever the triumph of things.
O amazement of things — even the least particle!
O spirituality of things."

- From "Song at Sunset"

by Philip White

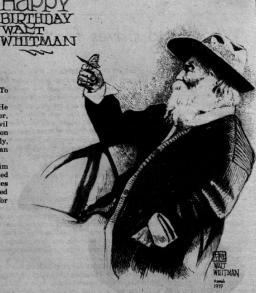
This May 31st was the 160th birthday of Walt Whitman and his inspiring, joyful vision. He filled our language with hopeful songs of the smells, sounds and colors of flowers and workers, faces and thrushes, seas, stars, ships and suns.

In "To Think of Time" Whitman says, "I swear I think there is nothing but immortality." It seems that each spring's tulips and lilacs and apple-blossoms bring Whitman sailing back in his "Eidolon yacht" still true to his vocation: "to limn with ab-

solute faith the mighty living present....To drink the mystic deliria."
His formal education ended at age 11. He was a printer, carpenter, schoolteacher, newspaper editor, comforter of the Civil War's maimed and dying in Washington hospitals, government clerk and, finally, an old, poor, supremely contented man welcoming admirers in Camden, N.J.
Like Van Gogh, his at never earned him.

weicoming admirers in Camden, N.J.
Like Van Gogh, his art never earned him
a living. With his own funds, he published
nine editions of his life's one book, Leaves
of Grass. But his message always flowed
with a love for life, for humanity and for

MAMTHW



I believe a leaf of grass is no less than the journey-work of the stars,
And the pismire is equally perfect, and a grain of sand, and the egg of a wren,
And the tree-toad is a chef-d'oeuvre for the highest;
And the running blackberry would adorn the pariors of heaven,
And the narrowest hinge in my hand puts to scorn all machinery,
And the cow crunching with depress'd head surpasses any statue,
And a mouse is miracle enough to stagger sextillions of infidels."

- From "Song of Myself"

Watts blind Forest Service to park's wonders

A little too abstract, a little too wise, It is time for us to kiss the earth again, It is time to let the leaves rain from the skies, Let the rich life run to the roots again.

- Robinson Jeffers: "Return"

Although it overflows with lovely photos and maps in many colors and shows dedi-cated effort by honest and respectable peo-ple, the Island Park Geothermal Area draft environmental statement utterly fails to fulfill the high purpose of such documents. It is a heinous, frightening, inexcusable circumlocution.
This document from the U.S. Forest Ser-

vice is a classic symptom of the disease that afflicts a society obsessed with quantifica-tion: we are unable to see the forest for the

to discuss the impacts of drilling holes 10,000 feet deep in an area only 13 miles from Old Faithful Geyser in Yellowstone National Park.

It does address, at length, some of the

impacts: effects on the population of Ashton, Idaho, for instance, or on the timber industry in the area or on elk winter range.

possibility of harming any of Yellowstone's fountains, which are cherished by the people of the world, one would logically expect that the document would deal first and foremost with the Yellowstone question.

Instead, that question is almost totally ignored, and where it is discussed, the risks are minimized. The statement has only one clause on the whilet.' The existing

only one clause on the subject: "no existing data identifies a connection between Yel-lowstone National Park geothermal fea-tures and geothermal features outside the

The people at the Targhee National Forest would be the first to say that there is no data denying such a connection either. But that critical fact is not mentioned.

The document addresses every question except those that would be asked immediately by any intelligent person anywhere in the world:

industry in the area or on elk winter range.

These are important topics.

But when such drilling has the remotest done? Can't it be done somewhere else?

Even if hot water is found, how much net energy can be produced?

Our trust in the integrity of public officials tells us that they inadvertently omitted the location of the geyser basins and the startling proximity of the proposed drilling to Yellowstone's geysers on maps in the IPGA document. We hope it was mere oversight that the document does not mention that New Zealand's geyser fields were ruined by geothermal development nearby. We hope that the absence of any reports from the government geologists who have studied the possible subterranean connections isn't another case of bureaucrats trying to avoid personal rebureaucrats trying to avoid personal re-sponsibility for a questionable venture.

The people who wrote the environmental statement say they spent \$10,000 for full-color printing on high-quality paper so that it would attract attention and spark public comment. We submit that a straightforward approach, rather than color pictures, would have been more effective. The real issue should have been more effective the real issue should have been presented on the cover in big, bold letters:

WE ARE CONSIDERING WHETHER TO ALLOW DRILLING OF 10,000-FOOT WELLS ONLY 13 MILES FROM OLD

June 1, 1979 - High Country News-3

FAITHFUL GEYSER IN YELLOWS-TONE NATIONAL PARK. PLEASE STUDY THE ENCLOSED INFORMA-TION AND GIVE US YOUR VIEWS ON THESE PROPOSALS.

The document should have contained reports by the world's experts on the crucial, inescapable question presented here: how do the potential benefits of drilling deep wells in this area balance against the risk of harming Yellowstone's marvels?

We implore the Forest Service to begin anew, to ask the best geologists, economists and hydrologists to study this matter, to obtain signed and detailed opinions from the U.S. Geological Survey's experts on the matter, to disseminate the new environmental statement to all countries and throughout this country with special ef-forts to obtain coverage in the mass media, and to not allow the first drill bit to be lowered until all creditable experts agree that there is no risk to Yellowstone.

Yes, Forest Service, there are still some things more important than domestic energy production, even from alternate sources. Neither all the electricity ever sources. Neither all the electricity ever produced, nor all the imaginings of the poets, could ever equal the glory and splen-dor, the pure, divine lesson in the beauty of glistening geyser spray

- Philip White

Federal rescue would erase 3-Mile's message

Sen. Gary Hart (D-Colo.), chairman of the Senate nuclear regulation subcommit-tee, is right to resist efforts to get federal help for the Three Mile Island nuclear plant owners.

True, the cost of substitute electricity and of servicing the debts on the crippled plant will be enormous. Without federal assistance, the firm could go bankrupt. If some of the costs are passed on to customers, they face potential rate increases of 30

ers, they mee possesses to 40 percent.

However, if the federal government allows low cost loans to the utility, as the Pennsylvania Public Utility Commission suggests, one of the principal morals of the Three Mile Island story will be ignored: nuclear power cannot be economically jus-

For years, nuclear opponents have argued that nuclear power is prohibitively expensive, while utilities have said that one day it will be too cheap to meter.

Now the Bank of America, the nation's largest commercial bank, is beginning to see the light. It has barred any new loans to utilities for construction of power nuclear plants or the purchase of fuel for them. "The financial community is suddenly beginning to smell the problems here," one security analyst told the Los Angeles Times. "The talking about the financial risks...The market is suddenly seeing it the way it never has before."

Neither the banks nor the government

Neither the banks nor the government can afford to assume that Three Mile Is-land was a fluke and that such a thing or orse will never happen again. Companies in the nuclear industry

Companies in the nuclear industry haven't been able to dismiss the threat of major accidents either. Otherwise, they wouldn't have pushed so hard for continuation of the Price-Anderson Act. The act limits a company's total liability for a nuclear accident's damage to persons and property to \$560 million, not including the

property to \$500 million, not including the costs for which the Pennsylvania Public Utilities Commission is seeking help.

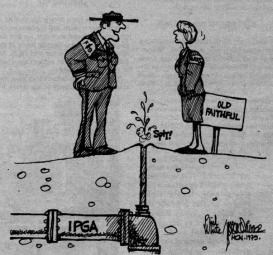
Babcock and Wilcox, the designer of the Three Mile Island plant, said, for instance, that it would have to "reconsider its role in the nuclear industry" if the liability ceiling

In the aftermath of Three Mile Island Ongress is giving more serious considera-tion to removing that liability limit. More members of Congress seem to be seeing it the way that Hart does when he says,

There ought to be corporate liability, up and down the line" for accidents.

We're glad the Bank of America and some members of Congress are seeing things differently now. The liability ceiling should be removed, and the federal government shouldn't bail the company out from its other debts.

years, nuclear opponents have ar-that nuclear power is prohibitively could.



"LOOK AT IT THIS WAY, IT STILL ERUPTS AS RI

PSST...

Did you know that you are reading an exclusive? That's right. High Country News is unique it's the only regional environmental newspaper the Rocky Mountain West has got going for it.

Think about that. For only \$12a year, you get one-of-a-kind coverage — of development and degradation, legislation and land use, wildlife and wilderness - every two weeks. Don't let such an unusual opportunity pass you by. Sub-

Enclosed is my \$12 for 25 issues (one year) of the incomparable HCN.

Name City, State & Zip

Mail to: HCN, Box K, Lander, Wyo. 8252

Boom town perfection...



BLACK MOUNTAIN VILLAGE includes space for recreational vehicles as well as landscaped mobile home and permanent home areas.

opposed the power plant from the start be-cause of the agricultural water it would onsume. The town has some unique prob-ems, too, some of them created by the adsems, oo, some or their treater by the ac-vanced planning. One year in the midst of the boom, there was a surplus of teachers. Local officials have boosted the growth but resisted social change. The town is sur-rounded by empty subdivisions, which have taken agricultural land out of produc-

The people in town, however, are sure they've been successful. "Doesn't it make you mad when everyone tells you how wonderful it is? It's like the kid in school who made straight A's; you want to punch him in the nose," says Jill Holloway, local director of the Department of Public Assis-tance and Social Services and former head tance and Social Services and former head of a task force of local citizens. The town set up the task force to share information when MBPP announced its plans. It in-cludes representatives of schools, local governments, the business community, the mental health center, the ministry, the so-cial services office and students.

DIFFERENT BOOM TOWN

Certain facts indicate that the townspeople's pride is justified. Wheat-land does differ from the textbook boom towns. Wheatland's population has increased by two-thirds in 2½ years—from creased by two-thirds in 2½ years—from 3,000 when construction began in 1977 to about 5,000 now, according to city officials' estimates. However, the schools haven't become overcrowded. In fact, they're only 84 percent full. The school district's tax base has increased fivefold, and the assistant school superintendent, Lucien Trouchon, doesn't expect the district to

> AT RUSH HOUR in Wheatland, traffic bogs down at the city's only traffic light. Power project officials say the state highway depart-ment refused to improve a dirt road that would have eliminated much of the congestion.

ever need state money again—unless the power plant shuts down.

The construction force, which now num-

bers about 2,379, is expected to peak at 2,555 in August. However, city services have been more than adequate. The sewer, water and electric facilities are designed for a population of 10,000 instead of 5,000, according to City Clerk Jim Dunham.

for a population of 10,000 instead of 5,000, according to City Clerk Jim Dunham.

While crime and mental health caseloads have increased, according to officials, increases in rape, spouse beatings, drug use and delinquency—problems commonly associated with rapid growth—haven't been disproportionate with the increase in population.

with the increase in population.

Last year the county reduced its mill levy because of the increase in the tax base. In 1979, the tax base is expected to be \$134 million, including \$102 million from the

ower plant and its associated facilities. While quality of life is difficult to meas while quality of life is difficult to meas-ure, some people are happy in the changed community. Many construction workers have indicated they plan to establish homes in Wheatland where their families will live while they commute to other jobs in Casper, Gillette, Cheyenne or Douglas, Wyo. One construction worker estimated that as many as 200 or 300 workers and their families would maintain Wheatland their families would maintain Wheatland

their families would maintain Wheatland as their home, not including the 200 permanent plant employees.

In addition, the people on the task force like the present level of activity—or at least are concerned about the boom bust-

The task force has switched gears and is concentrating on bringing new industry to town after the power plant construction force leaves. MBPP has provided \$35,000 in matching funds for a study of alternatives, which may include a sunflower processing plant or a trout farm, both of which would use waste heat from the power plant. Since the sugar beet market is waning. Steve Haeberle, a realtor who now heads the task force, says growing sunflowers could be an attractive alternative for area farmers. Without a new stimulus, the economy in the area could slow by as much as 20 percent, MBPP warms. The task force has switched gears and is

DISGUSTED

"I think the town people are thrilled to have this power plant, but the farm people, who have to depend on water, are just dis-gusted," one woman having lunch at the Wheatland Senior Center told HCN. Resing to give her name, she said she'd been

in the area since 1916.
"Why build a big dam on that little, tiny river? There are plenty of big rivers. It's

their problem, but I guess we'll have to pay tance, and the district had previously deforit. You can grow almost anything how if conded on the help for it. You can grow almost anything here if you have the water—we have wonderful soil," she say.

Water has been a principal concern of the

Laramie River Conservation Council, a farmer-conservationist group that fought the power plant. Tyler Dodge, chairman of the group, says the area's water worries are just beginning. MBPP has decided to use a dry scrubber to reduce sulfur emissions on one of the three units, which will reduce water consumption. But Dodge says if there is much seepage from the dam, MBPP will have trouble getting as much water as it will need.

As far as the Laramie River Conserva

tion Council is concerned, no matter how well the boom is handled, the plant is un-welcome because it consumes water that would otherwise be used for agriculture. Dodge says farmers are also hurt by the

lack of support services. For example, when his neighbor's clutch went out, the man spent a whole day during planting season looking, unsuccessfully, for a mechanic. He finally had to rent a pickup.

mechanic. He inaily had to rent a pickup. Farmers are also having a hard time finding farm help because they can't compete with the power plant's wages, Dodge says. Watching Wheatland's irrigated farm land be eaten up by subdivisions reminds him of the leapfrog development around Fort Collins, Colo. "The same pattern has started here; the farmer gets more and more encroachment, and sooner or later he has to close up shop. That's it," he says. More than 190 rural acres have been subdivided as a result of the power plant-spurred develop-

Some problems in town apparently couldn't be prevented by planning and money. While there never were too many students, there was a lot of turnover because of the changing types of work at the power plant and the reservoir. During the past school year, 454 of the 934 elementary students in Wheatland either entered or left the schools in mid-year. The results were hard on the transient students, the other students and the teachers, according to Martha Morris, math teacher. "The time you spend on new kids coming in mid-year takes time away from the other kids. It's just not fair to any of them," she says.

PROJECTIONS OFF

Another problem was matching the number of teachers to the number of students. The first year, the school district hired too many teachers, based on the population projections prepared by the University of Wyoming. When the students didn't show, the district had a low student-teacher ratio—15-1, which caused the property of the prop problems between the district and the state. The state requires a higher ratio before a district is eligible for state assis-

pended on the help

This year, the district waited until after the students showed up to hire extra teachers, but by then many teachers had taken other jobs.

Student projections were off by as much as 20 percent, and other estimates for city residents, which affected such things as the design of sewer and water lines, were also

wrong.
University planners erred in two major
ways. The first was the population model
used to predict the number of people each
construction worker would bring with him when he moved to town. This includes the worker's family and the people to serve them in the retail marketplace. A model of 3.3 was used, but it turned out closer to 2.5, according to City Clerk Dunham. Tim Rafferty of MBPP says this could have been because more spouses of employees are working than predicted, because people still do their shopping in bigger cities such as Cheyenne (70 miles away) rather than relying on Wheatland, or because a na-tional standard is not appropriate for the

econd source of error was that 10 percent more workers than expected chose to commute rather than live in Wheatland.

Some of the problems seem to be caused by local leaders who hold tightly to traditional social values.

Rafferty says the planners underestimated the number of local workers available from nearby towns. He also thinks workers rented homes in Cheyenne or Casper rather than Wheatland so they could be closer to the services and entertainment they're used to. Twenty-eight percent of the workers commute every day, and most of those commute farther than 50 miles one way. Rafferty points out that as a result of union agreements, the workers are paid as much as \$22 per day to cover transportation, food

Tom and Roy, who are both construction workers, agree that some of their coworkers locate in Cheyenne because of the lack of entertainment in Wheatland. There's not that much to do in a little town—ti sin't the town's fault, Tom says. Softball and fishing at a nearby reservoir only last a few months, and the recreation center MBPP built, which is used by more than 2,000 people per month, doesn't fulfill everyone's recreational needs. "Iknow a lot of guys that go there damn near every night, but not me," Roy says.

The other reason people locate in Cheyenne or other towns, the two workers say, is the prices in Wheatland. Many other residents share their perception that prices are higher in Wheatland. However, the cost of living index computed by the Wyoming Department of Administration and Fiscal Control says the cost in Wheatland has averaged only 2.4 percent higher than Tom and Roy, who are both construction

has averaged only 2.4 percent higher than in Cheyenne between January of 1978 and April of 1979. Phil Kiner of the department says that people's perception are some-times affected by their expectation that boom town prices will be higher. The infla-tion nationwide may also affect people's

perception of increased prices.

Asked about housing, he points out that the index reflects its cost—not its availability. The lack of housing could be forcing some people to commute.

MBPP housing in Black Mountain Vil-

ige has never been full, however, achelor quarters, where residents can get

(see next page)



three meals a day and cleaning service for three means a day and cleaning service on \$16 a day, are now 87 percent occupied. The development also has room for more mobile homes and single family permanent homes on MBPP-landscaped lots. Black Mountain does not offer rental housing, and rental

A total of 1,003 units are available there. Rafferty of MBPP says this housing discouraged price gouging, and, he says, was resented by some local businessmen. However, MBPP didn't undercut local prices, and some private development has flourished, too, he says.

Jill Holloway of the Department of Public Assistance and Social Services, says some families face a "desperate situation" because of the growing lack of low-income housing. The city council has turned down proposals by private developers to offer A total of 1.003 units are available there

proposals by private developers to offer such housing because they "don't want to attract less desirable people to town," according to Holloway.

Another phenomen

money couldn't prevent is the invasion of a rural town by hundreds of single men. "You look around at 4 p.m. on Friday

nights and see the pickups go by—80 per-cent of them driven by men. They go straight to the bank and then to the bars," one plant worker's wife says.

"It gets pretty rowdy. I went out dancing one night, but I won't do it again," she says. There are more handguns in town than there were before, according to Detective

"It gets pretty rowdy. I went out dancing one night, but I won't do it again."

Sergeant Al Keys of the Wheatland Police Department, and the problems are often more serious than mere rowdiness. He says he hasn't kept adequate records on aggravated assaults, but he knows they're on the upswing.

The workers admit some of their friends cause trouble. They say they don't have enough of a home life, and there aren't enough women. "There are some troub lemakers in any bunch," Roy says.

Some of Wheatland's insurmountable problems seem to have been caused by local leaders who, while progressive about growth, hold tightly to traditional social values. The city's refusal to allow federally-subsidized housing for low-income families is an example.

The county commissioners have been reluctant to spend the county's new-found riches on day care for children of working parents; a county land fill; recreation facilities; senior citizen facilities in two neighboring towns, Chugwater and Glende; or the library, according to state Rep. Doug Bryant of Wheatland.

Instead, he says, they have lowered the mill levy, an action which benefits primarily MBPP since its facilities make up 75 percent of the county tax base.

The county hasn't turned down any

The county hasn't turned down any roposals for rural subdivisions, although

proposals for rural subdivisions, although it has reduced the size of some. As a result, 16 new subdivisions have been approved, most on good agricultural land and all within three or four miles of town.

"At the start, it got real wild. Everyone became a subdivider," one man says. Gravel roads were constructed to meet county subdivision requirements, all principles consequences. county subdivision requirements, eliminating acreage from agricultural use, but 71 percent of the lots are empty, just as the planning staff had predicted 2½ years ago. With the boom almost at its height, it's not likely many more will be

With these problems, Wheatland can't be described as an "ideal" boom town. But is it better than most boom towns?

is it better than most boom towns?

Comparing towns is about as difficult as comparing people—there are no exact parallels to Wheatland's situation. From HCN's interviews, it is obvious that Wheatland has fared better than Gillette Wheatland has lared better than Gillette and Rock Springs, Wpo., the classic examples of what can go wrong as a result of rapid growth. However, those towns were thit by several developments at once, while Wheatland had only the growth spurred by

one power plant.

Researcher Harry Zeid, who has studied boom towns in Wyoming, Colorado, Oregon, Montana and North Dakota, says the only examples he knows of towns that have coped well with boom growth are Wheatland and Boardman, Ore.

Zeid works for a private research firm in Panyar. Rickert Browns. Ceddington.

Denver—Bickert, Browne, Coddington and Associates—that had a contract with several years ago to review Wheatland's growth projections. Since then, he has kept track of the town through monitoring reports. He says, "Overall, I'd say the company and the town did a bang-

However, Ray Gold, a sociologist from the University of Montana who studies boom towns, says Wheatland could never be a model boom town. "The local people must have a voice in the go or no go deci-sion, in the choice of the site and in the design of the plant. Without such mutual trust and collaboration, you can't have a model boom town." Several of Wheatland's successes could



CHUG CREEK ESTATES is one of the 16 rural subdiv

be duplicated by other communities—if they have state legislation to back them

The Wyoming Legislature provided for local governments to join together to obtain low-interest loans from the state Farm Loan Board. Wheatland and the neighboring town of Guernsey received a joint powers loan for sewer and water improve-ments. The money to repay the loan will come partly from coal tax money distri-

come partly from coal tax money distri-buted by the state.

While the loan was helpful, the Indus-trial Siting Act was by far the most impor-tant state law for Wheatland. Wyoming's siting law is somewhat flexible, but the siting council established by the law im-posed stringent conditions on MBPP -partly because of the Laramie River Conservation Council's involvement in the proceedings, according to many people who

watched the siting hearings.

To avoid social and economic impact, the siting council required MBPP to:

—establish and fund a coordinating

council to monitor and resolve problems,
—limit the number of construction
workers to a maximum of 2,250 at any one

guarantee a loan for construction of school facilities and pay any excess operat-ing expenses that public financing couldn't

provide a \$600,000 recreation com-

-provide \$62,000 per year for three years for a human services team (a mul-tidisciplinary team of university-trained professionals that works with different

-provide \$20,000 per year for three years for the mental health center, -guarantee a loan for water and sewer

improvements -provide \$28,000 for the planning

 build facilities for a day care center,
 if required, provide financial or tech nical assistance to communities in the

-provide housing as needed for the con struction force and the retail people who come to town to serve them.

Carl Ellis of the Industrial Siting Administration staff says there was a con-troversy at one point about whether people who are not employed by MBPP are wel-come at Black Mountain Village housing. The question apparently still is not resol-ved. While Rafferty told HCN other people ved. While Rafferty told HON other people are welcome, two task force members told HCN they understand it is exclusive. People who call MBPP about housing are told that construction workers getfirst priority. One couple was told it was "unlikely" any mobile homes would become available since there were so many others in line before them. before them.

MBPP asked for and received approval for more people in the construction force but other than that and the housing ques-tion adhered to all the above conditions.

tion adhered to all the above conditions. Impact alleviation has not come cheaply. While MBPP succeeded in guaranteeing loans, providing technical assistance and taking other steps to help local governments without digging into its own pocket, it has spent more than a quarter million dollars for social service and planning grants and another hundred thousand dollars in grants to the city of Wheatland for police and city employees.

Rafferty estimates that MBPP spends \$30,000 to \$40,000 per year for its monitoring effort, including its own staff's salaries for gathering data, publishing monthly reports and distributing the information.

However, Rafferty asys that at the end of the project, he expects to be able to demon-

However, Raterty says that at the enalor the project, he expects to be able to demonstrate to other companies the economic advantages of such expenditures, which should result in a stable, generally content work force. He can already show an absenteeism rate of nine or 10 percent, as com-pared with the Wyoming average of 15 per-

Other companies are paying attention. Rafferty says he has received information requests from "just about everyone in the energy industry." The state siting administration also has been answering questions about the "model boom town" from other states, the federal government and researchers. And Holloway of the task

"Overall, I'd say the company and the town did a bang-up job."

force says she has spoken to groups of residents from towns in several states and even received one information request from Au-

received one information request from Australia.

As a result of all the attention, local leaders are becoming adept at listing the ingredients they think went into making their boom town habitable.

They mention a cooperative industry, the Industrial Siting Act, which required MBPP to fulfill its promises and provided time for planning; power plant opponents, who made sure the Industrial Siting Council gave the project careful scrutiny, timing of the project, which made it subject to several new impact alleviation state laws; proximity to Cheyenne; the fact that only the power plant project was being constructed; and community spirit, which made it possible for the people to work together to tackle the oncoming problems.

Without any one of those ingredients, it might not have been possible.



THE RECREATION CENTER at Black Mountain Village includes a swimming pool and game rooms as well as space for exercise classes and other gatherings. One woman said the center is "the only thing that keeps her from going berserk."

Geothermal exploration...

world's most revered natural phenomena, Old Faithful Geyser.

The National Park Service and other geyser guardians are concerned that deep drilling in the IPGA could disrupt Yellowstone's fragile plumbing. Industry says the risk is so small that cautious exploratory drilling should be allowed. In its draft statement, the Forest Service makes no recommendation but expresses a trust that U.S. Geological Survey experts can effectively prevent harm to park features through a well monitoring system and reinjection of hot water brought to the surface.

"We don't know anything definite about "We don't know anything definite about

face.

"We don't know anything definite about the interconnections between IPGA and Yellowstone underground systems," says Stan Szczepanowski, hydrologist for the Targhee Forest at St. Anthony, Idaho. "Thatcan only be known through drilling." Monitoring wells and stream gauging stations at various points in Yellowstone would be installed, according to the draft statement. The Forest Service and Geological Survey would require that all geothermal fluid used in this area be reinjected "into the reservoir from which it was extracted to minimize loss of reservoir pressure."

'ABSOLUTELY PRICELESS'

These assurances, however, do not allay the fears of Park Service officials Bill Gregg, chief of environmental compliance in Washington, D.C., and Alan Mebane, chief naturalist at Yellowstone.

"The park is an absolutely priceless part of our national heritage," Gregg says. "It's of global importance. It is my personal view

world's most revered natural phenomena,
Old Faithful Geyser.

The National Park Service and other
geyser guardians are concerned that deep
drilling in the IPGA could disrupt
Yellowstone's fragile plumbing. Industry
save the risk is so small that cautions exp.

considered inviolable."
"The resource is just not well enough known to assure us that the monitoring program can do what it is supposed to do," Gregg says. "We must approach the subject from the perspective of a worst-case accident, such as a blowout or an earthquake. This is just not a case where we feel comfortable we have all the information we need."

need."

Mebane agrees. "In New Zealand, three geyser fields were destroyed by geothermal development nearby. Yellowstone's geysers and hot springs are the most important part of the park and nothing should be done to threaten them," Mebane says.

"There is such a large magma chamber under Yellowstone that it seems quite possible to affect the park's systems by draining off heat at the edges. Geothermal development is a necessary thing, but I'm not sure the IPGA is the place for it," Mebane says.

The editor of the Old Faithful Times, a tourist-directed newspaper published in West Yellowstone, Mont., is also strongly opposed to the drilling idea. In an editorial, the paper said the country cannot afford "to play Russian Roulette with these irreplaceable national treasures." Roger Stoker, a geologist and geothermal expert who has formed Energy Services, a consulting firm in Rexburg, Idaho, says test drilling is necessary "Because we don't know enough now to say that geothermal development in IPGA would be either good or bad. Nobody The editor of the Old Faithful Times, a

WEST YELLOWSTONE DANA MONTANA Oldfaithful @ 7,367" YELLOWSTONE NATIONAL ASHTON GEOTHERMAL AREA BOUNDARY NATIONAL PARK BOUNDARY STATE BOUNDARY

understands the systems well enough to state that limited exploration will have an effect on Yellowstone. Nobody in industry wants to harm Yellowstone's resources." Stoker says it may be reasonable to put

"To me," Stoker says, "it is inconceivable, considering the apparent magnitude of the geothermal resource in the area, that a few wells a relatively long distance away will have one iota effect on Old Faithful.

Under Island Park—hot stuff?

The Island Park Geothermal Area is adjacent to Yellowstone National Park. That's about all anyone knows about the plumbing interconnections and the geothermal potential of the area. "It's all an enigma," says Mickey Beland of the Targhee National Forest.

Industry hopes some of that heat re-source laps over into the IPGA. Several companies are anxious to explore and drill to determine whether sufficient reservoirs of hot water can be found, even in wells 10,000 feet deep, to allow power production on a paying basis.

Geothermal entrepreneurs are eyeing the IPGA chiefly because of its proximity to Yellowstone, "a monumental geothermal system," according to Bob Mallis of the U.S. Geological Survey in Menio Park, Calif. Test wells in the park have found 350 degree water at less than 400 feet and 465 degree water. at about 1,000 feet.

"The temperatures probably aren't that hot at comparable depths in the IPGA," says Roger Stoker, a geothermal expert in Rexburg, Idaho, "or we'd have geysers over here, too."

There are no geysers in the IPGA. A few hot springs are present, but "they are of low temperatures and flows and not valuable commercially," says Stan Szczepanowski of the Targhee Forest.

Stoker's hunch is that "water of up to 400 degrees can be found in the IPGA,

but we're talking depths of 4,000 to 10,000 feet."

If a community was located in the IPGA, much cooler hot water could be used for space heating, similar to the systems which have heated Boise, Idaho, homes for decades.

West Yellowstone, Mont., with only west tenowener, Mont., with only about 800 people is the largest community in the IPGA proper. The draft environmental statement says geothermal space heating requires water only 130-175 degrees but that "a minimum district size of 1,000 dwelling units will probably be required for economic feasibility."

Szczepanowski says industry is primarily interested in the IPGA for electric generation. A Department of Energy experiment at Raft River in southcentral Idaho near the Utah border could have a direct bearing on economical power production in the IPGA.

At Raft River, 300 degree water is rought up from 3,700 to 5,000 feet. A 10 megawatt experimental power plant is being built that would utilize a twostage system: hot water would vaporize a fluid called isobutane, which boils at a much lower temperature than water The gaseous isobutane would then turn

Another federally-assisted project is under way at Ontario, Ore. Deep wells will be drilled on the site of the Ore-Ida food processing plant. Program Man-ager Bob Rolf of Ore-Ida was quoted in ager Bob Roll of Ore-da was quoted in Geothermal Energy magazine as say-ing "half of the energy requirements for food processing can be supplied by geothermal energy if our source meas-ures up to at least 300 degrees F."

The water first would be used to operate peelers and blanchers and, as it cools, be reused for space or hot water

"The amount of heat given off by the Upper Geyser Basin (Old "The amount of heat given off by the Upper Geyser Basin (Old Faithful area) is 800 times the amount given off by nonthermal areas of the same size. This excess heat is enough to melt 1½ tons of ice per second! And, contrary to popular opinion, the underground temperatures have not cooled measurably in the 100 years that records have been kept on the thermal activity in the park. In fact, geologic studies indicate that very high heat flows have continued for at least the past 40,000 years."

— Keefer, "The Geologic Story of Yellowstone National Park,"

U.S.G.S. Bulletin 1347

U.S.G.S. Bulletin 1347

A LONG HISTORY

In 1970 Congress passed the Geothermal Steam Act, which allows the Interior sec-retary to allocate geothermal resources on federal lands. After the Araboil embargo of 1973, interest in geothermal development soared. Some 200 lease applications have been filed on the IPGA by such companies as Occidental Geothermal, Union Oil and California Geothermal, as well as a number of smaller firms, individuals and seculators.

speculators.

According to Mickey Beland, resource coordinator for Targhee National Forest, most previous geothermal proposals on Forest Service lands "were not deemed major federal actions and were handled without a full continuous." without a full environmental statement. Because of the proximity to Yellowstone and the presence of several endangered species, we felt from the outset that a DES (draft environmental statement) would be necessary for Island Park."

necessary for Island Park."
While industry fidgeted, the planners took more than two years to finish the statement. It emerged in late March. "We've been under a good deal of pressure," says Szczepanowski. "Most of our responses to the statement thus far have been from industries anxious to get the drilling work going. We've had little response from environmental groups," he save.

says.

For discussion's sake, the draft statement presents six possible development alternatives running from the no leasing extreme of alternative one to opening the entire area to leasing in alternative six. The intermediate options present various methods for mitigating impacts.

Szezepanowski says the Forest Service

(see next page)

and the Bureau of Land Management, which manages a small portion of the IPGA, hope to decide the matter with a final environmental impact statement by

BEARS, CRANES AND WOLVERINES

Because of timbering, recreational home development on private land within the IPGA and extensive motorized recreation ("winter weekend use often exceeds 2,000 snowmobiles per day." according to the



draft statement), the IPGA was not part of the Forest Service's recent wilderness inventory.

Nonetheless, the draft statement cates that the area is crucial wildlife habitat. Bald eagles and peregrine falcons, both endangered species, have nested in

the IPGA. One million migrating waterfowl pass through the area, and the rare wolverine, fisher, lynx and wolf have been seen there.

The IPGA also contains "extensive

The IPGA also contains "extensive winter range" for a declining population of moose and provides major deer, elk and sandhill crane staging and breeding areas. According to the draft statement, "operation of a geothermal field increases continuous noise, discharge of geothermal fluids, operation of machinery, construction, human activity." Cooling towers, pipelines, powerlines, roads, buildings and drilling pads would be built in the "sparsely populated (less than 1 0.00 pec.

"sparsely populated (less than 1,000 people) and non-industrialized" area.

The statement indicates that such activities could have substantial adverse effects on wildlife. fects on wildlife.

Although the official deadline for co menting on the IPGA draft statement was May 21, Targhee spokesman Beland says "we'll be real liberal" in considering late

Comments should be addressed to Targhee National Forest, St. Anthony, Idaho, 83445.

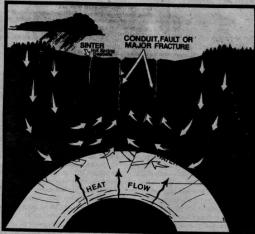


FIGURE 2. CROSS SECTION OF A GEOTHERMAL AREA



Bulletin Board



LOONEY LIMERICKS by Zane E. Cology

An entrepreneur named Stotts Hooked a turbine to several mud pots, Disturbing the lair
Of Yogi the Bear
For the sake of a few kilowatts.

BIOMASS CONFERENCE

The Third Annual Biomass Energy Systems Conference is scheduled for June 5-7 at the Colorado School of Mines in Golden, at the Colorado School of Mines in Golden, Colo. The conference, sponsored by the Department of Energy and coordinated by the Solar Energy Research Institute, will focus on DOE's Biomass Energy Systems Programs. Write Vicky Curry, Conference Coordinator, Solar Energy Research Institute, 1536 Cole Boulevard, Golden, Colo. 80401, or call (303) 231-1467.

COAL MINING WORKSHOP

The Public Lands Institute is sponsoring
a free workshop on the Federal Surface
Mining Control and Reclamation Act of Mining Control and Reclamation Act of 1977 and how it can be used by citizens to protect fragile areas from being mined. The workshop will be held June 23 and 24 in Lander, Wyo. For more information contact Carolyn Johnson, Mining Project Director, Public Lands Institute, Inc., 1740 High Street, Denver, Colo. 80218.



WILDLIFE T.V. SPECIAL

WILDLIFE I.V. DEELAL
Stouffer Productions, Ltd., of Aspen,
Colo., will present a wildlife film, "The
Man Who Loved Bears," on ABC-TV June
17. It's about the experiences of a man who
raises a young grizzly to adulthood.

ALASKA LANDS HEARINGS

Hearings on the fate of 57 million acres of federal lands in Alaska, which President of ederal lands in Alaska, which President Carter slated for protection last December, are scheduled for June 7 in San Francisco, Denver, and Washington, D.C. The Denver hearings will be held at the Bureau of Re-clamation auditorium, Denver Federal Center, Denver, Colo. Persons interested in testifying should write Regional Direc-tor, U.S. Fish and Wildlife Service, Attn. PAO 204(d. Public Hearing, P.O. tor, U.S. Fish and Wildlife Service, Attn: PAO-204(c) Public Hearing, P.O. Box 25486, Denver Federal Center, Denver, Colo. 80225. Written comments will be accepted for 30 days following the hearings, and should be sent to Area Director, U.S. Fish and Wildlife Service, 1011 East Tudor Road, Anchorage, Alaska 99507.

SOFT ENERGY WORKSHOP

Energy expert Amory Lovins will be the featured guest at a seven-day workshop, "Soft Energy Path Explorations," spon-

sored by Holistic Life Seminars. The work-shop, to be held September 24-30 at Feath-ered Pipe Ranch near Helena, Mont., will focus on participants' technology needs. A fee of \$400 includes room and board for the week. For more information write to Christ Cappy, Holistic Life Seminars Director Box 1682, Helena, Mont. 59601.

ENVIRONMENTAL STATISTICS

ENVIRONMENTAL STATISTICS
The President's Council on Environmental Quality (CEQ) has published Environmental Statistics 1978, which shows trends in air and water pollution, population growth and distribution, transportation, solid wastes, cropland, wildlife and energy between 1950 and 1977. CEQ plans to release future reports every two years. To obtain a copy write National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22161. Request report No. PB 294141.

SERVICE DIRECTORY

GRAND TETON ENVIRONMENTAL CENTER

EXCITING COURSES FOR SUMMER HIGH SCHOOL FIELD ECOLOGY
Six week coed summer field course
June 21-August 1
One year H.S. science credit.
SIXTEEN SUMMER FIELD SEMINARS
One week field courses in a variety of subinarts benjoins.

jects beginning June 4 through August 31, with or w-o cre

dit. Grand teton summer field ecol OGY

Two week college course, August 4-17.
With or w-o credit. (six quarter units or
4 semester grad or undergrad credit.)
for more information write:

TETON SCIENCE SCHOOL Box 68H, Kelly WY 83011 Phone: (307) 733-4765





A portfolio on our tipis is available for \$1 FOOFARAW 855 North Cedar Laramie, WY 82070

creating energy

he third in a series of Practical us of solar energy, this book covers con-centrating collectors, solar furnace electricity, and much more. Com-plete plans and information.

P. O. Box 1112

HIGH-LITE SKYLIGHTS

arm your home in winter.

Plastic rafts • 2800 N Speer Blvd Denver, Co., 80211 • 303 • 433 • 8801

LARSEN'S BIGYGLES



Climb Every Mountain

by Thomas M. Jenkins

by Thomas M. Jenkins

The howling coyote a stereotypical image of the Western plains, is more than a symbol. Some wildlife scientists say the coyote is as indispensable to the natural system as any wild animal in the West.

As a predator, the coyote not only prevents rabbits, rodents and other small mammals from taking over but also strengthens game herds by eliminating the weak, sick and aged from their breeding cycle, which in turn prevents overpopulation and overgrazing. Under severe winter conditions, coyotes will feed on carrion, which prevents carcasses from decaying and contaminating the water supply.

Unlike the diminishing wolf, the coyote has thrived despite predator-control campaigns. Persecution has not only failed to retard its spread but has led to an even more adaptable animal. Over a million coyotes now inhabit the West.

An old Indian belief that "the coyote will be the last animal on earth" seems plausible. This indefatizable creature can sus-

An old Indian belief that "the coyote will be the last animal on earth" seems plausible. This indefatigable creature can sustain up to 70 percent fatality each year and still maintain its population. Classified as a carnivore, the coyote is actually omnivorous, eating insects, some fruits and berries as well as meat. It has even been reported that under desperate conditions the coyote has resorted to cannibalism, feeding on the carrion of its own race.

Such indiscriminating eating habits aid its adaptability, which in turn extends its range. In the Los Angeles area coyotes live in such unlikely habitats as culverts, back alleys and on the eatstes of movie stars. Their howls interrupt the singers at the Greek Theater in Griffith Park and blend inharmoniously with the concert music in

inharmoniously with the concert music in the Hollywood Bowl. They chase the Be-verly Hills dogs into their houses and occa-sionally pluck off Persian cats dozing in the sionally the front lawns of suburbia.

This irrepressibility takes other forms. This irrepressibility takes other forms. Some coyotes have survived on three legs after losing a leg in a trap. A female coyote in Oklahoma, having lost both her forelegs, managed somehow on only two legs. A California female coyote, who was blind but fat and healthy, is said to have successfully raised a litter of pups.

In its resistence to predator control, the adaptability of the coyote has almost taken

the form of defiance. For over 100 years, it has successfully withstood the onalaught of man's technology and antagonism. Despite the millions of dollars spent on poison-bait programs, government trappers and a bounty system, the coyote's habitat now includes forest, farm and prairie from Alaska to South America. Cautious, suspicious and opportunistic, the coyote learns from its mistakes and passes such knowledge to its young.

Predator control efforts have produced ironic results. Sometimes kills have increased, rather than stopped, predation. A coyote adjusted to his territory, familiar with the trails, washes, ditch banks and ridges by which to hunt wild prey, may never attack domestic animals. The killing of coyotes in this well-managed domain, however, will create a vacuum into which lessperate, timerant coyotes will drift. Before they develop their own natural hunting runways, they often prey upon sheep and other domestic animals.

A coyote litter averages 7 to 10 pups, a this high less than 50 percent are likely to

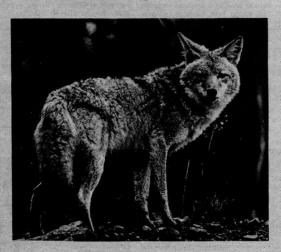
and other domestic animals.

A coyote litter averages 7 to 10 pups, of which less than 50 percent are likely to survive the first winter. Coyotes are intensely protective, affectionate and devoted. Sometimes unmated females protect and feed the pups of another female when the mother is absent. Despite these close relationships, there is fierce competition in a season when hunting is poor, with resulting high mortality. Fast growers, the a season when hunting is poor, with result-ing high mortality. Fast growers, the young coyotes are soon capable of joining their parents in the hunt for small prey. Once the hardships of winter and the dan-gers from other predators during the first year have passed, the coyote's only real

year have passed, the coyote's only real enemy is man.

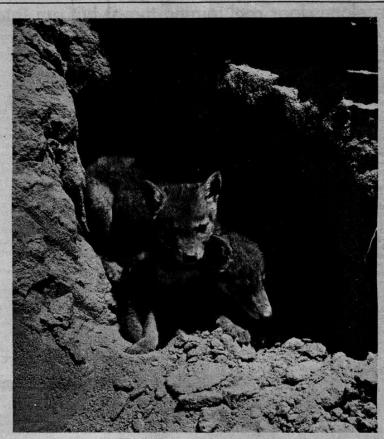
Man's threats, however, are abundant. The guns, traps, poisons, hounds and cars are everywhere, but some coyotes survive the human gauntlet for 12 years or more until old age slows them down. Then weakened by the inability to feed fully, parasites or disease inevitably take hold. The next winter the coyote will become too weak to hunt and eventually become food for his successor.

Thomas M. Jenkins is director of the division of communications and arts at the Red Rocks Campus of Community College









ABOVE: COYOTE PUPS ONE MONTH OLD.

SOME COYOTES SURVIVE THE HUMAN GAUNTLET FOR 12 YEARS OR MORE UNTIL OLD AGE SIOWS THEM DOWN.

LET: SOME WIDLIFE SCIENTISTS SAY THE COYOTE IS AS INDIS-PENSABLE TO THE NATURAL SYSTEM AS ANY WILD ANIMAL, IN THE WEST.

PHOTO COURTESY OF DENVER PUBLIC LIBRARY.

FARIEFT: DESPITE
PERSECUTION, THE COYOTE
HAS SUCCEEDED IN
EXTENDING, ITS RANGE
TO INCLUDE FOREST, FARM
AND PRAIRIE FROM ALASKA
TO SOUTH AMERICA.
HOTO BY RON MAIRR

Antelope clear coal mining threat but run into fencing plans

by Genevieve Dodd

Though Bureau of Land Management officials have decided to ban coal mining to protect antelope winter range in the Red Rim area west of Rawlins, Wyo., a rancher's fence may jeopardize the animals

anyway.

BLM's Rawlins district manager, Fred
Wolf, says that two days after BLM declared federal lands on Red Rim "unsuitable" for coal mining, rancher Taylor Lawrence announced plans to erect a 28-mile
long, 5-foot-high, sheep-tight fence across
his land. The fence will cross most of Red
Nim Wolf says.

long, b-toot-high, sheep-tight lence across his land. The fence will cross most of Red Rim, Wolf says.

The Wyoming Game and Fish Department has documented that fences can cause antelope deaths in severe winter weather. In the winter of 1971-72 about 3,600 antelope died in the Red Desert region, blocked by fences.

Property lines in the Red Rim area form a checkerboard pattern; federal sections alternate with privately owned sections. The planned fence, which Wolf estimates will cost Lawrence about \$125,000, will not cross federal property. (See diagram.)

This winter BLM reviewed 100,000 acres in the Ray lins district to determine their suitability for coal mining. Using nationally established criteria, ELM determined that Red Rim was "unsuitable," because it provides critical winter habitat for antelope.

Red Rim's windswept ridges and broken

Red Rim's windswept ridges and broken topography allowed 1,200 antelope to feed and survive this year's severe winter, Wolf says. A herd of about 5,000 antelope lives

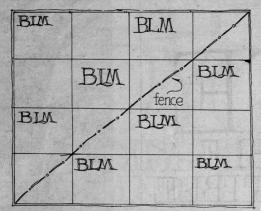
during most of the year in the surrounding

After BLM announced its decision con-cerning Red Rim, Lawrence's attorney, John McPherson, wrote the agency a letter. In the states that Lawrence is considering the construction of a fence in the area and suggests that BLM might not consider Red Rim a critical antelope habitat if the fence were there. "Such a fence would have an obvious effect upon wildlife patterns...This...may be reason enough to reconsider the application of the unsuita-bility criteria to the area," he wrote.

Where Lawrence owns the surface on Red Rim, Rocky Mountain Energy Co., a subsidiary of Union Pacific Railroad, owns the mineral rights. When the company plans to mine an area, a surface owner such as Lawrence is asked to sign a "Surface as Lawrence is asked to sign a Surrace Owner's Agreement," a company spokes-man says. The agreement varies, but nor-mally involves payment to the surface owner for land disturbance, says Dornthy Reid, public relations officer for the energy

Lawrence told BLM his fencing plans are not related to BLM's decision to restrict coal mining in the area. The purpose of the fence will be to protect newly seeded crested wheat grass on his land, the

Wolf says the agency is consulting lawyers, but a legal dispute over the fence seems unlikely. Lawrence is not breaking a law, according to Wolf. However, Wolf says, "the last thing we want in there is a fence."



CHECKERBOARD. In an area where land ownership falls in a checker-



The HCN Hot Line

energy news from across the country

SUBSIDIZING SOLAR. A House committee is debating the establishment of a federal loan program to help people buy solar heating systems. The Solar Lobby, a Washington, D.C., based group supporting solar energy, says a program of low-interest, long-term loans would foster energy independence and boost large segments of U.S. industry. The bill (HR 605) calls for \$100 million in federal funds for the first year, increasing to \$200 million by the first year, increasing to \$200 million by the third year. Loan ceilings would be \$10,000 for residents of single family homes and \$200,000 for owners of commer-cial buildings.

FRIENDS OF THE WEST. A Boise State University teacher has started a petition drive to ban radioactive waste shipments drive to ban radioactive waste shipments and disposal from the 11 Western states. Dr. Kathleen Warner, who says she has no ties with anti-nuclear groups, says, 'I guess anyone who is concerned at all about quality of life shouldn't have any reservations about signing it." She says when atomic blasts conducted near her Nevada home were close enough to give off a bright slow, she became very frichtened and deglow, she became very frightened and developed a hedonistic attitude about life, according to the Idaho Statesman. Her petition is titled "Friends of the West."

GROWTH SLOWING. The growth rate of U.S. energy consumption has slowed, mainly due to industry's conservation efmainly due to industry's conservation ef-forts, according to the Department of Energy. The agency says the growth rate, which was 2.5 percent in 1977, was 1.8 percent last year. However, Americans are consuming oil and oil products at higher rates, says the American Petroleum Insti-tute. Demand for gasoline, for instance, rose 4.8 percent in February alone, a counth when demand wight powerfully be month when demand might normally be level or even decline, the institute says.

THREE MONTH NUCLEAR PLANT FREEZE. The Nuclear Regulatory Commission has imposed a three-month freeze, beginning May 21, on the issuance of operating licenses and construction permits for new nuclear power plants. The freeze is designed to give experts time to assess the implications of the March 28 accident at Three Mile Island, Penn., in which radiation escaped from a nuclear power plant. Four construction permits and five operating licenses are affected by the delay. Harold Denton, director of the NRC's office of nuclear reactor regulation, says that it will take a month for a special 15-member task force to investigate the accident, another month to convert the findings of the investigation into recommendations and a third month for response from the plants and the NRC.

GASAHOL WARRANTIES. Two leading auto manufacturers, Chrysler Corp. and General Motors, are expanding their automobile warranties to include the use of automobile warranties to include the use of gasahol fuel, the companies' spokesmen say. Use of up to 10 percent ethanol mixed into gasoline will not affect warranties covering one year of 12,000 miles. Officials at Ford Motor Company, however, say they need to do more research on gasahol's effects on engine parts. Gasahol is now being cold at very 200 cres stations lawyshy in the sold at over 200 gas stations, largely in the



Be sure to send us your new address at least two weeks in advance so you won't miss an issue of HCN.

HE STATE OF THE ST



ANTELOPE migration will be blocked by a fence proposed in the Red Rim area of Wyoming, according to the Bureau of Land Management.



TRIBE V. STATE. Rep. Ron Marlenee (R-Mont.) has introduced a bill that would amend the Clean Air Act to allow a state legislature to contest an Indian tribe's de-cision about air pollution on its reservation. The Clean Air Act allows certain governments, including tribal governments, to change their federal air designation to allow either less or more pollution. The act now says a governor can object to a tribe's request and ask the Environmental Pro-tection Agency to intervene. Marlenee's amendment would allow the state legislature to object if the governor did not. Or Marlenee's staff members explains the bill would not give the legislature veto power; the final decision would still be up to the EPA. "The governor and the state legislature should have the right to determine the path the state follows," he says. The bill is in the Interstate and Foreign Commerce

IN 1995. A U.S. Department of Energy re-port says that it will be 1995 before more than two million cubic feet of recommendations. than two million cubic feet of nuclear waste buried at the Idaho National Engineering Laboratory near Idaho Falls can be perma-nently stored. And, the report says, this goal can only be reached after political and social opposition to a permanent waste storage facility in New Mexico can be over-come. The Atomic Energy Commission had come. The Atomic Energy Commission had originally set a deadline of 1980 for permanent storage of the INEL waste, which has been piling up since the 1950s. However, problems with site selection for a permanent facility have extended the deadline by 15 years. DOE also says that digging up and removing the waste from its current hursal site may be more hazardous than burial site may be more hazardous than simply leaving it where it is. Hearings will be held on the problem on June 5 in Idaho Falls and on June 7 and 8 in Albuquerque.

OIL SHALE STARTS. The Department of Energy has asked oil shale developers to submit design proposals for surface oil shale development. DOE will consider the proposals, then enter a government-industry cost-sharing program to demon-strate the economic, technical and environmental feasibility of surface shale oil production, according to the Denver Post. production, according to the Denver Post. Designs for underground technology will not be considered because DOE officials say the technology needs "additional development." Congress has set aside \$15 million for the oil shale demonstration program, which has been delayed for 15 months as a result of "manpower problems"

UTAH GASIFICATION PROPOSED. Mountain Fuel Supply Co. is planning to construct a pilot gasification plant near South Jordan, Utah, to test a gasification process that it says is more efficient and economical than the more commonly used Lurgi process. Construction is to begin later this year, according to the Deseret News. If the pilot plant is successful, a full-scale plant that could process 15,00 tons of coal per day would be built near

Herschler vetoes Texas slurry line

Wyoming Gov. Ed Herschler has killed for at least this year a proposal by Texas Eastern Corp. of Houston, Tex., to use Wyoming water in a coal slurry pipeline from Montana to Texas. The proposal had been expressed by the Wickeys and all been approved by the Wyoming Legisla-ture, but the governor was given 90 days — until May 25 — to decide whether to enter into a contract with the company for use of the water (see HCN, 4-6-79).

the water (see HCN, 4-8-79). In rejecting the pipeline, Herschler said, "I believe the legislation put the cart before the horse. The review process which I was required to pursue should have been accomplished prior to the passage of the legislation. The 90-day review period authorized by the legislature was not sufficient."

Texas Eastern had proposed to take about 42,000 acre-feet of water from the Little Bighorn River in northern Wyom-ing. The company would have used 20,000 acre-feet to slurry coal to several Texas power plants and the remainder would have been turned over to the state to do. been turned over to the state to do with as it chose

Herschler said that there were several unanswered questions concerning the pipeline. These included the amount of vater available to Wyoming after the water available to Wyoming after the pipeline's requirements and other competing claims were satisfied; whether, once committed to the pipeline, the water would become subject to federal control by the Interstate Commerce Commission; and whether the company and the Wyoming Game and Fish had thoroughly examined the environmental impacts of the pipeline. In addition, the state of Montana had

NEXT TIME YOU FLUSH YOUR TOLET
THINK OF YOUR NEIGHBORS

GULF INTERSTATE TEXAS EASTERN PIPELINE ENERGY TRANSPORTATION SYSTEMS, INC. EGEND existing
in progress
planned

threatened to sue Wyoming under the terms of the Yellowstone River Compact if it signed the Texas Eastern contract. The compact requires the consent of Montana and North Dakota before water from the Yellowstone Basin can be diverted out of the basin. Wyoming officials were convinced, however, that the compact does not apply to the Little Bighorn.

The Crow Tribe in Montana also claimed all of the water in the Little Bighorn, further muddying the legal situation.

Texas Eastern officials were disap-pointed with the decision, but said that they would continue their studies of poten-they would continue their studies of potential water sources. The legislation passed the Wyoming legislature by a large mar-gin, and company officials say that they may take their case back to the legislature

for a stronger mandate.

Texas Eastern has been unwilling to divulge the names of their customers to the state, but HCN has learned that the coal

state, but HCN has learned that the coal would go to Southwestern Public Service plants in Amarillo and Lubbock, San Antonio Public Service plants in Austin and La Grange and Houston Light and Power plants in Houston and Lake Charles.

In one curious sidelight, a spokesman for Wyoming's other coal slurry pipeline company, Energy Transportation Systems, applauded the rejection, saying that the project had many unanswered questions. Texas sources say that ETSI has approached at least one of Texas Eastern's customers about extending a branch from ETSI's proposed line, which currently goes to White Bluff, Ark., and Baton Rouge, La. to Houston.



U.S. nuclear jitters delay mine

Urangesellschaft, a German mining Urangesellschaft, a German mining firm, will delay a proposed Wyoming uranium mine and mill for at least one to three years. Phil Collyer, a spokesman for the company, says that the delay will last "until the uranium market shows a little more strength. Since the Three Mile Island accident, buyers have been reluctant to commit themselves to new sunnies."

accident, buyers have been reluctant to commit themselves to new supplies."
Collyer says that the company had only recently completed full technical feasibility studies and market forecasts for the mine. These showed that the venture is "close to the borderline in terms of profits-bility. Give he current national mood, we are deliberately slowing down."
Even if plans proceeded immediately, he says, it would be four years before the mine would reach the production stage.
The mine and mill would have a 2,000 ton per day capacity. They would be located near Baggs, Wyo., near the Colorado border.



Thoughtful people do not wash their wastes into sewers. That is unkind to

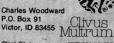
our neighbors downstream, and to our lakes and rivers. It also wastes a torrent of fresh water.

Such profligacy is not necessary. The Clivus Multrum is a waterless waste treatment system for the home or public facility which saves all that water and protects our environment. Toilet wastes and organic garbage are composted into a rich fertilizer right in your basement, conserving water, nutrients, and energy.

Clivus Multrum Northern Rockies 205 Meadows Rd. Whitefish, MT 59937

May Raynolds 1290 S. Second St. Lander, WY 82520

P.O. Box 1152 Saratoga, WY 82331



Clint Elston P.O. Box 18 Traser, CO 80442 treatment system 12-High Country News - June 1, 1979

STATE OF WYOMING

Financial statements of Insurance Companies which are authorized to do business in Wyoming. Published in High Country News June 1, 15, 29; July 13, 27; August 10, 1979



Western Roundup



BLM to choose new leaders in 5 Western states

Bureau of Land Management Director Frank Gregg has announced that it's time for changes in the leadership of his agency in at least five of BLM's 11 Western states Idaho, Montana, Utah, California and Nevada.

State directors retiring this summer are Bill Mathews of Idaho, Ed Rowland of Nevada and Paul Howard of Utah. Ed Zaidlicz of Montana will retire within a year, Gregg says. Ed Hasty of California has been named associate BLM director, which makes him the number two man in the

agency.

Gregg says that the reshuffling was not politically motivated, but that he thinks state directors should be changed every eight years. Each was offered a directorship in another state or a job in Washing-

You have to keep people in a job for awhile so they can get to know the people and the local problems," he said. "But at

Challis BLM cuts stock by 31 percent

The proposed cutback for livestock graz-ing on the Bureau of Land Management's Challis Unit in Idaho has been trimmed Challis Unit in idano has been trimined from 40 percent to 31 percent (see HCN, March 23). State BLM Director William Mathews said that identification of other

Mathews said that identification of other methods for rehabilitation of the grazing area and a larger wild horse cutback made the adjustment possible.

The BLM hopes to use the Experimental Stewardship Program devised under the Federal Rangelands Improvement Act of 1978 to carry out the grazing plan for the part. The argument large for the adjustion unit. The program allows for the selection of a group representing the private and public interests in the region to advise the BLM on management of the land.

the other end, after a man has been in a place for six or seven years, he becomes

place for six or seven years, he becomes stale. If you move him to a similar post, you generally get a new burst of productivity." Environmentalists have been disap-pointed with the agency's resistance to change, despite a new legislative mandate and new leadership in Washington, D.C. Debbie Sease of the Wilderness Society says she thinks the new state leadership will mean a change for the better in the West.

"That's not to say that the ones who are leaving have done a bad job," she says. "But

Matheson sues to stop Weteye move

Gov. Scott M. Matheson has filed suit in deral court to block the Army's decision to move 900 bombs filled with deadly nerve gas from Colorado to Utah. The "Weteye" bombs contain enough

poison "to wipe out the world," Matheson says. The Army plans to move them June 11, if Matheson does not win a court injunc-

While Matheson is the only top Utah While Matheson is the only top Utah elected official to oppose the transfer, he has received support from Colorado Gov. Dick Lamm; Secretary Joseph Califano Jr. of the Department of Health, Education and Welfare; Regional Administrator Alan Merson of the Environmental Protection Agency; Sen. Gary Hart (D-Colo.) and former Sen. Floyd Haskell (D-Colo.). All of the above officials had asked the Army to destroy the nerve gas at its pres-

All of the above officials had asked the Army to destroy the nerve gas at its pres-ent site at the Rocky Mountain Arsenal near Denver. Despite their requests, last year the Defense Department decided that the bombs were needed to match the chemical-biological weapons being stock-piled by the Soviet Union.

Electric fences may keep out coyotes

The U.S. Fish and Wildlife Service has recently developed a new coyote-proof fence, which it hopes may be useful in pro-tecting livestock. The fence stands 5 feet and 6 inches high and consists of alternat-



COYOTES could be controlled by electric fences, according to the U.S. ing electric and grounded wire strands. Aling electric and grounded wire strands. Ar-though few controlled tests have been run, researchers at both the Denver Wildlife Research Center and the Department of Agriculture's Sheep Research Station in Dubois, Idaho, have found the fence to be effective during initial tests. The potential disadvantage of the new fence may be its effect on migrating big game, such as antelope and deer.

Dick Randall, regional representative of the Defenders of Wildlife, says that such a high fence could pose a problem, especially for antelope. He points out, however, that any fence will hamper the movement of e animals.

A representative from the Wyoming De-partment of Game and Fish in Lander says that its effect on big game would depend on where the fence is located. If it replaced existing fences, it "would not be too harm-ful," he says.

According to Randall, the new fence might be a solution in areas where coyotes pose a "historical, perennial problem."

However, Randall says the fences would be expensive to construct and maintain and would only be practical in areas of extreme coyote predation. "They certainly would be one solution," he says.

when a director spends too much time in the same state, stagnation occurs — and political pressures can get to him. I think the new directors will represent the commitment to conservation and balanced land use planning of Frank Gregg."

News reports announcing the retirement of Wyoming's state director, Dan Baker, were erroneous, according to Andy Androf,

Tribal council revives grizzly bear study



Montana Fish and Game photo by Mike Sample A GRIZZLY STUDY in Montana has

On the Flathead Reservation in Montana a three-year-old grizzly bear study
which faced extinction from federal budget
cuts has been saved by the Confederated
Saliah and Kootenai Tribal Council. The
University of Montana Border Grizzly Project started in 1976 when two orphaned
cubs were transplanted in the Jocko Mountain area of the reservation at the tribed'
request. Study of the bears continued in
1977 with U.S. Fish and Wildlife Service
funding. The Bureau of Indian Affairs participated the next year because, under the
Endangered Species Act, it must have information regarding the grizzly-w-make
resource management decisions that
might affect the species, which is listed as
"threatened."

The Tribal Council voted to allocate The Tribal Council voted to allocate \$16,000 from its forest improvement fund to keep the bear study alive. Information gained by the study is already being used to determine the effect one proposed tribal logging project would have on grizzlies in

Federal haste bothers conservationist

At least one Montana conservationist is apparently fed up with speedy federal wil-derness inventories. When the Forest Service announced that it could finish the work mandated by the Montana Wilderness Study Act in a little over a year, Wilderness Society Rep-resentative Bill Cunningham protested in leasters. In Registrant, Eventer, Robert letter to Regional Forester Robert

He wants the agency to take the full five years allowed in the law. He also wants separate consideration of each of the nine roadless areas included in the act.

"Conservationists are shocked at this 'quick and dirty' attempt to circumvent the congressional mandate for a complete and thorough wilderness study," he says.

Nevertheless, Torheim says that "it is in the best overall public interest to have a single environmental statement covering all the areas within this (15-month) time-frame." Studying the areas together, he says, allows the agency to put them "in perspective with the qualities of other roadless areas.

Cunningham is also worried about workshops the Forest Service will be hold-

ing on the Wilderness Study Act in June. Based on his experience last year with the agency's second Roadless Area Review and Evaluation (RARE II) workshops, these "are almost certain to deteriorate into generalized statements for and against wilderness," Cunningham says. "The danger is that the workshops can produce a negative climate which may be difficult, if not impossible, to recover from." ot impossible, to recover from."

The nine Montana areas Congress as

The nine Montana areas Congress asked the Forest Service to review are: Big Snowies, Bluejoint, Hyalite, Middle Fork Judith, Mount Henry, Sapphires, Taylor-Hilgard, Ten Lakes and West Pioneer. Forest Service workshops to explain the process and give the public a chance to comment will be held at 7:30 p.m. in the following Montana toward Hamilton, have

following Montana towns: Hamilton, June 18; Dillon, June 18; Missoula, June 19; Butte, June 19: Eureka, June 20: Ennia June 20; Libby, June 21; Philipsburg, June 21; Bozeman, June 25; Lewistown, June 27; and Great Falls, June 28.

27; and Great Falls, June 28.
A draft environmental impact statement covering the nine areas will be issued in November, according to the Forest Service, with public hearings in January of 1980 and a final statement in August of 1980.

Wilderness procrastinators pushed

Lots of people intend to write letters to their Congressional delegation but never get around to it. In Ketchum, Idaho, proc-rastinators were given a push. For 25 cents, volunteer typists at tables in a public square offered to record 8-10 lines of any

view on the proposed River of No Return Wilderness and send the message to Idaho Sen. Frank Church (D). Church is sponsor-ing three bills of varying acreage on the River of No Return Wilderness proposal.

14-High Country News - June 1, 1979

State of Wyoming 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 12 C FWPCAA). PL. 9-500 AND THE PEDRING ENVIRONMENTAL QUALITY ACT (85-11-101 et. seq., WYOMING STATUTES 1867, CUMULATTY ELBERNT 1973). IT IS THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER LEARNING PERMITS TO (1) ONE OIL TREATER FACILITY, TO RENEW (1) ONE DIDUSTRIAL AND (6) FUX FEEDLOT PERMITS AND TO MODIFY (1) ONE COLL TREATER FACILITY. TO RENEW (1) ONE DIDUSTRIAL AND (6) FUX FEEDLOT PERMITS, AND TO MODIFY (1) ONE COMBERCIAL, (1) ONE INDUSTRIAL AND (26) TWENTY SIX OIL TREATER DISCHARGE PERMITS WITHIN THE STATE OF WYOMING.

APPLICANT INFORMATION

(1) APPLICANT NAME: FENIX SCISSON, INC.

P.O. BOX 3880 CASPER, WYOMING 82601

FACILITY LOCATION

TEAPOT DOME NAVAL PETRO-LEUM RESERVE NO. 3 B-TP-10, 58%, SWM, NEW, SECTION 10 Tash, R78W NATRONA COUNTY, WYOMING

APPLICATION NUMBER:

Facility is a typical oil treater located in Natrona County, Wyoming. The produced water is separated from potroleum product through the use of heater treaters and skim pends. The discharge is to the Little Teapot Cr (Class IV stream) via an unamed drainage.

The discharge must meet Wyoming's Produced Water Criteria effective immediately, Chapter VII of Wyoming Water Quality Rules and Regulations inferes that as long as the Produced Water Criteria is met, water is suitable for beneficial use. There is no evidence to indicate that limitations more criteria water is a suitable for beneficial use. There is no evidence to indicate that limitations more criteria water long that the contract of the country o

necess.

self-monitoring is required for all parameters with the exception of oil and grease which must be terry. The proposed expiration date is February 28, 1981.

WYOMING REFINING COMPANY

MAILING ADDRESS: P.O. BOX 820 NEWCASTLE, WYOMING 82701

The Wyoming Refining Company operates an oil refinery in Newcastle, Wyoming, with a rated capacity of 11,000 harrels of crude per day. According to the rafinery's environmental engineer one hundred percent of the crude processed receives atmospheric distillation and desalting, and 72. prevent of the crude present of the crude processed receives atmospheric distillation and desalting, and 72. prevent of the crude present extended from the information results in a process factor of .10.0 and a strength of the parameters BOD-5, total suspended solids, chemical oxygen demand, oil and grease, phenols, ammonia, suiface, total chromium, and pl. The proposed permit requires compliance with national "best practicable treatment" effluent limitations were surregioned and processed permit requires compliance with national "best practicable treatment" effluent limitations involved to the contraction of the

quality standards, or term and the Docember 31, 1980) is proposed since petroleum refining is one of the first for which EPA is developing toxic material effluent limitations under the Clean Water Act. Until those time for which EPA is developed it in not possible to include "best available treatment" standards in the proposed permit requires that all of the limited parameters be monitored on a regular basis and that the be reported at monthly intervals.

(3) PERMIT NAME: ANDREWS LIVESTOCK

P.O. BOX 850 TORRINGTON, WYOMING 82240 PERMIT NUMBER Wy-0022501

(4) PERMIT NAME: F.J. BOHNENKAMP FEEDLOT

ROUTE 1, BOX 530 TORRINGTON, WYOMING 82240

PERMIT NUMBER

(5) PERMIT NAME: JOE BOWEN FEEDLOT

MAILING ADDRESS: C-O WYOMING REALTY COMPANY BOX 247 WHEATLAND, WYOMING 82201

PERMIT NUMBER:

(6) PERMIT NAME: GROSS WILKINSON FEEDLOT

P.O. BOX 186 PINE BLUFFS, WYOMING 82082

PERMIT NUMBER:

YODER GRAIN AND LUMBER FEEDLOT

P.O. BOX 550 TORRINGTON, WYOMING 82240

PERMIT NUMBER:

All of the above listed facilities are feedlots located near Torrington, Wheatland or Pine Bluffs, Wyoming, Each cility is located near live water with the exception of Gross Wilkinson which is located near Lodgepole Creek (an termittent stream). All five facilities have adequate runoff control structures to contain a 10 year-24 hour expitation event or are situated in such a fashion that only excess precipitation (beyond the 10 year-24 hour Periodic removal of the manure packs is practiced at each of these facilities.

Periodic removal of the manure packs is practiced at each of these facilities are precipitation event. They also contain a section which requires each feedlet to report and monitor any target regions are precipitation event. They also contain a section which requires each feedlet to report and monitor any these processes of the processes of the

FRANK SEARS
"TOWN OF OPAL DEVELOPMENT"

OPAL, WYOMING 88124

Opal Development is a housing development at the townsite of Opal, Wyoming. Wastewater treatment consists of an extended seration package plant.

The owners have do have this permit modified since it is extremely difficult for this type of facility to meet the 1 mg per 1 residual chlorine limit to the Hama Fork River during the summer months. Ther permit is, therefore, being modified unto an additional discharge point (002), which will be utilized during the summer months this discharge point will be 2.0 mg per 1 with feed coliform set at 200-400 organisms per 100 ml.

Discharge point will be 2.0 mg per 1 with feed coliform set at 200-400 organisms per 100 ml.

Discharge point will be 2.0 mg per 1 with feed coliform set to 200-400 organisms per 100 ml.

Discharge point will be 2.0 mg per 1 with feed coliform set to 200-400 organisms per 100 ml.

Discharge point will be 2.0 mg per 1 with feed coliform set to 200-400 organisms per 100 ml.

econdary Treatment Standards will remain in effect for all other parameters at both discharge points pring is required quarterly. The permit will expire May 31, 1982.

(9) PERMIT NAME:

PATHFINDER MINE CORPORATION "SHIRLEY BASIN MINE"

MAILING ADDRESS: SHIRLEY BASIN, WYOMING

PERMIT NUMBER:

Pathfinder Mines Corporation operates a large open pit uranium mine in Shirley Basin, Wyoming. Water pumped from the mines is routed through barium chloride feed systems for the removal of Radium 226 and then to a series of settling ponds prior to discharge either to Spring Creek via an unanamed drainage discharge either to Spring Creek via an unanamed drainage discharge either to Spring Creek via unanamed manage discharge point 002) or the Little Medicine Bow River via a unanamed drainage for the proposation of the series and in not included in the permit.

The Corporation of the control of the series and in not included in the permit.

The Corporation of the control of the series of the seri

AMOCO PRODUCTION COMPANY MAILING ADDRESS P.O. BOX 1400 RIVERTON, WYOMING 82501 FACILITY LOCATION: LANDER FIELD, SECTION 30, T2S, R2E, FREMONT COUNTY, WYOMING

PERMIT NUMBER Wy-0000221

FACILITY LOCATION: BEAVER CREEK FIELD, MADISON BATTERY, SW4, NW4, T33N, R96W, SECTION 10, FREMONT COUNTY, WYOMING

PERMIT NUMBER:

FACILITY LOCATION-NORTH SAND DRAW FIELD, SE4, SW4, SECTION 21, T33N, R95W, FREMONT COUNTY, WYOMING

PERMIT NUMBER:

FACILITY LOCATION: BIG SAND DRAW FIELD UNIT A, SE4, SE4, SECTION 10, T32N, R95W, FREMONT COUNTY, WYOMING

PERMIT NUMBER

BIG SAND DRAW FIELD UNIT B, SW4, SW4, SECTION 14, T32N, R95W, FREMONT COUNTY, WYOMING

PERMIT NUMBER:

FACILITY LOCATION: BIG SAND DRAW FIELD, UNIT C, SW4, SW4, SECTION 14, T32N, R95W, FREMONT COUNTY, WYOMING

PERMIT NUMBER:

BEAVER CREEK UNIT SECOND CODY TANK BATTERY No. 1, W½, SECTION 10, T33N, R96W, FREMONT COUNTY, WYOMING FACILITY LOCATION:

PERMIT NUMBER: Wy-0027464

AMOCO PRODUCTION COMPANY P.O. BOX 569, POWELL, WYOMING 82435 MAILING ADDRESS:

FACILITY LOCATION: ELK BASIN WATERFLOOD STATION No's 1, 3 and 5, NW4, SECTION 24, T58N, R100W, PARK COUNTY, WYOMING

PERMIT NUMBER:

FACILITY LOCATION ELK BASIN WATERFLOOD STATION NO. 2, SE4, SECTION 31, T58N, R99W, PARK COUNTY, WYOMING

FACILITY LOCATION: LITTLE POLECAT FIELD USA PAN AM LEASE A, BATTERY WELL NO. 3, SW4, NE4, SECTION 31, T57N,, R96W, PARK COUNTY, WYOMING

PERMIT NUMBER:

MAILING ADDRESS:

FACILITY LOCATION: ELK BASIN FIELD BATTERY NO. 11, SW4, SECTION 19 T58N, R99W, PARK COUNTY, WYOMING

PERMIT NUMBER:

(12) PERMIT NAME: C.E. BREHM DRILLING COMPANY MAILING ADDRESS:

P.O. BOX 4088, CASPER, WYOMING 82601 FACILITY LOCATION

NO. 1 BERRYMAN, NW4, NW4, SECTION 29, T67N, R97W, BIG HORN COUNTY, WYOMING Wy-0001309 PERMIT NUMBER

3410 ANACONDA TOWER 555-17th STREET DENVER, COLORADO 80202

(13) PERMIT NAME: BRINKERHOOF DRILLING COMPANY



FLAVIVENTRIS by Myra Connell

The Great Depression that held us in its clutches through the early '30s was gradually loosening its grip by the last few years of that decade. My husband had found a job as caretaker of a small ranch on Wyoming's Wind River. Steady employment produced \$45 per month cash, and fringes: a snug log cabin, firewood, garden spot and milk cow. This was comparative affluence for us and our two children, but still we often lacked ments of a well-balanced diet -

especially fresh meat.
Underneath the log bridge that spanned
the river lived a family of rockchucks,
Marmota flaviventris. Dudes on a local

WANTED. Entrepreneurs and small businesses looking for effective advertising. We offer 10,500 potential buyers (average of three readers per copy) at reasonable rates. Contact Hannah Hinchman, HCN, Box K, Lander, WY 82520 or call (307) 332-4877.

HAND OPERATED WASHING MACHINES,

We ate something else; I've forgotten what — maybe a bowl of "lumpy dick," a kind of wheat flour mush.

Next morning back into the oven went the chuck, and I cooked it until noon.



ranch circulated a rumor that these creatures were a tasty dish, so we decided to try them. My husband shot a young one with a 22 rifle and dressed it carefully. I stoked the fire and put the chuck to roast; a continuous results are the statement of the continuous results. June 1, 1979 - High Country News-15 "It's now or never," I said as we sat down for lunch.

In spite of eager appetites, we found the meat inedible. It was strong, gamy, tough and stringy. I think the dog ate it.

It is probably fortunate for these harmless members of the squirrel family that they aren't good human food; otherwise man might have extinguished them. Ecologically, they are needed as food for coyotes, foxes, wolves (if there are any) and bobcats.

mouth-watering aroma like roast pork permeated the kitchen all afternoon. We practically drooled as we anticipated sup-

Per.

A few whacks of the carving knife changed expected delight to disappointment. The meat was as tough as the proverbial boiled owl.

Classified ads cost 10 cents a word; they must be prepaid. WANTED. Freelance writers and photographers to cover Montana natural resource news for High Country News. Pay is two cents to four cents per word or \$4 to \$10 per photo. One-sided diatribes unacceptable.

It is many years since I have seen the rockchuck that used to whistle at us from a rampart on the cliffs of Sinks Canyon near Lander. I have seen a few along the highrampart on the cliffs of Sinsa Canyon hear Lander. I have seen a few along the high-way that goes over South Pass, dead as often as not. It is strange that they place their burrows close to the road, unless digging is easier where machinery has dis-turbed the rocks.

bobcats.

turbed the rocks.
On a visit to Brooks Falls on the headwaters of Wind River, I once watched a big
rockchuck family in the bottom of the canyon below the falls — two adults and four
young. With binoculars I discovered both front and back doors to their home. They

front and back doors to their home. They fed on the lush vegetation near the water. Several times I have returned to the same place and looked for "my" marmots, but I never saw them again. I like to think that they've only moved down the river to new pastures.

CLASSIFIEDS

FOR RIVER TRIPS in Olympic National Park contact Verne Huser, 23020 SE 6th Place, Red-mond, WA 98052 or call 206-392-4703 after 5 p.m.

ANNOUNCING The Northern Rockies Are Not For Sale Poetry Series. Accepted poems will be printed as broadsides by Dovetail Press and dis-tributed through North Country Book Express. No monetary return; sorry. The face and heart of things where you live. SASE, please. POB 374, Troy Idaho 83871.

HORSES, Hitches and Rocky Trails, the Packer's Bible. How to pack anything possible on horse or mule. Eighteenth printing. Fifty-two illustrations. 87.50 postpaid. Joe Back, Box 26 Dubois, Wyo., 82513.

FACILITY LOCATION

non electric, for sale. Do it on your porch or in the forest. THE BASECAMP, Box 135, Volcano, Calif. 05689

HESLIN LEASE, SE%, SECTION 15, T3N, R1W, FREMONT COUNTY, WYOMING

PERMIT NUMBER: CONTINENTAL OIL COMPANY (14) PERMIT NAME:

MAILING ADDRESS PACIFIC WESTERN LIFE BUILDING CASPER, WYOMING 82601

FACILITY LOCATION: SOUTH ELK BASIN BATTERY NO. 1, SW4, SECTION 20, T59N, R99W, PARK COUNTY,

FRANNIE P-T UNIT, BATTERY NO. 2, SW4 SECTION 25, T58N, R98W, PARK COUNTY, WYOMING FACILITY LOCATION

PERMIT NUMBER: Wy-0026816

FACILITY LOCATION

FRANNIE P-T UNIT BATTERY NO. 1 SE4, SECTION 23, T58N, R98W, PARK COUNTY, WYOMING

PERMIT NUMBER: KIMBARK OPERATING COMPANY

MAILING ADDRESS 808 LINCOLN TOWER BUILDING DENVER, COLORADO 80295

CROOKS GAP FIELD, FEDERAL MKM LEASE, SW4, SECTION 8, T28N, R92W, FREMONT COUNTY, WYOMING FACILITY LOCATION

PERMIT NUMBER:

MAILING ADDRESS

MARATHON OIL COMPANY (16) PERMIT NAME:

P.O. BOX 120 CASPER, WYOMING 82601

OREGON BASIN FIELD BATTERY NO. 1 NORTH, NW4, SECTION 32, T52N, R100W, PARK COUNTY, WYOMING FACILITY LOCATION:

PERMIT NUMBER

FACILITY LOCATION: OREGON BASIN FIELD BATTERY NO. 6 SOUTH, NW4, SECTION 29, T51N, R100W, PARK COUNTY, WYOMING

PERMIT NUMBER:

OREGON BASIN FIELD, SIDNEY BATTERY (BATTERY LOCATION) NW4, SECTION 5, T51N, R100W, (DISCHARGE POINT LOCATION) SW4, SECTION 32, T52N, R100W, PARK COUNTY, WYOMING

PERMIT NUMBER:

PHILLIPS PETROLEUM COMPANY

MAILING ADDRESS: P.O. BOX 2920 CASPER, WYOMING 82601

BIG POLECAT "A" UNIT, SECTION 16, T57N, R98W, PARK COUNTY, WYOMING FACILITY LOCATION:

PERMIT NUMBER:

ROLFF A AND B LEASES, NEW, SW% SECTION 26, T6N, R3W, FREMONT COUNTY, WYOMING FACILITY LOCATION:

PERMIT NUMBER:

WIND RIVER LEASE SW4, SECTION 15, T5N, R2W, FREMONT COUNTY, WYOMING Wy-0024953 FACILITY LOCATION:

FACILITY LOCATION: ARAPAHOE LEASE, NW4, SECTION 15, T5N, R2W, FREMONT COUNTY, WYOMING

Wy-0024961 PERMIT NUMBER:

UNION OIL COMPANY OF CALIFORNIA

MAILING ADDRESS: P.O. BOX 79 WORLAND, WYOMING 82401

DALLAS PIT AND THE FOURT 4 AND 5 PIT, SW4 SECTION 13, T32N, R99W, FREMONT COUNTY, WYOMING FACILITY LOCATION:

PERMIT NUMBER: Wy-0001171

DERBY OIL FIELD, CARMODY USA W-0146121 AND USA CH-044067 LEASES, NW%, SECTION 4, T31N, R98W, FREMONT COUNTY, WYOMING FACILITY LOCATION:

PERMIT NUMBER

Facilities are typical oil treaters located in Fremont, Big Horn and Park Counties, Wyoming: The produced water is separated from the petroleum product through the use of heater treaters and akim ponds. The discharges are all to Class IV or Class II waters of the State.

The permits are being modified to simply change the expiration dates from 1980 to December 31, 1983. The modifications will help to spread out the expiration dates of all the oil treater discharge permits and thus make a much lighter work load for this Department when the permits are to be renewed.

The discharges must meet Wyoming's Produced Water Criteria effective immediately with the exceptions of Philips Wyo-2048, Wyo-2048, SW, 90-2048 and Marathon Wyo-0022900. Letters of beneficial use have been received from area ranchers concerning the discharges, therefore, the limitations on the chemical parameters (total dissolved solids, chlorides and sulfates) have been waived.

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

Semi-annual self-monitoring is required for all parameters with the exception of oil and grease which must be Semi-annual self-monitoring in required for all parameters with the exception of oil and grease which must be

it more stringent limitations are needed. al self-monitoring is required for all parameters with the exception of oil and grease which must be

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

Public comments are invited any time prior to July 2, 1979. Comments may be directed to the Wyun Department of Environmental Quality, Water Quality Division, Permits Section, Hathaway Building, Cheywoning 80020 or the U.S. Environmental Protection Agency, Region VIII. Endorsement Division. For Administration and Compliance Branch, 1860 Lincols Street, Denver, Colorado 80220. All comments revoir to July 2, 1979, will be considered in the formulation of final determinations to be imposed on the permits of the per

Additional information may be obtained upon request by calling the State of Wyoming (307) 777-7781 or EPA, 303 327-3874, or by writing to the aforementioned addresses.

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

Public Notice No: Wy-79-007

16-High Country News - June 1, 1979

(Ed. note: The "boomers" in the story below asked that their full names not be used.)

by Marjane Ambler

"I used to be a meat cutter for Safeway. It's safe, but it's a bore. I love being an

'Booming's a good life, if you lay off the booze'

didn't throw away the booming life. One couple I know — they have three or four suitcases. Never unpack them. They leave them right by the door. When he walks through the door and slams the lid on the first one, that's the signal. She closes the others and packs the dishes and they're gone in an hour."



ironworker, 640 feet in the air. Sure, if I take a dive, it might be my last one. But I can go anyplace in the world I want and make good money. I used to dream of doing this when I was a kid.

this when I was a kid.

"I can wake up tomorrow and see I have a hangnail and decide to move on. I have one reference — my union card. I can go into a union hall and say I need a job to get some traveling money. I'll get \$200, and it'll take me 200 miles down the road. Today's the seventh? By the 10th I could be in Alaska or maybe New Mexico."

A life of change, of adventure, of challenge — new faces, new towns. Tom says

he's been booming for 25 years. He and Roy have worked the same jobs three times. You see a guy — you recognize him. He'll name a few places, I'll name a few and bingo! You remember where it was." Maybe it was Colorado Springs on the NORAD job. Maybe Farmington, N.M., when the power plant was being built there. Rock Springs. Forsyth. Fairbanks. Houston, Gillette.
"Everynices I've been it's the same when

"Everylace I've been it's the same when the boom hits. The local people think we caused the high rent and the high-priced groceries. Everytime we get a raise, they up them again. It's the local people who get

"Construction has cost me five wives in 25 years."

hurt, but that ain't our fault. It's their friends and neighbors. They hate to see us come in and make a few dollars — yet we

guy thinks his craft is the best. But me, I've got carpenter friends — even some laborer

into a town; they don't know anyone. Their old man is out seeing people, going to the bar after work. If the women don't work at the plant, they're at home with the kids. "Construction has cost me five wives in

25 years," Tom says.

"But all women like to travel," Roy interjects. "The local guys are afraid to bring their women out because they'll see there is more to life than sitting around and raising

"I love it — my ex-wife did, too. She di-orced me and married a boilermaker. She

At a women's exercise class in the Black Mountain Village Recreation Center, which is owned by the consortium building a power plant in Wheatland, some women

had their say about booming. Ruth, a curly-haired, middle-aged man with a ready smile, said, "I've be woman with a ready smile, said, 1 ve ocen doing this since 1956 — average a move every 18 months. It didn't hurt the kids' education any — if the family keeps to-gether. For a young couple, it's a good life if

you lay off the booze.

"A lot of people have trouble meeting people. They think you're strange or want something if you speak to them. Construc-tion people — if they're good construction people — are different than local people. People who travel around are a friendly. They have to make friends.

Jean, an outgoing, athletic-looking woman in her mid-20s, says, "We've got two kids so we hang around a town as long as we can. Wheatland's great compared to where I've been. This recreation center makes it a lot more bearable. My mom — she doesn't like it because I don't write her as often as I did in other towns.
"We don't really have a home. People

us where our home is — it's where his folks live or my folks live. I like moving and

"But I see these houses....I'd love to have house. I'm sick and tired of trailers."

Dear Friends.

This issue Phil White takes a critical This issue Phil White takes a critical look at geothermal energy production near Yellowstone National Park. We expect that the story may inspire another letter such as that from Larry Kline in today's paper, who objected to the idea of criticizing a solar project. However, despite such mail, we'll continue to provide you with the musings of intelligent skeptics. In the past, we've written critical articles on solar companies with poor performance re-

we've written critical articles on solar companies with poor performance records, on insulation myths that encourage people to buy too much insulation and on expensive active solar systems. We intend to approach wind power with the same caution in a subsequent issue. A little poking and probing never butts.

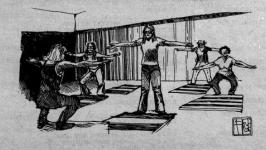
A little poking and probing never hurts.

But sometimes it doesn't turn up as many problems as we anticipate. Our analysis of Wheatland, Wyo., for example, seemed generally to confirm what the power plant backers had toldus—it is a pretty livable boom town.

We knew that because many of the town leaders were involved in planning, they wouldn't be objective about evaluating the planning's success; their own egos are at stake. So we went beyond these people, trying to get a sense of the feelings of the general public. At the suggestion of an environmentalist, we talked with the librarian, fan of High Country News, who also thinks the planners have done a good job. We hobnobbed with the construction workers at a local bar and talked with women in an exercise class that included both new and old residents.

We are lunch with the senior citizens at

Using some standard quantitative measures of quality of life, including school, police and health statistics, Wheatland's reputation held up. As for the intangibles, we took the word of the residents we met. They're generally happy — which is surprising good news



Eavesdropper

LONGLEGS CONTROVERSY. The Interior Department has omitted some species from the endangered species list to avoid political squabbles, according to the General Accounting Office, Congress' investigative arm. A GAO report says a type of daddy longlegs wasn't listed because to do so might have halted work on the New Melones Lake project in California. However, the Interior Department says there isn't enough evidence to prove the species is endangered. LONGLEGS CONTROVERSY. The In-

RESOURCE REORGANIZATION DOOMED. The boldest part of President DOOMED. The boldest part of President Carter's government reorganization plan, a proposed Department of Natural Resources, is doomed, according to the Associated Press. Carter gave up his plan to move resource agencies under the leadership of one department in mid-May, when administration officials concluded that the proposal was too controversial for Congress

to handle this year. Moving the Forest Service out of the Department of Agriculture and the National Oceanic and Atmospheric and the National Oceanic and Atmospheric Administration out of the Commerce Department would have saved \$110 million and cut 2,100 jobs from the federal payroll, according to administration officials. However, the Forest Service shift drew strong opposition from timber, forest product and other interests.

TELLICO AGAIN. The Senate Environment and Public Works Committee has refused to exempt the Tellico Dam in Tennessee from the Endangered Species Act. By an eight-to-three vote, the committee defeated the exemption, which was proposed by Sen. Howard Baker (R-Tenn.). The dam, which is 90 percent complete was kalted by Sen. Howard Baker (R-Tenn.). The dam, which is 90 percent complete, was halted because it threatens the survival of the snail darter, an endangered fish. A panel created last year to review the Tellico situation refused to exempt the dam from the act, prompting Baker to ask for a congressional exemption.

In Warra

The NEWS	
Wheatland model boom town?	i
Turbines tap complex underground plum	nbing. 1
Coyotes last animal on earth?	8
Fencing Red Rim range war.	10
Slurry nixed by Herschler.	11
The Boomers	
and the booming life.	16