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# High Country

Friday, October 16, 1981

Vol. 13 No. 20

news

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## Low salt diet

# Briney Colorado still defies salty solutions

by Michael Moss

IN THE GRAND VALLEY, Colo. — During the late 1960s, Mexican farmers just south of the United States border laid down their shovels and loudly raised their voices. Despite a 1944 treaty guaranteeing them a share of the Colorado River, the water they now were getting was worthless, ruined by tons of salts added upriver. Their crops were shriveling in a white-crusted soil.

In response, the United States — to placate a neighbor that now has oil and gas to sell and to ease its own water quality enigma — in 1974 proposed to tackle the Colorado's salinity problem.

No one expected a miracle overnight. Nor did anyone expect success to come cheaply. Half a miracle by 1985, hopefully at a reasonable cost, would do. But today, more than halfway to the target date, there is little rejoicing among federal water regulators.

The half a miracle has fizzled. One thousand miles upriver from the Mexican farmers, here in the Western Slope's Grand Valley surrounding Grand Junction, the federal effort to control salinity is floundering.

There have been crippling cost overruns. There has been political pressure to expand the program beyond its carrying capacity. There has been a steadfast

reliance on elaborate, highly-mechanized hardware that doesn't work.

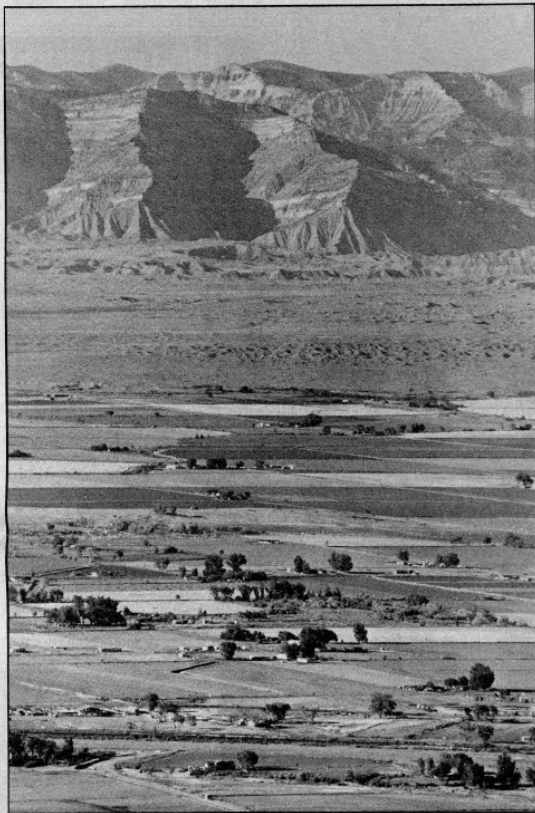
Yet the program blunders on, extracting few salts and several million dollars from the federal coffers every year.

On a recent tour of the miracle's centerpiece — the \$9.5 million relining of the Highline Canal running north of the valley — Bill Hapwyk, head of a private water users group here, illustrated one reason why. Spreading his arms above the cement monolith, he said, "Right or wrong, the course has been set and the country is committed to this."

Hapwyk and others concede there are faults in the program. Some fine tuning would be helpful, they say. But they reject the idea that what is needed is a whole new scheme.

The Colorado, however, may not play their game. The impending energy boom throughout the seven-state Colorado River Basin has put new pressure on the river. This new energy use, added to the already taxing agricultural diversions, could topple the weak management framework and the West's lifeblood could run sluggish with salts, of use to no one.

It's an axiom well-known in the West that the water from the Colorado River serves too many masters. Great numbers of people want too much of it for too many purposes.



"The Colorado is the most used, most dramatic, and the most litigated and politicized river in this country, if not the world," wrote Philip Fradkin in *A River No More*. Travelling the West this fall stumping for his new book, Fradkin has a river-bottom pessimism about the Colorado's future. He predicts mismanagement will eventually dry up its waters.

The Colorado River Basin covers some 242,000 square miles, one-twelfth of the lower-48 land mass. Its journey to Mexico passes through or forms the borders of Wyoming, Colorado, Utah, New Mexico, Nevada, Arizona and California, accumulating the Green, San Juan and Gila Rivers along the way. Its water is precariously doled out by an international treaty, two major court decrees, nine interstate compacts, and a bucketful of state and federal laws. The distribution is precarious because no one can predict the river flow, nor which rights will prevail when there's too little to go around.

People, especially the city of Los Angeles, get blamed for siphoning off the bulk of the Colorado. But nearly 90 percent of the river is diverted for agriculture; most of that is used for growing cattle forage.

While regulators concentrate on dividing the waters, little attention has been paid to the water's quality. The price of

neglect is an unchecked and rapidly rising level of salinity.

**Salinity** is a catch-all term for a cornucopia of solids, including carbonates, bicarbonates, sulfates and a large family of phosphates — nearly everything but table salt. The solids have little value to people; dissolved in the river, they're a plague.

For every milligram of salts per liter (mg/l) of water found at Imperial Dam on the Arizona-Mexico border, the Bureau of Reclamation calculates a loss of over \$500,000 due to lower crop yields and more difficult purification requirements.

The average concentrations today range from 50 mg/l in the upper waters to 823 mg/l at Imperial Dam. Daily fluctuations take the high figure well beyond 1,000 mg/l. (Federal drinking water standards are set at 500 mg/l; many crops can tolerate levels up to 1,000 mg/l without a major decline in yields.)

Much of the salinity is due to a declining water supply. As more water is taken from the river there is less water to dilute the solids. If nothing is done, the Bureau of Reclamation predicts that salinity on the border will rise to a 1,214 mg/l average by the turn of the century, costing water users some \$600 million.

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## WESTERN ROUNDUP

### Durango told: Save water on your own

An independent engineering study done for the city of Durango in southwestern Colorado sharply criticizes the proposed Animas-La Plata water project and recommends that the city pull out. That move, if it happened, would seriously jeopardize what Reagan

administration officials have called one of their top priorities for new water projects in the West.

The study, using a "worst case" river-flow scenario and the highest population growth projections available, concludes that Durango is better off developing its own water sources.

Participating in the Bureau of Reclamation's Animas-La Plata project, the report said, would cost Durango nearly \$30 million, or an average annual increase of \$81 on residential water bills. But by installing more of its own pumps on the Animas River, enlarging its reservoir, adapting a new water treatment

plant, and using all of its existing water rights, the city could obtain the same water supply at a cost of \$9.2 million, or a less than \$37 increase in water bills.

Should Durango not meet the growth rates projected by the BuRec — rates beyond any historical precedent for growth — the city could easily modify its developments to meet only those lesser water needs, according to the study.

The study, prepared by the engineering firm Black and Veatch of Kansas City, Miss., would give Durango "good hard data" for determining whether to stay with the federal project or pursue its own resources, said city manager Ron Jack. "We're now the masters of our own fate," he said.

### Dear friends,

Whew.

It's hard to know just where to start. Perhaps the best place is with the obvious.

*High Country News* has a new look this issue. A different flag, a different typeface, different design on the inside. The change of our graphic physiognomy no doubt seems major to readers who can remember looking at the backside of the Tetons, then spent two years adjusting to our goat. But, the external change only superficially reflects a major transition that is taking place at the paper. *High Country News* is taking steps to convert its operations to non-profit and tax-exempt. That may make some of you laugh — as if *HCV* has ever made a profit. But for those who know the labyrinthian ways of corporations, charities and the Infernal Revenue Service, it is a monumental change indeed.

Let's backtrack a little bit.

For two years now, the staff at *HCV* has been aggressively looking for a solution to the paper's perpetually low wages and precarious existence. We began by studying investment schemes and tax shelters; finally we decided that becoming a non-profit corporation was more realistic, and more in keeping with the

paper's history.

In the midst of our research, we had a crisis of the kind that has often plagued *HCV* in its twelve years: We ran out of money. So we did what *HCV* has always done: We asked our friends for it, wondering if maybe we were going to the well once too often. They came through, as we should by now expect, but it always surprises. We found ourselves with just enough money to hire an attorney and consultants to help us work our way towards a solution of our chronic problems.

We went at it in a number of areas. Geoff looked into the non-profit question, and various approaches to gaining non-profit status, which can mean cheaper mailing rates and a more legitimate (in the eyes of some) claim to charitable contributions and foundation help. Kathy began working on a new design for the paper that would both attract more readers and not put off the old ones. We restructured the staff to spread editorial responsibilities and laid plans to hire new staff. And we talked to consultants about mounting a major direct mail campaign to introduce the paper to new readers. We sized up our office space and equipment and looked to plug the holes.

Things that we thought we could accomplish in weeks took months, of course. But we held onto our lists of goals and scribbled revised budgets and sat down together to talk it all over. And we decided to take the leap. Actually, several leaps.

Now let's back track even further.

Tom Bell did a lot more in Wyoming than just start this paper — one of his many other public interest endeavors was a non-profit entity called the Wyoming Environmental Institute. You may remember W.E.I. from seeing its name on our research fund appeals for the past few years.

Last month, W.E.I.'s board met in Lander to listen to our plans for *High Country News*. They liked what they heard enough to offer to take over the paper in its entirety. Same staff, same mission — new parent. And an all-important change in our status with the post office and the I.R.S.

Given that momentous change, it seemed symbolically right to go ahead with our long-gestating redesign. There's not much we can tell you about it that you can't see. Much of it was Kathy's work, with the help of consultant Kerry Treman. What you can't see are two important factors: Our new printer, the *Jackson Hole News*, gave us the longer page and Catalina paper, which we began using last issue; and our new typesetting equipment, an AM Vari-typer 3510 Comp/Sec. The machine makes a lot of things possible that we couldn't do in the old days, when we used to punch tape with a rickety Fairchild and carry the tapes down the street to run them through someone else's computer. The Fairchild is no longer manufactured, so we made our spare parts with pop tabs and pliers. Now we can play with our column widths and types sizes, perform search and destroy missions to eliminate errors, and throw in an odd symbol or two when we feel like it. We'll probably find out next week that the thing can go out and cover news events.

So much for the machinery; there is a little more humanity in the office, too. Carol Jones arrived two weeks ago from Dallas, by way of Fort Collins, Colo. She comes to us with experience on papers in Evergreen, Colo., Denver and Dallas.

Our biggest problem in filling the news editor slot wasn't in finding qualified candidates — our ads this time around inspired over 50 applicants to write. The problem was finding someone who we thought could adjust to and enjoy life in a small Wyoming town. Carol may have won the job when she told us she had two horses and a pickup. We swear it wasn't because she had experience on the Vari-typer typesetter. (Carol, how do I indent the next paragraph?)

We're exhilarated by all the things that are happening here, and at the same time we're aware that we're taking chances when we tamper with something near and dear to the hearts of many. If going non-profit means anything, it's that *High Country News* belongs to its public. We want to hear from our readers and friends.

— the staff



### High Country News

Published biweekly at 331 Main, Lander, Wyoming 82520. Telephone (307) 332-6970. Printed by the *Jackson Hole News*, Jackson, Wyoming. Second class postage paid at Lander. (USPS No. 087480). All rights to publication of articles herein are reserved.

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To have a sample copy sent to a friend, send us his or her address. Write to Box K, Lander, Wyoming 82520. ISSN: 0191-5657.

Subscriptions \$15.00 per year. Single copies 75 cents.



Standing, left to right: Betsy, Kathy, Michael, Lisa and Carol. In front: Dan, Mike and Geoff.

Opponents of the federal project say the report confirms their arguments for backing out, while project supporters argue that only adjustments in the city's contract with the BuRec are necessary.

The Animas-La Plata project, authorized in 1968, involves constructing several dams, reservoirs, a pumping plant and a web of canals leading from the Animas and La Plata River south of Durango. At a cost of \$500 million (up from \$400 million just last year) the system would yield some 118,100 acre-feet of irrigation water and 80,100 acre-feet of municipal and industrial water.

Recipients of the water in Colorado and New Mexico would include the Southern Ute Indians, and the towns of Aztec, Bloomfield and Farmington, as well as Durango.

The project has been delayed by Carter administration opposition and a legal suit brought by a group of Durango residents. That group, Taxpayers for Animas-La Plata Referendum, unsuccessfully sought earlier this year to bar the formation of a new water conservancy district to negotiate with the BuRec for project water. They argued that the appointed board members would have illegal taxing powers since they weren't elected.

Elated by the Black and Veatch report, group member Jeanne W. Englert interpreted the study to conclude: "Durango, do your own thing." She predicted that if the city withdrew from the Animas-La Plata project, other towns would also back out and the project would "collapse under its own weight." "This report changes everything," she said. "We now have the facts. And the only question remaining is who got us into this mess."

Not quite, said John Murphy, head of the conservancy district Englert opposed. "I don't buy that one," he said. "What the study will do is give us more flexibility in negotiating with the BuRec for project water." Murphy said he expects to go back to the agency and work out a deal that would commit the city for project water only up to the year 2000, after which it could pull out if growth projections and needs fail to materialize.

City manager Jack said Durango would consider that course. Among incentives to stick with the project, said Jack, was its likely resolution of unsettled Indian water rights claims — claims that could challenge the city's water rights if the Southern Utes don't get the new supplies offered by the Animas-La Plata project.

Murphy agreed, adding that water rights claims from New Mexico could also jeopardize Durango's supply. "We're just around the corner from the moment of truth in the Colorado River (Basin) as more demands are made on its water," he said, "and more storage will be the key." Murphy said the study's storage recommendation was not enough.

The Animas-La Plata project, though, is

far from set. Administration support is contingent on a balanced federal budget, until which point no new starts on water projects will be allowed. That delay is supported by Sen. Bill Armstrong (R-Colo.), who otherwise is a staunch project backer.

Meanwhile, manager Jack said the Black and Veatch report, which cost Durango \$90,000, will light up his planning efforts. "It's the best money the city ever spent," he said. "We'll be getting dividends for 50 years."



## Timber firms given harvest extensions

In an effort to help out the depressed timber industry, the U.S. Forest Service has again granted extensions to firms holding contracts to cut national forest timber. But while critics call the move a bail out, the industry itself is divided over whether the extensions will help or hurt.

Much of the timber sold, but still unlogged, in the Rocky Mountain West is already under a one-year extension that expires next April. The depressed housing market that prompted that delay has only worsened, however, with lumber sales skidding to new lows.

The latest extension was announced Oct. 15 by John Crowell, Jr., the former Louisiana Pacific Corp. executive who is now the Department of Agriculture's assistant secretary for natural resources and environment. Details were not available at press time, but according to Mack McManigle, timber manager for the agency's Rocky Mountain region, another two-year extension will be granted on sales made prior to 1981, and due to expire before April, 1985.

Lumbering in the West is running at about 76 percent of normal today. Nearly 55,000 lumber mill workers — 54 percent of the total workforce — were out of work during the week

ending Oct. 15, according to a survey by the Western Wood Products Association. Some 430 of the West's 756 sawmills are closed or cutting at reduced rates.

With most of the industry turning spruce, fir, and lodgepole pine into two-by-fours and other studs, the slump is blamed on a housing market stalled by high interest rates. A thousand board-foot log getting \$278 two years ago today brings only \$198.

"It's an industry bail out," said Trent Orr of the Natural Resources Defense Council in San Francisco. "And I'm not surprised given Mr. Crowell's background. But it astounds me that the Forest Service is meanwhile continuing an aggressive new timber sale program, including sales in roadless areas. It's all out of sync."

"I don't look at it as being a subsidy for the industry," said Charles Coston, regional forester for the Northern Region in Missoula, Mont. "These guys are really hurting."

New sales, according to Coston and most industry officials, are needed to insure a long-term lumber supply for when the market rebounds. But that's where agreement in the industry ends.

One firm displeased with the latest extension grant is Boise Cascade Corporation. Spokesman R. Kirk Ewart told the *Idaho Statesman* that the extensions would send a message to companies that when bad business decisions are made, "someone will always bail us out."

Ewart also argued the extensions would reduce sawmill production, lowering employment even further, while costing the federal government interest on the lost revenue.

But forcing small mill owners to cut and sell timber at today's depressed prices would cause dozens of bankruptcies, said Paul Ehinger of the Western Resource Alliance in Eugene, Ore.

Small mill owner Scott Robbins, however, said it isn't that clear cut. Robbins manages the Black Mountain Spruce Co. in Craig, Colo., which is keeping all of its 50 employees busy making boards from national forest spruce.

"The issue is not split along large and small lines," he said. "It depends more on whether you have a contract or not. Last year we didn't, and the extension didn't help. But this time, depending on the wording, it may save us."

Those details, said Robbins, include how much, if at all, firms will be required to pay out in monthly deposits as a pre-payment for the timber. Too high a rate would force out small operators.

Varying circumstances exist for all of the 45 mills in Rocky Mountain region forests, said official McManigle, who manages timber sales from the agency's Denver office for forests in Colorado, Wyoming, South Dakota, Nebraska and Kansas. Contracts for national forest timber range from 100,000 board feet to over 130 million board feet held by

the giant firm, Edward Hines Co. of Chicago.

Neither McManigle nor Coston could predict the effect of Crowell's extension decision, saying it was made without their consultation.



Milling uranium at Uravan

## Cotter mine contests state uranium rules

GOLDEN, Colo. — A draft water quality permit to be issued next week may satisfy state standards, but both the mine operator receiving the permit and downstream water users say they're displeased. The ensuing tussle may set a precedent for regulating radiation levels in drinking water throughout Colorado.

The permit would allow the Cotter Corporation to discharge 40 picocuries of uranium per liter of water per month from its Schwartzwalder uranium mine, located on Ralston Creek in the foothills west of Denver. A picocurie equals a millionth of a millionth of a gram of radium.

That is far below the average 1,635 picocuries per liter the mine released last year, and even though Cotter intends to build a water treatment plant using a newly applied ion exchange process, the firm is not sure it can meet the lower standard.

"The test results look good," said Joe McCluskey, Cotter vice president and mine manager, "but we won't know until we really use it." To cover itself, Cotter is challenging the state water quality standards now being set for uranium.

Those standards are being determined for each of Colorado's major watersheds. Only the South Platte River Basin, in which Ralston Creek is located, has thus far been targeted.

The Schwartzwalder mine was purchased by Cotter in 1966. Its uranium is milled in Canon City and sent to nuclear power plants in Illinois owned by Cotter's parent company, Commonwealth Edison. Mining the urban Front Range has not been easy for Cotter, which today also faces charges it is violating county zoning laws.

Efforts to set state uranium standards were begun after Ralston Creek water users protested the high levels of radiation in their drinking water. In May 1979 the North Table Mountain Water District, serving some 7,500 foothill residents, sued the city of Denver, which manages the Ralston Creek water supply.

Denver, joined by the city of Arvada, in turn sued Cotter, and all parties agreed a state uranium standard would help resolve the issue.

"If you don't want to run things by crisis, then you damn better get your

(continued on page 4)

## BARBED WIRE

Now that's what we call multiple use. Two oil companies have applied for oil and gas leases on a hill now occupied by the Snow King Mountain ski area in Jackson, Wyoming.

Bob "Exxon" Marshall. Montana Libertarian Senate candidate Lawrence Dodge — a certified environmentalist and white water canoeist — thinks the Bob Marshall Wilderness would be better off in the hands of Exxon than the federal government. He told the *Billings Gazette*: "If the company owned the wilderness, it could not afford to destroy a resource that is very marketable. It would take the minerals quietly and preserve the rest so it could sell wilderness permits to backpackers, hunters and others."

"Well, officer, they had a kind of crazed look in their eyes." A Converse County, Wyoming, resident is planning to sue the state of Wyoming because two antelope ran into his \$92,000, 1979 Rolls Royce, causing \$10,000 worth of damage.

Instead, they're going to invest in steel mills. Environmental Protection Agency administrator Anne Gorsuch "made it clear that she wants the agency to become less involved in environmental protection," according to the *Denver Post*.

Shucks, let's blame it on the guys who aren't there yet. A headline in the *Sheridan* (Wyo.) Press said, "Old-timers, newcomers are root of boom town problems."

What's in a name. A British engineer has developed a plan for construction of synthetic island to be created 20 miles off the New Jersey Coast as a site for disposal of hazardous wastes. The island itself would be composed of dredge spoils, sewage sludge and toxic wastes. It would be located in an area known as Cholera Bank.

Well, at least they're not Communists. Interior Secretary James Watt's nominee for head of the U.S. Geological Survey, Andrew V. Bailey, once sent a memo to the USGS environment section saying that "inflammatory words such as devastated, defiled, ravaged, gouged, scarred and destroyed should not be used" to describe the impact of a strip mine. Bailey continued, "These are words used by the Sierra Club, Friends of the Earth, environmentalists, homosexuals, ecologists and other ideological enunches."

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## WESTERN ROUNDUP

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figures straight, rather than wait for someone to die," said Polly Hearn, president of the water district.

The 40 picocurie level (on a monthly average) is low enough, said Hearn, but among the draft permit's deficiencies she cited a lack of waste rock monitoring, inadequate sampling requirements, an unclear definition of the area's flood-plain boundaries and questionable discharge flow limits.

Hearn, who describes her three year relationship with Cotter as "strained," is also angry that the firm broke what she perceives as a promise to abide by the state uranium standards by challenging them in court. "That simply cuts off communication, except between lawyers," she said.

Bob Yuhnke of the Environmental Defense Fund in Denver is also pleased with the proposed 40 picocurie level. But he too questions the adequacy of the monitoring requirements.

The Department of Health's Water Quality Control Division intends to assist Cotter in sampling Ralston Creek's water. In order to determine whether the firm is meeting the daily maximum allowance of 80 picocuries per liter, a sample must be taken once a month, said the agency's Don Simpson. But, he said, three samplings per month are needed to determine compliance with the monthly 40 picocuries level. The Department of Health will take only one sample per month, regulating the daily allowance; but no one is scheduled to take the other two samples. Yuhnke said he wants those three samplings done.

McCluskey declined to comment on details of the permit, including its monitoring standards, while litigation was pending. But he defended Cotter's response to the problem. "We got a research program going to reduce the discharge long before any regulatory agency got into this," he said.

Yuhnke fears Cotter's attack on the state uranium standards may trip up the process, leaving the rest of Colorado's watersheds without radiation level limits.

Cotter is expected to argue in part that



### ADDENDUM

In our story on the Montana waterfowl hunting season in Western Roundup, 10/2/81, we reported that the Montana Canada goose hunting season was being postponed six weeks because of contamination of birds with the pesticide endrin. The postponement is effective only in the eight counties most heavily sprayed with endrin: Richland, Dawson, Prairie, Wibaux, Fallon, Custer, Carter and Powder River. In the remainder of the state, the Canada goose season is now underway.

### CORRECTION

We incorrectly reported in the last issue that Sen. Gary Hart (D-Colo.) was opposing off-tract leasing for federal oil shale leases. His bill to amend the leasing system, S. 1383, allows such leasing (to be used for shale waste disposal), subject to environmental and social impact protections, as well as gubernatorial concurrence. See HCN/6/26/81 for more details.

without a federal standard, Colorado's rules are unlawful.

Efforts by the U.S. Environmental Protection Agency to set national standards have stalled, in part due to uncertainties over how to factor in natural radiation levels — a dilemma that has hounded Colorado officials.

Once issued, the draft discharge permit for the Schwartzwalder mine will be open 45 days for public comment.



## Condemned N.D. farmers fight tax

Facing the prospect of paying capital gains taxes on profits they never wanted, nor received, seven North Dakota farmers are again asking the federal government to return their condemned land. But their protest is falling on deaf ears, and any solution rests with the uncertain future of the controversial Garrison Diversion water project.

In 1979 the federal government began acquiring private land to build the first phase of the project — the 30-mile New Rockford Canal. Two owners willingly sold. The seven who are now protesting, however, refused to sell and had their land condemned.

Work on the canal has not yet begun. The Bureau of Reclamation is under court order to wait until several issues surrounding the whole Garrison project are resolved, including a Canadian government protest and uncertain congressional funding.

The landowners, hoping the project will never be built and feeling inadequately compensated for their land, have refused to accept the money. But meanwhile, the Internal Revenue Service clock has ticked on, and starting December 1, the protestors will be liable capital gains taxes on the profits they, at least officially, have made.

"The condemnation was totally unjustified, and those taxes are discriminatory," said Ordean Ebel, a Fessenden, N.D., farmer and head of the Committee to Save North Dakota, which is fighting the Garrison project. The taxes will vary, depending on the original purchase price and other estate factors.

Ebel's group wrote to the Department of the Interior asking to meet with Secretary James Watt during his visit to the state this week. Notwithstanding the offer of a "good home-cooked North Dakota meal" and the "chance to see a productive and beautiful river valley still threatened with destruction by the Garrison project," Watt did not accept the invitation. Ebel said he will try other channels to reach the administration.

Meanwhile, the seven protesting farmers have continued cultivating the condemned land. "It's somewhat illegal," said Ebel, "but what can they do? It's their life."

## Oil shale \$ face final fight in D.C.

The \$1.1 billion federal loan guarantee for the Colony Oil Shale Project in western Colorado is being protested by Sen. Harrison Schmitt (R-N.M.) and four environmental groups. The challengers admit it's a political longshot, but they hope the fight will at least precipitate a telling congressional vote.

The guarantees would be given to the Tosco Corporation to help finance its part of the joint Tosco-Exxon Company USA venture — billed as the nation's first commercial-scale oil shale facility. The Colony project is located near Parachute and is expected to produce 48,300 barrels of shale oil a day by 1987, costing \$3.1 billion to build.

The controversial guarantee, which would back private loans to Tosco with federal money, was unsuccessfully opposed by Office of Management and Budget Director David Stockman. It's an unfair subsidy he argued.

That opinion is shared by Schmitt, who is pushing the Senate to exercise its option to reject the proposed guarantee. (It will automatically go into effect if neither the House nor Senate acts.)

"Any time the government interferes in the private capital market, it is its responsibility to clearly justify that the project would not go forward otherwise and that public interest or national security would suffer significantly," Schmitt told the *Denver Post* last week. "That responsibility has been abandoned in the granting of these loan guarantees."

Schmitt further argued that the guarantee in effect raises the federal deficit by \$1.1 billion by "raising the pressures on interest rates and by allocating credit to specific projects."

A poor precedent will be set, he said, "that other such companies will expect to follow."

The new U.S. Synthetic Fuels Board will have \$6 billion during Fiscal Year 1982 to help fund other projects, including six oil shale-related projects in Colorado and Utah.

Echoing Schmitt's concerns, the four environmental groups, including Friends of the Earth and the Colorado Open Space Council, said the guarantee "does not adequately protect the taxpayers' investment." The security offered as collateral for the guarantee — basically the value of the project itself and the lands Tosco has acquired — do not match the government risk, being largely derived from the loan guarantee itself. If it defaults, Tosco would keep all of its patents, licenses and property rights not necessary for completing the project.

The groups said the agreement with Tosco fails to consider environmental health and safety problems that may arise with the Colony project.

Schmitt said he will try to introduce a resolution before the full Senate when Congress reconvenes Oct. 15, bypassing the banking committee chaired by Sen. Jake Garn (R-Utah), which is supportive of the guarantee.

Efforts to kill the loan guarantee are also underway on the House side, where Rep. Toby Moffett (D-Conn.) is pushing for a similar resolution of disapproval.

Last minute support for the guarantee has come from Sen. Gary Hart (D-Colo.), who last week said he favored it because it allowed a "relatively modest size" company to join the oil shale rush and because Tosco has promised to provide more than \$275 million in impact aid to Parachute and other communities.



Colorado River below Shadow Mtn. Reservoir

## Energy firms told to store own water

DENVER — There is enough water in the Colorado River to support a 1.5 billion barrel-a-day oil shale industry in the West without draining irrigation and other uses, Colorado water expert Bill McDonald told a group of energy company officials here last week.

The availability of that water, which could also sustain five times the existing coal-fired power plants in the region, is contingent on several conditions, said McDonald, head of the Colorado Water Conservation Board. But he predicted no major obstacles, stressing the water for developing oil shale, will cost industry no more than \$1 billion — less than two percent of the total development cost.

McDonald's remarks came during a symposium attended by some 100 public officials and energy developers, including representatives from Chevron, Standard Oil, ARCO, Tosco, Sohio, construction companies such as Bechtel and Utah International. With interests in resources spread from Wyoming's Green River Basin south to Colorado's Piceance oil shale tracts, they came to learn about water in the West.

Irrigators are a tempting target for water purchases, said McDonald. They use 90 percent of the 3.8 million acre-feet consumed annually by the four Colorado River Upper Basin states — Colorado, New Mexico, Utah and Wyoming.

All four states allow water right transfers, he said, "and from a purely legal point of view, there's no constraint on the amount of water that could be transferred." The industry already owns some 20,000 acre-feet of irrigation water on Colorado's Western Slope, he estimated. (A 1.5 million barrel industry is believed to need 200,000 acre-feet, plus another 20,000 for associated growth.)

Such transfers, however, McDonald warned, "can be cumbersome and costly." He cited a slew of obstacles, including complex water laws, Indian water claims, federal reserved rights, the 1944 Mexican Treaty, and river flow uncertainties.

Other speakers testified to successful efforts to purchase water. ETSI spokes-

man Dennis Stickely relayed the recent commitment contract with South Dakota for its coal slurry pipeline. Rodney Clark of the Intermountain Power Project said his firm was able to obtain water from 673 farmers "without coercion." Water law veteran Edward Clyde of Salt Lake City concluded that "in most places in the West you can put a water right together."

There is widespread opposition to new water storage projects in Montana, warned John Acord of the Montana Department of Natural Resources. Nonetheless, the word heard by energy developers wanting water was: build your own dams.

"That's generally what we advise," said Joe Lord, project engineer for Banner Associates, Inc., of Laramie, Wyo., to whom many Overthrust Belt energy firms turn for help in acquiring water.

That opinion was shared by Paula Jones of the federal Office of Technology Assessment in Washington, D.C., who said there were a myriad of "political and institutional constraints on water availability" from existing users that make developing new sources and storage projects attractive to industry.

Among the conditions McDonald cited for making adequate water available were: that the Colorado River Basin Compact allows each state enough water for its share of the oil shale development; that other water users don't exceed their project levels; that proposed water storage projects are built,

and that the Colorado River flows each year as predicted.

While agriculture may not suffer from oil shale development, wildlife and other instream users might be hard hit, said lawyer Clyde. "The system for determining water rights by whomever got to the courthouse first has left instream uses dry," he said.

Clyde said he opposed proposals to subject all water users to full-cost pricing, arguing that the market place can't "save a waterfall or other public interests." Several speakers had complained that federal subsidies of agricultural and municipal uses were unfair to energy developers and encouraged water waste.

## States try rule-bending for uranium

Massive layoffs in the uranium industry are forcing the nation's top two uranium-producing states, New Mexico and Wyoming, to weigh environmental regulations and standards against economic considerations.

In New Mexico, where the industry has traditionally shown great political muscle, the balance is skewed toward

dollar considerations. In Wyoming it is still too soon to tell.

Between March 1980 and September 1981 the uranium work force in Wyoming declined by 54 percent to 2,500. An ad hoc committee appointed by Gov. Herschler (D) has recommended several steps the state could take to cut costs for uranium operators and restore confidence in the uranium industry there.

Herschler told the committee Oct. 2 that he had already acted on several of the recommendations: among them, working with federal agencies to remove duplication in the permitting and bonding process, and changing bonding requirements to allow companies to bond themselves.

The committee is also asking that the Wyoming Legislature consider deferring or reducing taxes. Committee members are most concerned about reclamation requirements during temporary shutdowns.

State environmental officials have argued they cannot allow companies to shut down mining for several years without reclaiming the mines. Concerned about water pollution and erosion during the interim, they also fear companies might abandon the mines if the market does not improve, as they did during a uranium bust in the 1960s.

Now the state and the companies are approaching a compromise, which would not require full reclamation but would take some steps to protect the

environment. In a letter to the state, the Wyoming Mining Association said operators would file annual reports, monitor their sites, pay bonds, and generally show a willingness to incur significant ongoing investments." Marion Loomis, associate vice president for the association, said the companies would be willing to take "reasonable" precautions to guard against environmental degradation during the interim.

New Mexico has no reclamation or bond requirements for uranium mines: a company can stop mining and walk from the site without forfeiting anything, whether or not it is a temporary shutdown.

New Mexico is required by federal law to regulate uranium mills and their wastes, known as tailings. But the state is defying the federal Nuclear Regulatory Commission by proposing tailings regulations that are less stringent than the national standards. New Mexico has an agreement with the NRC allowing it to regulate mills and tailings only if its standards are at least as stringent as the NRC's.

"Compared with NRC's requirements, the state regulations are much more shortsighted, much less flexible and much less likely to be successful," according to Paul Robinson of the Southwest Research and Information Center.

A confrontation between state and federal regulators is expected.

— Marjane Ambler

## HOTLINE

### ANOTHER BLM WILD AREA

The Great Rift lava flow roadless area in southern Idaho is expected to be named the country's second official Bureau of Land Management wilderness area this week by Secretary of the Interior James Watt. The 341,000 acres of public lands east of Sun Valley surround the Craters of the Moon National Monument. Except for some upcoming decisions on developing geothermal energy resources in the area, Idaho BLM Director Bob Buffington in Boise predicted little controversy over the recommendation, which will be sent to Congress for approval. The BLM's Aravaipa wild area in Arizona was recommended last month; Malpais in New Mexico is expected to be the third nomination for wilderness status.

### WILDERNESS RUNDOWN

*Public Land News*, a Washington-based newsletter, has published a rundown of congressional attempts to write wilderness bills for various states based on Roadless Area Review and Evaluation studies conducted by the U.S. Forest Service. *Montana*: Members of the state's congressional delegation are apparently considering bills for individual wilderness areas, such as West Big Hole, but there are no plans for a statewide bill. *Utah*: No action is expected. *Wyoming*: According to Sen. Malcolm Wallop's office, the delegation is working "quite closely" to develop a bill. Colorado, Idaho and New Mexico have already passed statewide wilderness bills.

### FARMLAND LEVELLING OFF

For the first time in years, the value of farmland has actually declined when measured in real values. Average prices rose nine percent during the past 12 months, compared to an 11 percent rise in the Consumer Price Index. The last decade saw farmland prices soaring some 266 percent. But for the next year at least, predicts Ron Jeremias, a U.S. Department of Agriculture economist, higher interest rates, tight credit, and falling farm income will keep a lid on farmland value growth. Farm income also faces a further decline, he said, following a 40 percent drop last year.

### DUNOIR DRILLING

The DuNoir Wilderness Study Area, adjacent to the Washakie Wilderness in Wyoming, may hear the nearby sound of drilling next spring if Chevron USA has its way. Chevron, which holds leases in the area, has told the U.S. Forest Service it wants to drill near Gap Lake. The site is near elk calving areas, according to Forest Service officials. District Ranger Ted Knowles told the *Wyoming State Journal* that Chevron would use primarily old timber roads. Knowles said the company would be allowed to develop its lease with restrictions determined by an environmental assessment prepared by the U.S. Geological Survey.

### WASTE ON THE PLAINS

Frustrated by the controversy involved in dumping wastes close to Colorado's Front Range, the hazardous waste industry is setting its sights on the Colorado plains for a new chemical dump. The latest suggestion by Chem-Security Systems, Inc., of Bellevue, Wash., calls for a 320-acre disposal facility just east of Limon, 90 miles from Denver. Geological studies are still needed, but the company president Patrick Wicks predicts the underlying Pierre Shale formation will be ideal for containing the liquid toxics.

### YELLOWSTONE CONCESSIONS

TWA Services, Inc., which took over concessions in Yellowstone National Park on a temporary basis two years ago, will be moving in for five or possibly ten years under a new contract it won by bidding against seven other firms. TWA, a subsidiary of Canteen Corp., of Chicago, evidently fit Interior Secretary James Watt's bill of a company willing to play a bigger role in running the park. TWA will invest 22 percent of its gross revenue, and pre-tax profits over five percent, into tourist improvements in Yellowstone. Seven million will go to fix up Grant Village with more lodging and eating facilities. TWA also runs services at Bryce Canyon and Zion National Parks in Utah, and the North Rim of the Grand Canyon.

### WILD HORSE FEE DELAYED

The Bureau of Land Management's plan to raise adoption fees for wild horses and burros has been delayed until Jan. 2, 1982. The increase, which will create a uniform adoption fee system of \$200 for wild horses and \$75 for burros, was originally scheduled to go into effect on Oct. 1, 1981. BLM Director Bob Burford said, "The delay will give us time to assess the effects of the fee increase on demand for wild horses and burros. Our review over the past several months indicates the adoption program would not meet the Bureau's removal and disposal goals of 11,000 excess animals for fiscal year 1982." The increase is designed to reduce the federal subsidy for the program. It costs the BLM about \$325 to round up each animal. Previous fees had ranged from as low as a few dollars to \$145, depending upon the location.



### UTAH ORV'S

The Uinta National Forest in Utah is closing hundreds of acres to off-road vehicles in an attempt to preserve watershed. The forest is losing about 90,000 tons of soil each year through various impacts, including off-road vehicle use, grazing and some natural erosion. Vehicle restrictions should save about 12,000 tons of that loss. Forest officials said most of the roads weren't supposed to be there in the first place. "People just take off and go across meadows."

### SHALE LANDS ADDED

More than 2.6 million acres of oil shale land in western Colorado have been reclassified by the U.S. Geological Survey as "prospectively valuable for oil shale." The action reverses a withdrawal of the lands made in 1930. Of the acreage, 655,789 acres appear to have the greatest potential for economic recovery of shale oil, the USGS said. The two areas so identified are the Roan Plateau oil shale leasing area in the southern half of the Piceance Basin and the White River area in the northern half of the basin. USGS said these areas contain deposits of at least 60 feet of oil shale that will yield 25 or more gallons of shale oil per ton.



## The Clean Air Act

by Dan Whipple

There are as many opinions about the Clean Air Act as there are people who breathe air. The act expired last month and the debate about its renewal is currently raging in Congress. Everybody wants some changes — the auto industry, environmentalists, utilities and energy producers. As might be expected, they don't all have the same revisions in mind.

Whatever changes come about, they will have a profound effect on the Rocky Mountain West. They will determine the future of Denver's air quality, the intensity of oil shale and synthetic fuels development, visibility in parks and wilderness areas, the future deterioration of air in a region that now has relatively clean air and, according to some, the survival of lakes and streams now under assault from acid rain.

"It's as clear a conflict between public health and private profit as I've ever seen," said Robert Yuhnke, Rocky Mountain regional counsel for the Environmental Defense Fund.

"The changes we're looking for will not hinder progress in cleaning up the air. In fact, they will increase it," said Jeff Conley, air quality project director for the industry-sponsored National Environmental Development Association. NEDA has proposals for 23 changes in the act.

First passed in 1970 and strengthened in 1977, the act is a complex amalgam of auto emissions restrictions, "increments" of allowable pollution in clean air areas, provisions for compliance schedules for areas which fail to meet health standards and dozens of other concepts that were invented exclusively for dealing with the subject. It is a regulator's heaven and an industrialist's hell.

The act is designed to protect the health and welfare of the American public by cleaning up the air they breathe. Apparently the Clean Air Act is working. There has been steady improvement in the nation's air quality over the last decade, according to the Environmental Protection Agency.

Yet there are as many proposals for changing the act as there are special interests. Currently, there are two focusses of the debate — changes in auto emissions proposed by the auto industry and a more comprehensive series of revisions suggested by the Reagan

administration through the EPA.

The Reagan proposals have become known through a series of leaks, followed by a lot of backtracking, followed by a list of announced "principles" for changes in the act.

The administration's principles are:

- Continuing current methods of setting air pollution standards, "based on sound scientific data" that demonstrates real health risks. The administration does not yet want to apply cost-benefit analysis to clean air proposals.
- Continuing federal "secondary standards." These are air quality rules which protect human welfare, as opposed to the more lenient primary standards, which protect human health. Secondary standards protect crops, visibility and buildings from damage from air pollution.
- Continuing protection of clean air in national parks and wilderness areas, designated Class I under the act, which prohibits virtually all deterioration of air quality in these areas.

- Establishing more effective controls over cancer-causing pollutants.

- Changing automobile emissions to "more reasonable levels," particularly for carbon monoxide and nitrogen oxide.

- Eliminating the requirement that all new power plants install equipment known as scrubbers to remove sulfur from stack emissions, regardless of whether they burn high- or low-sulfur coal.

- Giving states full partnership in carrying out the act, with the federal government monitoring their performance.

The issues which will have the most effect on the West are the auto emissions standards, the changes in the prevention of significant deterioration requirements, elimination of the scrubber requirement and an issue which the administration guidelines do not address, control of acid rain.

The administration claims that the proposed changes are reasonable responses to problems caused by the act. The National Clean Air Coalition, an umbrella group of environmental organizations lobbying on the act, said the principles are "filled with code

words for serious cutbacks in protection for public health and environment.

The first issue being addressed in Congress is the auto emissions question. Legislation has been introduced by Reps. Bob Traxler (D-Mich.) and Elwood Hillis (R-Ind.) to ease tailpipe emissions standards.

Under current law, cars are required to emit no more than 3.4 grams per mile of carbon monoxide (CO) and 1.0 grams per mile of oxides of nitrogen (NOx). The Traxler-Hillis bill would change these requirements to seven grams per mile of CO and two grams per mile of NOx, roughly doubling allowable emissions.

Tim McCarthy of the Motor Vehicle Manufacturers Association, which supports the changes, said, "CO is going down everywhere in the country at the rate of about seven percent a year; 14 percent a year in urban areas. Going from a 3.4 to a seven CO — even though our opponents portray that as doubling the standard — would only really mean going from a 96 percent total reduction to a 92 percent reduction."

The association also supports the new NOx standard, arguing that only seven counties in the country exceed NOx. "Five of those are in Southern California.

Our provision wouldn't affect them," said McCarthy. California has a special provision under the law allowing it to set its own air standards. "The other two areas are Chicago and Denver. Between 1987 and 1990, all areas would be in compliance with the standard."

But Dr. James Lents, director of the air pollution control division of the Colorado Department of Health, said Denver will be incapable of meeting the national ambient air quality standard in this century under the Traxler-Hillis bill. "Our visibility would also get worse," said Lents. "In addition, a petition by General Motors to relax diesel particulate standards from 0.2 grams per mile to 0.6 grams per mile will make Denver's visibility 60 percent worse."

The Denver metropolitan area is currently a non-attainment area — meaning it does not meet the primary public health air quality standards — for particulates, CO, ozone and NOx. Other areas in the region not meeting some air standards in whole or in part because of auto emissions are Salt Lake City and Davis County in Utah; Missoula and Billings, Mont.; and Larimer County, Colo. None of these have as severe a problem as Denver. Salt Lake could meet the health standards under the changes, but it would need a compliance extension until the late 1980s.

The reason for the proposed reduction is acknowledged by everyone affected to be economic, not environmental. The troubled U.S. auto industry wants to use the changes to save money, increase profits and reduce the price of cars to the public.

But the cost savings estimates vary radically. Some manufacturers claim they will save in excess of \$400 per car if the standards are relaxed. However, a Ford Motor Co. executive recently testified before Congress that the savings would be only about \$85 per car.

A consultant to the Environmental Defense Fund, Thomas C. Austin, said Ford's estimate "is far more realistic...the reduced fuel economy that would result from the use of minimum cost control systems would significantly increase the total cost of owning and operating the vehicle."

To EDF's Yuhnke, it's more than dollars. "High altitude auto standards literally mean life and death for those sensitive to these pollutants," he said.

"We are talking about increased heart attacks, birth defects, problems for asthmatics and other illnesses. With complete certainty, we are talking about some lives, but we don't know how many."

Industry spokesman McCarthy concedes manufacturers can meet the current standards, but says they are unnecessarily high. "We are convinced that a seven gram CO standard and two gram NOx standard will more than adequately maintain our air quality goals," he said.

The Traxler-Hillis bill is now being considered by the House health and environment subcommittee. A panel source said a majority on the subcommittee favors the bill's amendments to the act, but they want to do a comprehensive re-write of the Clean Air Act, not take a piecemeal approach. Passage is unlikely this year.

The auto industry says it needs to "know the answers" about emission limits because of the long lead times required by the industry.

When the comprehensive review gets under way, another provision of the act which will get a lot of attention is the prevention of significant deterioration (PSD). The PSD is a complex web of regulations designed to keep very clean air very clean and pretty clean air from getting too much dirtier, while allowing concentrated industrial development in some areas.

The PSD program divides the country up into Classes I, II and III. Class I covers areas that must meet the most stringent air quality standards and includes most, but not all, national parks and wilderness areas. Several governmental bodies and Indian tribes may petition to have land under their jurisdiction redesignated as Class I. So far only the Northern Cheyenne Reservation and the Flathead Reservation, both in Montana, have petitioned for and received Class I status. A group of citizens in Wyoming is asking the state to petition the federal government for Class I status for the Cloud Peak Wilderness area in the Big Horn Mountains.

Most of the country is designated Class II. This designation allows for certain increments of air quality deterioration, which vary from place to place, using as a basis changes in the air quality since 1977. In no case is air quality supposed to be worse than the National Ambient Air Quality Standard (NAAQS). If an area's air quality is worse — like Denver, Salt Lake City, or Billings — it is called a "non-attainment area" and put on a compliance schedule, under which it must clean up its air to that standard by a date specified in the compliance plan.

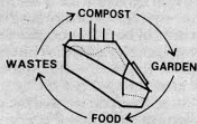
Class III allows the largest increments of additional air pollution, but must still meet the NAAQS. This designation is designed to allow for some industrial concentrations. Class III areas must be requested by governmental bodies, like Class I; there presently are none in the U.S.

There are several proposals which would eliminate the Class II and III. The industry association's Conley said, "What we are finding out is that the increment doesn't do anything in the overwhelming majority of cases. The increment feature, in theory, is based on the presumption that pollution levels are rising everywhere. This, in fact, is not the case. We only hit the increment in about seven percent of the cases — in high terrain. So if you have these few cases, is the program really justifiable?"

"If you don't hit the increment, you still have to do a long analysis and monitoring, and it turns out that it doesn't

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## “It’s as clear a conflict between public health and private profit as I’ve ever seen.”

— Robert Yuhnke

make any difference.”

However, according to Western environmentalists, the PSD requirements assure that already clean air will not be degraded. Elimination of the Class II and III designations would probably allow air quality in all these areas to deteriorate to the NAAQS, which is the minimum acceptable standard.

Most areas in the Rockies have very clean air already. Since this “baseline” air is so clean, the allowable increments would increase air pollution by only a small amount. The effective limit on air pollution is very low, thanks to the Class II designation.

EDF’s Yuhnke said, “The PSD requirements prevent industrial clusters and may help put a lid on energy development in wilderness areas, currently being proposed by the Reagan administration.”

Brent Bradford, director of the air quality division of the Utah Department of Health, said, “Class II and III areas should be replaced with one secondary air quality standard. We need to look at what the ‘proper level’ for the secondary standard is, but it should provide as much protection as the classes. Class II should be at the option of the state.”

Wyoming has in effect done what Bradford advocates by establishing the federal secondary standard — designed to protect public welfare — as the state’s primary standard. Wyoming’s stringent rules forced the Wyodak power plant at Gillette to install a scrubber on its plant, a cost that would not have been required to meet the federal primary air quality standard.

The administration also wants to eliminate the requirement that new coal-fired power plants install stack gas scrubbers to control sulfur dioxide emissions. Under the current law, scrubbers must be built, regardless whether high- or low-sulfur coal is burned. Under the administration’s proposal, pollution could be abated by

burning low-sulfur coal without a scrubber. SO<sub>2</sub> emissions in the West have not been a big problem, but most of the coal mined in the West is low in sulfur content. Relaxation of that requirement could increase the demand for Western coal, but no one is certain how much.

Air quality requirements could also affect the infant synthetic fuel and oil shale industries.

Environmentalists are pushing for strict emission control standards on synthetic fuel plants and oil shale facilities. Said one, “We don’t even really know how dangerous the pollutants these plants emit will be. It is essential that we get standards in place before the plants are built.”

Utah’s Bradford said, “The clean air requirements could substantially curtail the oil shale industry in Utah.”

According to a study completed by the American Petroleum Institute, the Clean Air Act after 1990 will cost the country one million barrels a day of synthetic fuel and shale oil from seven different areas of the country. It will restrict the development of 350,000 bbl/d of heavy oil in Kern County, California; 400,000 barrels a day of shale oil in western Colorado’s Piceance Basin; and 320,000 bbl/d of synthetic oil and gas from coal in Appalachia, southeastern Ohio, northwestern New Mexico, northwestern Colorado and west central North Dakota.

To alleviate these problems, API suggests a number of changes. The group recommends replacing the PSD program with requirements for the use of “best available control technology” on plants; excluding fugitive (airborne) dust from the review process for major projects; not regulating “visibility” until more accurate methods for measuring visibility impairments are developed; and not establishing an ambient standard for nitrogen dioxide “unless mandated by public health considerations.” The administration’s principles for

changes in the act seem to address most of API’s concerns.

Finally, there is the ticklish question of control of acid rain. Industry generally downplays the seriousness of the acid rain, problem arguing, first, that it is not a human health hazard and, second, that too little is known about the phenomenon to address it adequately.

But environmentalists are pushing for immediate changes in the act to deal with the acid rain problem, which they believe has become serious in some parts of the country. Also, Canadian government officials are asking Congress to take steps to deal with the problem, believing that their acid rain problems originate in the U.S.

Acid rain occurs when sulfur and nitric acids combine with water vapor in the upper atmosphere to create sulfuric and nitric acids which are brought to earth in any form of airborne moisture — snow, rain, fog, mist, hail and so on.

Acidity is measured by pH — potential of hydrogen. A pH of seven is “normal,” with numbers above seven indicating alkalinity and numbers below seven indicating acidity. The scale is logarithmic, so acidity of six is ten times more acidic than seven, acidity of five is 100 times and so on.

The Reagan administration’s proposals for the Clean Air Act do not address control of acid rain, and it is one of the chief goals for new provisions in the act that the environmentalists want to see.

No one can exactly pinpoint the source of the acid rain problem, but it is widely believed to be created by emissions from fossil fuel burning power plants and industrial facilities. It’s blamed for the “death” of several lakes in Canada and New England, lakes in which water has gotten too acidic to support its normal variety of biotic life.

Acid rain also affects crops. According to a Sierra Club report, plants such as tomatoes and strawberries thrive in acidic soil and grow better in acid rain

conditions. However, other crops, such as broccoli, carrots, beets and radishes suffer yield losses of up to 50 percent when exposed to simulated acid rain. In one experimental study, more than half of the crops suffered leaf damage.

Acid rain has until now been seen as an eastern or far western problem. But EDF recently reported that there is an increasing trend toward acidity in precipitation in the West. Precipitation with an average pH of less than 5.6 “is being measured at widely scattered points in the Rocky Mountain region...The incidence of acid precipitation, or the degree of acidity, or both, is greater at higher altitudes (above 7,500 feet).” EDF attributes the high acidity to human activity, not natural causes.

None of this is yet cause for panic, but environmentalists see an opportunity to prevent the problems from getting worse by reducing sulfur dioxide emissions from power plants.

According to the National Commission on Air Quality, a reduction of seven to ten million tons in annual sulfur dioxide emissions by eastern utilities — 40 percent to 57 percent of total emissions in the East — can be achieved by 1990 with an average increase of about two percent in utility bills.

The administration’s clean air principles said, “Research on acid precipitation should be accelerated.” Most industry groups support this position.

But the National Clean Air Coalition said, “Research means no action...In fact, the only action (the administration) plans is weakening the (emission) standard for power plants, which will worsen acid rain.”

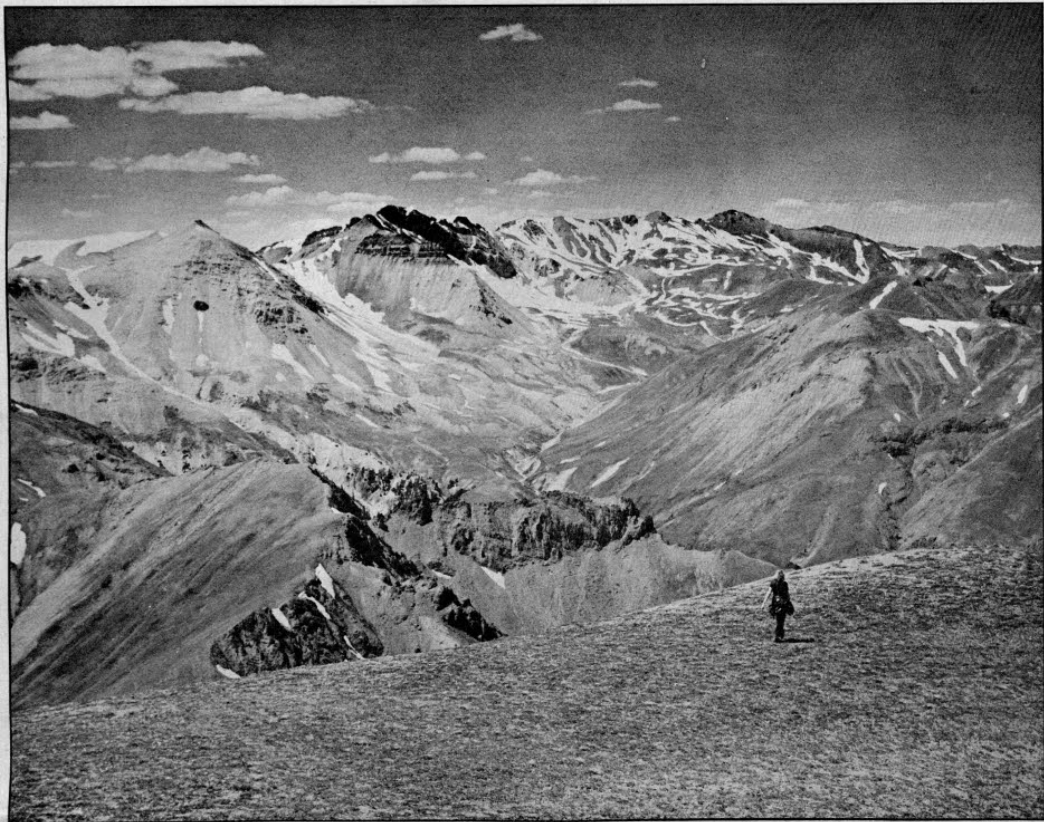
Despite the distance separating the adversary groups in the debate, virtually everyone agrees that some regulatory delays can be shortened and regulatory language cleaned up. However, the points of agreement are minor in comparison to the other issues.

Virtually everyone admits that the Clean Air Act has worked, though at some cost. To date, no industrial project in the West has ever been stopped because of clean air restrictions, though a limit may be put on oil shale development, if industry studies are correct. But, hidden behind the esoteric terminology that has grown up to describe how the act functions, the debate will eventually focus on fundamental issues of human health and welfare. □



Mike Kichler

Five Pockets



Ralph Mumford

East Fork Pass



The Washakie Wilderness

# “If there were no laws involved...”

by Geoffrey O’Gara

“If there were no laws involved, I probably would say no to leasing in the Washakie Wilderness,” said Ray Hall, supervisor of the Shoshone National Forest. But next week he’ll send to the printer an environmental impact statement that is expected to recommend some leasing for oil and gas development in the Wyoming wilderness area.

The key law is the Wilderness Act of 1964. Representatives of the oil and gas industry — already under fire for what one called their “ornery” pursuit of leases in the wilderness — say they’re in the same bind as Hall. The law specifically allows exploration and development until December 31, 1983. So while some energy developers would rather avoid the poor public relations of wilderness development, others continue to file applications.

“It’s fairly fundamental,” said Alice Frell, a public lands expert with the Rocky Mountain Oil and Gas Association. “If members of Congress feel strongly enough, the law should be changed.”

In the meantime, she said, industry is confident it can drill and develop and still preserve wilderness values, and it is pressing for an extension of the 1983 deadline.

The environmental impact statement on leasing the Washakie will be the first step in a process of evaluating lease potential that will ultimately affect all 23 million acres of protected wilderness in the lower 48 states. It has thus become the taut rope in a tug-of-war between conservationists and energy developers.

Perched on the eastern side of Yellowstone National Park and the Teton Wilderness, the Washakie wilderness is a biologically sound

wilderness puzzle. From its steep slopes flow the Shoshone and Wind Rivers; populations of bighorn sheep, grizzly bear and other wildlife remain strong.

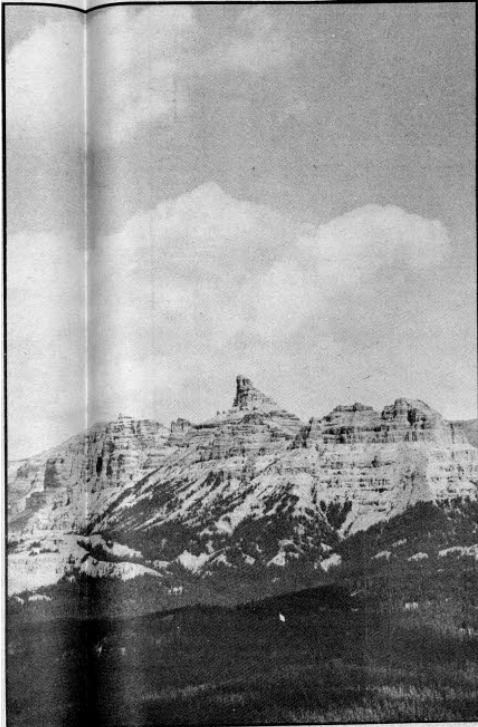
Comments on leasing alternatives for the Washakie were slow in coming — but when they came, mostly from people in the vicinity they were overwhelming opposed to leasing. The public was joined by interior department officials, including Yellowstone National Park Supervisor John A. Townsley, who wrote, “A most important element provided by... (the) Washakie Wilderness is a biologically sound buffer for the core of this ecosystem... The long-term effects created by the impact of energy development would be devastating.”

But forest official Ray Hall said that despite the public outcry, he must consider leasing if it can be done without destroying the wilderness. Hall said that by law the area must be open to leasing and that it cannot be denied “because of the wilderness designation.” The Forest Service can, however, place stipulations on any leases to protect the wilderness characteristics.

Michael Scott, The Wilderness Society representative in Denver, said the Forest Service is misreading the Wilderness Act. “I think they’re translating a provision that says leasing *may* occur into one saying leasing *must* occur, and that’s fallacious.”

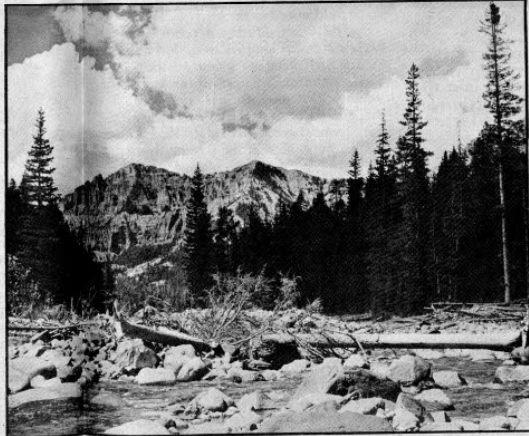
Scott also said the most emphatic argument in favor of leasing — that we must know what reserves wildernesses hold in order to prepare for national emergencies — is invalid. “The wilderness is not closed,” said Scott, because the act allows exploration, but not development, after 1983.

The Forest Service recommendation will be released in November.



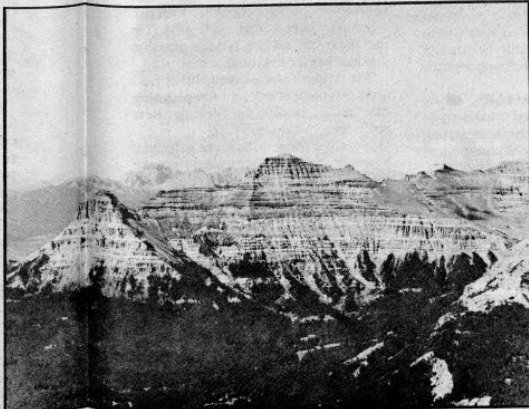
Ramsborn Peak

Mark Kitchner

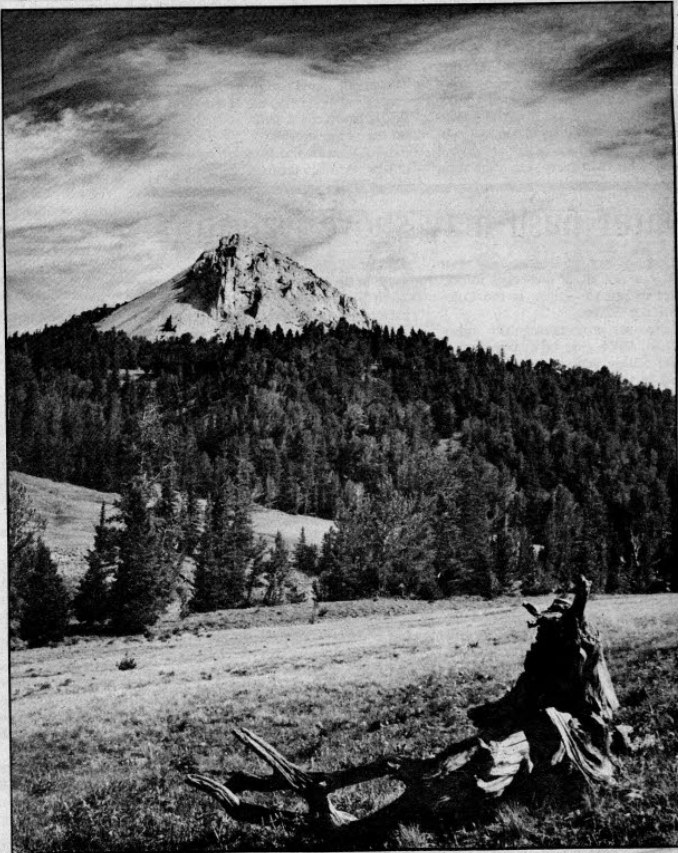


Brown Rock Canyon

High Country



Mark Kitchner



East Fork of the Wind River

High Country

## Salinity...

(continued from page 1)

The energy boom could inflate the BuRec's guess.

One scenario constructed by the Colorado Energy Research Institute in its 1981 study, *Water and Energy in Colorado's Future*, predicts synthetic fuels and other energy development in Colorado alone will take an additional 300,000 acre-feet per year by the year 2000 (assuming a moderate 600,000 barrel-a-day oil shale program).

For every 10,000 acre-feet taken from the river, the BuRec calculates that a milligram of salt is added at Imperial Dam. So that 300,000 acre-feet, just for energy projects in Colorado, would add 30 milligrams.

Today, irrigation adds heavily to the salinity problem. Much of the Colorado River Basin is underlain by geological formations heavily laced with salts. When irrigation water percolates down through the soil, it picks up the salts and carries them into the river.

And western irrigators are not efficient. Water users from other water-scarce regions of the country are usually aghast at the waste. The average five-acre-foot-per-acre of irrigation water per year in the Grand Valley is six or seven times the use in Nebraska, for example, with no difference in crop yields.

With irrigation using most of the water and accounting for most of the salinity, it's a natural place to look for a solution.

If irrigators are the target, then the bullseye is the Grand Valley on Colorado's Western Slope, where the Colorado emerges from the Rockies and begins working its way south through the high desert country.

Since 1882 farmers here have tapped the river to grow hay, corn, fruits and grain. The Book Cliffs and surrounding mesas shelter the valley's alluvial soils. There is a 190-day growing season.

Some 1,000 farmers last year paid a flat \$7-an-acre fee to divert 630,000 acre-feet of river water. All but one-fifth of that irrigation water returned to the Colorado, carrying salt from the underlying Mancos Shale formation. An estimated 780,000 tons of salt are added here to the river every year, translating

## Water push may shove irrigators

Federal water regulators have put most, but not all, of their eggs in one basket to reduce salinity in the Colorado River Basin.

Of the four projects originally authorized in 1974, one other besides the Grand Valley scheme is being considered in the southwestern Colorado's Paradox Valley. A pending \$4 million feasibility study may show that 180,000 tons of salt could be saved yearly by preventing natural groundwater from introducing salts into the river.

There's a giant desalination plant planned at Yuma, Ariz., on the border with Mexico that could save another 100,000 tons of salt and help meet acknowledged obligations to Mexican farmers for usable Colorado River water.

Officials are also excited about the prospects of using saline waters in the basin to cool power plants, develop oil shale or even run solar gradient ponds. Using all of the saline water spewed out by the Glenwood — Dotsero Springs Springs east of the Grand Valley could save half a million tons of salt each year, said Bill McDonald, head of the Colorado Water Conservation Board.

But if those schemes don't work, as many observers predict, and if the Colorado continues to be managed by happenstance with regulators floating from one crisis to the next, there will be wars over water rights.

A host of scenarios could develop. Dan

into 77 mg/l at Imperial Dam.

Studies have found that 60 percent of that salinity is avoidable. So in 1974, Congress enacted the Colorado River Basin Salinity Control Act and targetted the Grand Valley as one of four spots on the Colorado to begin corralling the salts.

As proposed, the U.S. Agriculture and Interior Departments, through their Soil Conservation Service and Bureau of Reclamation, respectively, would join hands to keep 410,000 tons of salt out of the river annually by 1984.

They would do so by fixing leaks and encouraging less use. The BuRec would line 185 miles of canal with concrete, and line or replace with pipe another 450 miles of lateral ditches.

Meanwhile, the SCS would work with farmers to line 546 miles of ditches, replace another 118 miles with pipes, level 16,000 acres of land, install 54 miles of subsurface drains and 2,600 water measuring devices, and cover 800 acres with new drip sprinklers. A field station would be built. Lost wildlife habitat would be replaced. A management program would advise farmers on how to save water. The total cost: \$59 million.

Four years later, the cost estimate had nearly tripled to \$170 million. Congress, in the meantime, had balked at the original project. A scaled-down, experimental version limited to the west end of the valley was approved, costing only \$18 million to save 24,000 tons of salt each year. The experience gained from this first experiment would then be applied elsewhere in the valley and throughout the Colorado River Basin.

In contrast to author Fradkin's pessimism, a joint agency tour last month of the Grand Valley project was strictly upbeat. "The data we have is showing fantastic salinity reductions," said SCS coordinator Emery Johnson of Grand Junction.

The success stories are indeed sweet. Newly lined canals are holding water, while dozens of farmers in the valley are using new ditches and irrigating equipment and consuming less water.

But there are problems. The 6.8 miles of Highline Canal the BuRec lined cost 25 percent more than expected; various delays have kept it from starting work on any of the laterals.

The SCS has also had cost overruns and delays. Some 125 farmers are waiting in

Leucke of the Environmental Defense Fund in Denver predicts regulators will go to great lengths to protect agricultural interests in the Basin. Consuming 90 percent of the river's water, however, Rocky Mountain farmers are likely to get pinched.

Just how much irrigators will be affected depends on the energy boom and whether energy developers choose to purchase agricultural water rights or get their own water from new dams and reservoirs.

"They've already bought a lot of land and got the water rights just north of here," said T. John Baer, who has irrigated 180 acres in the Grand Valley for 43 years. Estimates of how much Western Slope water has already changed hands range as high as 20,000 acre-feet. But there's no upper limit, said McDonald. "Water runs uphill towards money and energy companies can pay \$1,000 an acre-foot for water worth \$10 an acre-foot to farmers."

If dollars don't decide the issue, then politics may. Those intent on remaining on the farm could be subjected to strong political pressure: Rocky Mountain farmers and ranchers use a lot of taxpayer dollars and river water to produce relatively little beef.

"We waste a lot of water, I'll admit that," said Baer. "But if this country thinks it doesn't need agriculture... let us collapse and wait six months. Just wait six months."



Bud Fougner

line for help because the agency can't find enough contractors to do the construction work. And two major setbacks in the SCS program have wasted much of the agency's efforts and ruined the experimental nature of the initial project.

First, there's been an uncompromising and, according to Johnson, mindless devotion to automated irrigation systems that use gauges and timers to regulate the flow of water. Fully 60 percent of the total project budget spent by SCS has gone for automated systems; only a few manual systems were built.

Yet with few exceptions, farmers using the automation have found it unreliable, time-consuming, and anything but automatic (see accompanying story). Eight out of ten farmers in the program, the SCS itself estimates, have scrapped the automated parts of their systems.

"The pressure came from above," said Johnson, but he declined to specify who in the agency insisted on automation. Johnson said he's now unlikely to approve any more automated systems.

Political pressure from within the Department of Agriculture has caused the project's second major problem. Only a quarter of the SCS's efforts have been in the original stage one target area. The rest have been scattered throughout the Grand Valley, from Mack to Palisade, evidently because of pressure from farmers in those areas to spread the wealth.

As a result, the SCS and BuRec efforts are uncoordinated: lined canals meet unlined ditches here; delicate irrigating systems are clogged by unlined canal water there.

The scattering of test projects has also "completely wiped out our whole plan," said Johnson. "I'm not sure we can do an accurate analysis of the data, and I don't expect to have much technical advice for other projects in the basin."

Furthermore, Congress has yet to approve the funds for any wildlife habitat mitigation efforts. And despite the backlog of waiting participants, many farmers in the valley remain skeptical of the program. Some fear decreased yields from measures to conserve water, even though all tests show actual yield

increases; others spurn the federal involvement in their operations.

Convincing the farmer has been his biggest obstacle, said Jim Currier, Johnson's field coordinator.

The 1974 act directed a portion of SCS's efforts to improve irrigation efficiency by lending in-the-field advice — a nonstructural approach to reducing salinity. The program was successful, said SCS staffer Bob Madler. "As long as they didn't have to pay for it," he said, "some two-thirds of the farmers used the data."

By 1979, he said, 55 farmers tilling 4,800 acres were using computer analyses of soil moisture, crop growth, and water needs to predict when and how much to water. But by and large, Grand Valley farmers revolted.

"They thought we were trying to come in and tell them how to irrigate, how to run their farms," said Currier. Two years ago the program — still in its infancy — was scrapped.

However, efforts to provide irrigation management advice may be refurbished next year by the Colorado University Extension Service at Fort Collins, which has received a \$200,000 grant to take over. But even that effort, said Dan Leucke of the Environmental Defense Fund in Denver, would only begin to tap the potential salinity savings possible through better irrigating.

"The neglect of the management program is typical of federal water planning that relies heavily on building new structures," said Leucke.

Even once those systems are installed, however, the SCS is struggling to make them work. With 11 fulltime people running the whole Grand Valley program, only one spends his time helping farmers work out the kinks.

Seven years after it was authorized, the program seems to have achieved little when measured against the total problem. Johnson projects saving 2,000 tons of salt this year, compared with the original annual goal of 130,000 tons from on-farm improvements. That should save 0.2 of the 823 mg/l of salts at the Imperial Dam, compared with the original annual goal of 77 mg/l for the whole

## Few farmers deride the gravy train

LOMA, Colo. — Asking a farmer to criticize the federal salinity control project is a bit like asking the Farmers' Union to complain loudly about federal price supports; neither would bite the hand that feeds them.

Federal regulators, likewise, are reluctant to reveal the names of critics, though they admit there are many.

Along every stretch of rural road in the Grand Valley, from Mack to Loma and north, there are farmers cutting fields of alfalfa or pulling up new red potatoes nurtured by federally-financed irrigation systems — all in the name of reducing salts in the Colorado River.

That the individual farmer should benefit, too — getting sparkling new irrigation systems at a tenth of the total cost — is not incidental. Their support of the program is crucial to its success.

But there are many — participants and non-participants alike — who are less than satisfied. If encouraged, some become positively reproachful.

Much of their criticism is bent toward the automated parts of the experimental irrigation setups: the gauges and clocks and timers that once promised to make the watering chore so much easier.

"It's a big joke," said Bud Fournier, a non-participant in the program who this year is harvesting his 37th season of Grand Valley alfalfa. "There's no such thing as automation. You have to be there to watch things."

T. John Baer, another farmer, agrees: "One part of a field just isn't like another. You can't just set a timer and walk away and expect things to work

right."

Baer is not only a participant. As a state representative 12 years ago, he first proposed lining canals and other structural chores to help cut the salt flow. But the Agriculture Department, he now says, has gone too far. "They've insisted on this automation."

For some, however, participating in the federal program has been pure gravy, automation and all.

The star of a recent project publicity tour was Glen Fry who added 10,000 federal dollars to his own \$2,000 and replaced a 20-year-old dirt ditch with a chalk-white cement canal complete with moveable headgates, portholes and those automatic timers.

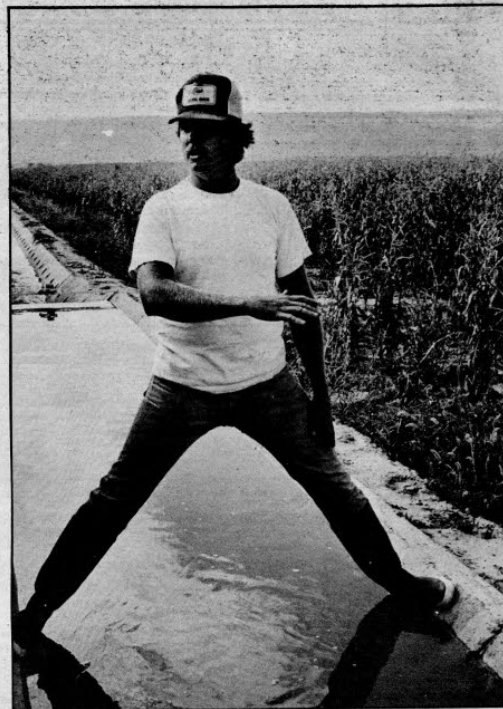
"I love it," he testified before the visiting water officials and equipment dealers. Pumping 10 gallons a minute down each furrow of corn without even a glance from him, the system, Fry said, has saved him two hours a day over the old irrigation method.

Asked how he'll spend his new-found time, Fry said he had a job lined up with Dowell, the energy subsidiary of Dow Chemical.

Riding the federal gravy train is a sensitive issue. "But if the money's there, why not?" said Fry.

Bud Fournier couldn't agree more. Although pushing 67, he'd like to acquire a new sprinkler he'd just seen at a Nebraska farm show. With federal money? Sure, if it's there.

The salinity control program is another matter, though. "That automation," he said, shaking his head, "just couldn't trust it."



Glen Fry

### Grand Valley project.

Nonetheless, he insists the results are "fantastic." Even those meager savings should save downstream users some \$1.7 million, he predicts.

But here, the numbers game gets highly political. The BuRec and the SCS, of course, want to show lots of benefit to little cost, so their figures of cost savings for Colorado River water users are optimally high.

According to a 1979 study by the General Accounting Office, the investigative arm of Congress, those benefit figures are suspect. But even using the BuRec's own estimates, the GAO found the over-

all cost-benefit ratio for the Grand Valley project to be negative, with the cost exceeding benefits by nearly \$1 million a year.

The cost of the project, however, was not to be an obstacle under the 1974 law. In fact, the 90-to-10 cost-sharing ratio with farmers for on-farm irrigating systems is as charitable as cost-sharing laws allow.

Unimpressed, the GAO recommended an immediate halt to the Grand Valley salinity control project until more data could be gathered to determine the program's chances at success.

The GAO recommendation won few

friends in Congress, which is likely to authorize upwards of \$7 million for FY 1982, according to BuRec project director J.R. Rinckel.

Jack Barnett also continues to believe in the miracle. As an executive director of the Colorado River Basin Salinity Control Forum, he pulls together some 15 agencies and water companies in the region to discuss river management. "There's been a sense that the project was not for real," he said. "But now we're really getting started."

That optimism is shared by both the BuRec and the SCS. Even though Johnson says he now needs 33 more years to

meet the original 1985 goal, he concludes: "We're at the leading edge of technology. Of course there are going to be some problems, some systems installed that just don't work. We'll need some fine tuning. What would be really bad is if we weren't able to change."

The question remains whether the Colorado River will wait. □

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### STATE OF WYOMING PUBLIC NOTICE

#### PURPOSE OF PUBLIC NOTICE

THE PURPOSE OF THIS PUBLIC NOTICE IS TO STATE THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER DISCHARGE PERMITS UNDER THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 (FWPCA), P.L. 92-500 AND THE WYOMING ENVIRONMENTAL QUALITY ACT (35-11-101 et. seq., WYOMING STATUTES 1957, CUMULATIVE SUPPLEMENT 1973).

IT IS THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER DISCHARGE PERMITS TO (1) INDUSTRIAL FACILITIES, AND (2) OIL TREATER FACILITIES, TO MODIFY (1) INDUSTRIAL PERMITS, (3) MUNICIPAL PERMITS, AND (4) SWIMMING POOL PERMIT, AND TO RENUE (3) INDUSTRIAL PERMITS, (2) COMMERCIAL PERMITS, (14) OIL TREATER PERMITS, (5) MUNICIPAL PERMITS, AND (2) STATE GOVERNMENT PERMITS.

#### APPLICANT INFORMATION

- (1) APPLICANT NAME: Alder Construction Company  
 MAILING ADDRESS: 3939 S. 500 West Salt Lake City, Utah 84107  
 FACILITY LOCATION: City of Sheridan Wastewater Plant Construction Site, Sheridan County, Wyoming  
 PERMIT NUMBER: WY-0050821

The Alder Construction Company has the contract to build the new City of Sheridan's wastewater treatment plant. Construction is expected to last for two years and during this period the contractor will be required to dewater the construction site. Pumped water will be discharged to Goose Creek (Class II Water) via the existing treatment plant's discharge pipe (outfall 001) or directly to the creek via the contractor's own pipe (outfall 002).

The proposed permit requires compliance with effluent limitations which are considered by the State of Wyoming to represent "best available treatment." Self-monitoring of effluent quality and quantity is required on a regular basis with reporting of results quarterly. The permit will expire September 30, 1984.

- (2) APPLICANT NAME: The Cleveland Cliffs Iron Company  
 MAILING ADDRESS: P.O. Box 3140 Casper, Wyoming 82602  
 FACILITY LOCATION: Campbell County, Wyoming  
 PERMIT NUMBER: WY-0030783

The Cleveland Cliffs Iron Company is the operator of the Collins Draw Rad D in-situ Uranium Mine located in Southwestern Campbell County, Wyoming. Mining is now complete and the Company is in the groundwater restoration phase of the operation. During restoration up to 20 million gallons of water may be produced and the company has applied for a permit to discharge this water after routing it through a uranium recovery plant which will remove uranium, radium and some other mineral constituents. The discharge would flow to Collins Draw (Class IV Waters) via an unnamed drainage.

The Department proposes to issue the requested permit. The proposed permit requires compliance with effluent limitations which are considered by the State of Wyoming to represent "best available treatment technology." However, the permit also contains a re-opener clause which requires the permit to be modified if more stringent limitations are developed at the federal level.

Self-monitoring of effluent quality and quantity is required on a regular basis with reporting of results quarterly. The permit is scheduled to expire October 31, 1986.

- (3) APPLICANT NAME: Rocky Mountain Energy — Nine Mile Lake In-situ Project  
 MAILING ADDRESS: Box 2000 Broomfield, Colorado 80020  
 FACILITY LOCATION: Approximately ten miles north of the City of Casper, Natrona County, Wyoming  
 PERMIT NUMBER: WY-0030830

Rocky Mountain Energy has completed an experimental in-situ Uranium Mining operation located approximately ten miles north of the City of Casper, Wyoming which is known as the Nine Mile Lake Project. In the process of reclaiming the mined aquifer the company has excess waters which will be treated for Radium removal and discharged to Nine Mile Lake (Class IV Water) via an unnamed drainage. Nine Mile Lake is normally dry and is an enclosed basin.

The proposed discharge permit requires compliance with effluent limitations which are considered by the State of Wyoming to represent "best

available treatment." However, the permit also contains a re-opener clause which requires the permit to be modified if more stringent limitations are developed.

Self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The operation is expected to be completed within one year, therefore, the permit expires September 30, 1983.

- (4) APPLICANT NAME: Amoco Production Company  
 MAILING ADDRESS: P.O. Box 569 Powell, Wyoming 82435  
 FACILITY LOCATION: Little Probert Field, Well No. 5 Battery, SE¼, NW¼, Section 31, T57N, R88W, Park County, Wyoming  
 PERMIT NUMBER: WY-0030856  
 (5) APPLICANT NAME: Premala Corporation  
 MAILING ADDRESS: P.O. Box 2514 Casper, Wyoming 82602  
 FACILITY LOCATION: Tank Battery — Gov't. Well 23-27-53-68, NE¼, SW¼, Section 27, T53N, R68W, Crook County, Wyoming  
 PERMIT NUMBER: WY-0030868

Facilities are typical oil treaters located in Park and Crook Counties, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The discharges are to Polecat Creek (Class II Water) via an unnamed draw and Flag Butte Creek (Class IV Water) respectively. The discharges must meet Wyoming's Produced Water Criteria effective immediately. Chapter VII of the Wyoming Water Quality Rules and Regulations infers that as long as the Produced Water Criteria is met, the water is suitable for beneficial use. There is no evidence to indicate that limitations more stringent than the Produced Water Criteria are needed to meet Wyoming's Water Quality Standards. The Department will continue to evaluate the 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 monitored quarterly. The Amoco permit is scheduled to expire December 31, 1983 and the Premala permit December 31, 1984.

- (6) APPLICANT NAME: Husky Oil Company  
 MAILING ADDRESS: P.O. Box 380 Cody, Wyoming 82414  
 FACILITY LOCATION: Rose Creek #5 Tank Battery, NE¼, NW¼, Section 11, T48N, R103W, Park County, Wyoming  
 PERMIT NUMBER: WY-0030864  
 FACILITY LOCATION: TE Ranch 18-19 Tank Battery, NE¼, SW¼, Section 19, T50N, R104W, Park County, Wyoming  
 PERMIT NUMBER: WY-0030872

Facilities are typical oil treaters located in Park County, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The discharges are to Greybull River (Class II Water) and Mower Creek (Class IV Water) via unnamed draws. The discharges must meet Wyoming's Produced Water Criteria effective immediately. Chapter VII of the Wyoming Water Quality Rules and Regulations infers that as long as the Produced Water Criteria is met, the water is suitable for beneficial use. There is no evidence to indicate that limitations more stringent than the Produced Water Criteria are needed to meet Wyoming's Water Quality Standards. The Department will continue to evaluate the 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 monitored quarterly. The proposed expiration date for the Rose Creek facility is December 31, 1986 and for the TE Ranch facility is December 31, 1983.

- (7) APPLICANT NAME: The Thunder Basin Coal Company, a wholly owned subsidiary of the Atlantic Richfield Coal Company  
 MAILING ADDRESS: P.O. Box 1569 Gillette, Wyoming 82716  
 FACILITY LOCATION: Black Thunder Coal Mine, Near Reno Junction, Campbell County, Wyoming

(continued on page 12)

# BULLETIN BOARD

## CHEVRON INFORMS

Chevron Oil plans to enlighten the public with information concerning their proposed permitting and development schedule for the Clear Creek Shale Oil Project in Garfield County, Colorado. The public is invited to participate in the meetings as part of the environmental impact statement process. They will be held Oct. 20, DeBeque School, DeBeque, Colo.; Oct. 21, City and County Auditorium, 250 N. 5th St., Grand Junction, Colo.; Oct. 22, Continental Denver Motor Hotel, 1-25 and Speer, Denver. All meetings will begin at 7:30 p.m.

## WIND POWER

Energy for electrical needs is blowing through the Rockies and two regional workshops will discuss the potential of harnessing the wind for both individual and large-scale energy use. "The Northern Great Plains Wind Workshop," October 24, will be held in the Northern Hotel in Billings, Mont. This workshop will emphasize large wind systems and the possibility of selling wind-generated electricity to utility companies. On Oct. 31, the Rocky Mountain Wind Energy Association will sponsor a workshop at the Little America motel in Cheyenne. For more information, call Western Sun, toll-free, 1-800-442-8334.

## CROSS MOUNTAIN

The Cross Mountain Wilderness Study Area in Moffatt County, Colorado is being considered for wilderness designation. The public is invited to make comments and suggestions in two public

meetings: Oct. 22, Moffatt County Courthouse, 221 W. Victory Way, Craig, Colo., 7 p.m.; or Oct. 20, Ramada Inn Foothills, 11595 W. 6th Ave., Lakewood, Colo. at 7 p.m. Written comments may be sent to Duane Johnson, Little Snake Resource Area Office, P.O. Box 1136, Craig, Colo. 81626, by Nov. 1.

## GREEN MOUNTAIN

The opportunity to comment on the Bureau of Land Management's proposed actions for the Green Mountain environmental impact statement will be Nov. 2, at 7 p.m. in the Fremont County Public Library in Lander, Wyo. For more information contact: Dale Brubaker, P.O. Box 589, Lander, Wyo. 82520; or Bob Tigner, P.O. Box 670, Rawlins, Wyo. 82301.

The Department of Environmental Quality, Water Quality Division will hold operator certification examinations during the week of November 16, 1981. The exams, dealing with Water, Distribution, Wastewater and Collection, will be administered as follows:

Laramie November 16, 1981

Casper November 17, 1981

Rock Springs November 18, 1981

Worland November 19, 1981

Buffalo November 20, 1981

To receive an application, interested persons need to contact Bill Loh at Department of Environmental Quality, Water Quality Division, 1111 East Lincolnway, Cheyenne, Wyoming 82002, or telephone 777-7053. After applications have been screened, notification of specific exam locations will be made available to participants. No applications will be accepted after November 2, 1981. In the event of inclement weather conditions, exams will be postponed to a later date, and announcements regarding the postponement will be made over local radio stations.

The Holly Sugar Corporation operates a large sugar beet processing plant in Worland, Wyoming. All wastewater except barometric condenser cooling water is routed to complete retention ponds for disposal. The cooling water is routed through a forced draft cooling tower prior to discharge to the Big Horn River (Class II Water). Normally the plant has a discharge only during the processing season which generally runs from October through February.

Effective immediately and lasting through June 30, 1984 the discharge must meet effluent limitations based upon national best practicable treatment standards and an average daily sugar production of 630,000 lbs./day. Effective July 1, 1984 the discharge must achieve compliance with effluent limitations which are considered by the State of Wyoming to represent "Best Conventional Pollutant Control Technology" (Daily Average, BOD5 of 1.3 lbs./1000 lbs sugar processed and Daily Maximum, BOD5 of 2.0 lbs./1000 lbs sugar processed). A temperature limitation of 32°C (90°F) will be in effect immediately.

Effluent limitations more stringent than those proposed will probably not be necessary to meet Wyoming's In-stream Water Quality Standards. However, the situation will continue to be evaluated and if necessary the permit will be modified. Periodic monitoring of effluent quality and quantity is required on a daily basis with reporting of results monthly. The permit is scheduled to expire November 30, 1986.

(14) APPLICANT NAME: Holly Sugar Corporation  
MAILING ADDRESS: P.O. Box 1052  
Colorado Springs, Colorado 80901  
FACILITY LOCATION: Torrington, Gosden County, Wyoming  
PERMIT NUMBER: WY-0000191

The Holly Sugar Corporation operates a large sugar beet processing plant in Torrington, Wyoming. All wastewater except barometric condenser cooling water is routed to complete retention ponds for disposal. The cooling water is routed through a forced draft cooling tower prior to discharge to the North Platte River (Class II Water). Normally the plant has a discharge only during the processing season which generally runs from October through February.

The proposed permit requires that effective immediately the effluent meet limitations which are considered by the State of Wyoming to represent "Best Conventional Pollutant Control Technology" (Daily Average BOD5 = 1.3 lbs./1000 lbs sugar produced/day and daily maximum BOD5 = 2.0 lbs./1000 lbs sugar produced/day). Daily monitoring by the Corporation and the Department shows that the plant's effluent is currently well within these limitations. At present it does not appear that more stringent limitations will be necessary to assure compliance with Wyoming's In-stream Water Quality Standards; however, the situation will continue to be evaluated and, if necessary, the permit will be modified. All proposed effluent limitations are based on the plant's average sugar production of one million pounds per day.

The proposed permit requires periodic self-monitoring of effluent quality and quantity with reporting of results monthly. The permit is scheduled to expire November 30, 1986.

(15) APPLICANT NAME: Husky Oil Company - Rock Springs Truck Stop  
MAILING ADDRESS: P.O. Box 175  
North Salt Lake, Utah 84054  
FACILITY LOCATION: West of the City of Rock Springs, Sweetwater County, Wyoming  
PERMIT NUMBER: WY-0021814

The Husky Oil Company is the owner of a truck stop just west of the City of Rock Springs. Domestic wastewater from the truck stop is treated with the use of a package treatment plant which discharges to Bitter Creek (Class II Water). This plant has historically been unable to meet discharge permit limitations.

The Company now has plans to rebuild or replace the existing plant. The proposed permit requires the existing plant be operated at maximum capability and efficiency through June 30, 1982. As of July 1, 1982 the discharge must achieve compliance with National Secondary Treatment Standards and effluent limitations based upon Wyoming's In-stream Water Quality Standards.

Periodic self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The permit is scheduled to expire December 31, 1986.

(16) APPLICANT NAME: Mr. Gary Horst  
MAILING ADDRESS: Sheridan KMA Campground  
P.O. Box 55A, Birney Star Route  
Sheridan, Wyoming 82801  
FACILITY LOCATION: Sheridan County, Wyoming  
PERMIT NUMBER: WY-0026441

The Sheridan KMA Campground is located just north of the City of Sheridan, Wyoming. Wastewater treatment consists of an extended aeration package plant with chlorination and discharges to Goose Creek (Class II Water).

The proposed permit requires immediate compliance with effluent limitations based upon National Secondary Treatment Standards and Wyoming's In-stream Water Quality Standards. Periodic self-monitoring of effluent quality and quantity is required with reporting of results monthly. The proposed permit is scheduled to expire December 31, 1986.

(17) APPLICANT NAME: American Petrofina Company  
MAILING ADDRESS: 4613 Jackboro Highway  
Wichita Falls, Texas 76702  
FACILITY LOCATION: Skull Creek Tank Battery, South Unit, SW¼, Section 27,  
T44N, R62W, Weston County, Wyoming  
PERMIT NUMBER: WY-0023116

Facility is a typical oil treater located in Weston County, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The discharge is to Beaver Creek (Class II Water) via an unnamed draw.

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

Semi-annual self-monitoring is required for all parameters with the exception of oil and grease, which must be monitored quarterly. The proposed expiration date for the permit is December 31, 1986.

(18) APPLICANT NAME: Amoco Production Company  
MAILING ADDRESS: P.O. Box 569  
Powell, Wyoming 82435  
FACILITY LOCATION: Little Buffalo Basin, Battery #2 Embur, SE¼, SW¼, Section 7,  
T47N, R100W, Hot Springs County, Wyoming  
PERMIT NUMBER: WY-0002682  
FACILITY LOCATION: Little Buffalo Basin, Northwest Dome USA #5 Battery,  
NW¼, Section 10, T47N, R100W, Park County, Wyoming  
PERMIT NUMBER: WY-0003522  
FACILITY LOCATION: Little Buffalo Basin, Northwest Dome 2,4, USA  
1,3,6, SE¼, Section 3, T47N, R100W, Park County, Wyoming  
PERMIT NUMBER: WY-0003531  
FACILITY LOCATION: Little Buffalo Basin, Northwest Dome 100% 5 and 3 Unit,  
SE¼, SW¼, Section 34, T48N, R100W, Park County, Wyoming  
PERMIT NUMBER: WY-0003549  
FACILITY LOCATION: State of Wyoming U Battery, SW¼, Section 2,  
T47N, R100W, Park County, Wyoming  
PERMIT NUMBER: WY-0020702  
FACILITY LOCATION: Little Buffalo Basin Water Flood Overflow, NE¼,  
Section 12, T47N, R100W, Park County, Wyoming  
PERMIT NUMBER: WY-0022454  
FACILITY LOCATION: Fourbar Unit Battery #3, NE¼, Section 20, T48N,  
R103W, Park County, Wyoming

(continued on page 15)

PERMIT NUMBER: WY-0024091

The Thunder Basin Coal Company which is a wholly owned subsidiary of the ARCO Coal Company operates an open pit coal mine known as the Black Thunder Mine located near Reno Junction, Campbell County, Wyoming.

Because the Company has changed its method of treating domestic sewage (discharge point 006) from an lagoons system to a package treatment plant, the permit is being modified to reflect more stringent total suspended solids limitations which apply to package treatment facilities.

Because the discharges to the unnamed playa are not to waters of the U.S. as defined by federal law, and because a discharge high in total suspended solids would not be detrimental, the proposed permit limits only pH and oil and grease from the combined equipment washwater/dewatering wash discharge (005).

The discharges to the North Prong of the Little Thunder Creek must meet effluent limitations which are considered to represent best available treatment by the State of Wyoming, however, the point also contains language which requires the permit to be modified if more stringent limitations are developed at the federal level.

Runoff from disturbed areas will be controlled by sedimentation ponds which are designed to completely contain the runoff resulting from a year - 24 hour precipitation event. Because these ponds will not normally discharge, they are not specifically identified in the permit but are covered by operation and maintenance provisions.

Periodic self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The permit is scheduled to expire September 30, 1986.

(8) APPLICANT NAME: Town of Buffalo, Wyoming  
MAILING ADDRESS: P.O. Box 430  
Buffalo, Wyoming 82834  
FACILITY LOCATION: Buffalo wastewater treatment facilities,  
Johnson County, Wyoming  
PERMIT NUMBER: WY-0021021

On June 29, 1981 this Department issued the Town of Buffalo a discharge permit for their existing and planned wastewater treatment facility (scheduled for completion by July 1, 1983). Since issuance of that permit the Town has requested relief from the "85% removal of BOD5" requirement of the permit. The Town indicates that because of the relatively low strength of the Town's raw sewage (122 mg/l), 85% removal will require unnecessary expenditures for high level waste treatment which will not result in measurable in-stream water quality improvement.

This Department agrees that 85% removal of BOD5 is unnecessary in this instance and is not necessary to achieve compliance with Wyoming's In-stream Water Quality Standards. Therefore, it is proposed that the 85% removal requirement for BOD5 be removed from the Town of Buffalo's discharge permit. No other limitations or self-monitoring requirements of the permit issued June 29, 1981 are proposed to be changed.

(9) APPLICANT NAME: City of Evanston, Wyoming - Wastewater  
MAILING ADDRESS: P.O. Box 130  
Evanston, Wyoming 82930  
FACILITY LOCATION: Uinta County, Wyoming  
PERMIT NUMBER: WY-0020095

The wastewater treatment plant serving the City of Evanston, Wyoming, consists of an activated sludge plant which includes a bar screen, grit chamber, aerator, clarifier, and chlorinator. The discharge (point 001) enters the Bear River (Class II Stream).

The proposed permit requires immediate compliance with National Secondary Treatment Standards and effluent limitation based on Wyoming's In-stream Water Quality Standards with the exception of fecal coliform bacteria. The existing disinfection system is inadequate and cannot meet both a fecal coliform limitation and a total residual chlorine limitation of zero.

The City has now completed preliminary planning for a new sewage treatment facility. This plan recommends the construction of a new mechanical treatment plant which will discharge (point 002) to Yellow Creek (Class III Water). Therefore, the proposed permit requires the new plant to be in operation no later than January 1, 1984. Effective upon completion, the effluent from the new plant must meet National Secondary Treatment Standards and effluent limitations based on Wyoming's In-stream Water Quality Standards.

Self-monitoring requirements in the proposed permit require the monitoring of all limited parameters on a routine basis with reporting of results monthly. The proposed permit is scheduled to expire on September 30, 1986.

The City of Evanston has been exempted from meeting Federal effluent requirements by July 1, 1977 since, in accordance with Federal requirements, it specifically requested an extension due to previous unavailability of Federal construction grant funds.

(10) APPLICANT NAME: Town of Pinedale - Wastewater  
MAILING ADDRESS: P.O. Box 674  
Pinedale, Wyoming 82941  
FACILITY LOCATION: Sublette County, Wyoming  
PERMIT NUMBER: WY-0020656

The wastewater treatment facilities serving the town of Pinedale, Wyoming, consist of a single cell non-aerated lagoon of approximately five surface acres and do not include any disinfection equipment. The discharge from the lagoon enters Pine Creek (Class II Stream).

The existing permit for this facility requires only that the existing facilities be operated at maximum efficiency, however, the Town has not been offered Federal construction grant funds which means the wastewater treatment facilities must be upgraded to meet Federal effluent standards and Wyoming's In-stream Water Quality Standards. The proposed permit includes limitations on BOD5, Total Suspended Solids, Fecal Coliform Bacteria, pH and a prohibition against the discharge of Total Residual Chlorine. A schedule of compliance to meet these limitations requires compliance by July 1, 1983.

Because of an extensive infiltration -- flow problem in the Town's collection system, the Town has requested and the State of Wyoming has granted, an exemption to the 85% removal requirement for BOD5.

Self-monitoring requirements in the proposed permit require the monitoring of all limited parameters on a routine basis with reporting of results monthly. The proposed permit is scheduled to expire on September 30, 1986.

The Town of Pinedale has been exempted from meeting Federal effluent requirements by July 1, 1977 since, in accordance with Federal requirements, it specifically requested an extension due to the previous unavailability of Federal construction grant funds. In addition, the Town requested and received a less stringent limitation on total suspended solids. This modification allowed for the method of treatment is stabilization ponds and the design flow is less than 2 MGD.

(11) APPLICANT NAME: The Town of Saratoga - Municipal and Hobo Swimming Pools  
MAILING ADDRESS: P.O. Box 486  
Saratoga, Wyoming 82531  
FACILITY LOCATION: The south side of the Town of Saratoga, Carbon County, Wyoming  
PERMIT NUMBER: WY-0025968

The Town of Saratoga operates two swimming pools which are fed by a natural hot spring which flows approximately 95 gpm. Since issuance of the discharge permit for this facility in March of 1981 it has been learned that the pools are chlorinated and it is therefore necessary to modify the permit to include a chlorine residual limitation and self-monitoring requirements.

The proposed total residual chlorine limitation of .9 mg/l is based on the pool discharge volume of 95 gpm, a 07-10 in the North Platte River (Class I Water) of 957 cfs, and an In-stream Water Quality Standard for total residual chlorine of .002 mg/l.

The proposed permit requires periodic monitoring of effluent quality and quantity monthly with reporting of results quarterly. The permit is scheduled to expire September 30, 1986.

(12) APPLICANT NAME: Great Western Sugar Company  
MAILING ADDRESS: P.O. Box 5308  
Denver, Colorado 80217  
FACILITY LOCATION: Lovell, Big Horn County, Wyoming  
PERMIT NUMBER: WY-0000418

The Great Western Sugar Company operates a beet sugar refining plant at Lovell, Wyoming with an average capacity of 616,000 pounds of sugar per day. Flume washwater and lime wastewaters are routed to complete retention evaporation ponds. Barometric condenser water of approximately 5.0 MGD is routed through a pond prior to discharge to the Shoshone River (Class II Water). The plant may also discharge barometric condenser water through the plant's intake pond. All proposed effluent limitations pertain to the total discharge from both points of discharge.

The proposed permit requires compliance with effluent limitations which are considered by the State of Wyoming to represent "Best Conventional Pollutant Control Technology" (Daily Average BOD5 = 1.3 lbs./1,000 lbs of sugar produced/day, and Daily Maximum, BOD5 = 2.0 lbs./1,000 lbs of sugar produced/day, and temperature of 32°C). More stringent effluent limitations will probably not be necessary to insure compliance with Wyoming's In-stream Water Quality Standards, however, the situation will continue to be evaluated and, if necessary, the permit will be modified. Part monitoring by both the Company and the Department indicated that the plant is currently well within the proposed permit limitations.

Periodic monitoring of effluent quality and quantity is required with reporting of results monthly. The permit is scheduled to expire November 30, 1986.

(13) APPLICANT NAME: Holly Sugar Corporation  
MAILING ADDRESS: P.O. Box 1052  
Colorado Springs, Colorado 80901  
FACILITY LOCATION: Worland, Washakie County, Wyoming  
PERMIT NUMBER: WY-0000183

**OPINION**

# Profiting from parks: None of Watt's business

by Joseph L. Sax

Since the national parks are public places, it is commonly believed that everything in them is owned and operated by the federal government. In fact, virtually every hotel, store, gas station and restaurant in the national parks is a private, profit-making enterprise. Regulation of these businesses is one of the most important and least understood issues in public land management.

At one time concessions (as they are called) in the parks were small-scale, seasonal and local businesses. Lately there has been an influx of big business to park concessions, companies like TWA Services, General Host and the Music Corporation of America, a vast recreational conglomerate which even numbers movie and television companies among its holdings. What these companies see in the parks is a tremendous untapped potential for commercial development, for the national parks are — from a recreation industry perspective — enormously "underutilized."

But national park concessions can't just grow at will like most private enterprises, for they are not ordinary businesses. They are regulated monopolies, just like the telephone company. There is no competition among park concessions: Ordinarily there is one gas station, one store and one hotel. This is no accident. The one-company, regulated-monopoly policy goes all the way back to the first director of the National Park Service, Steve Mather. He initiated the perfectly sensible idea that there should be a minimum of commercial facilities within the national parks, to avoid competition of the sort that elsewhere leads to a filling station on every corner. The Mather policy remains in effect to this day.

As a result, the secretary of the interior has a very special role vis-à-vis concessioners. He decides whether a concession will grow. He is responsible for protecting the park's resources from commercial degradation, and the public from monopoly practices such as runaway prices and bad service. He controls locations, sets prices, determines what constitutes a reasonable profit, and decides whether a given concession shall continue in business, close down or be turned over to another company to operate.

The secretary of the interior's extraordinary regulatory role suggests the propriety of a certain distance and separation between the secretary and the national park concessioners, and that has been the usual relationship. While concessioners have never been as strictly regulated as some observers would like, the relationship between interior secretaries and the concessions industry has customarily — and properly — been one of detachment. It is in light of this traditional "distance" that Secretary Watt's speech last March to national park concessioners caused such a stir of astonishment among those who follow park affairs. While the press gave most of its attention to Watt's colorful comments on his raft trip down the Colorado River ("I don't like to paddle and I don't like to walk"), the real interest of the speech lay in the extravagant way Watt embraced the people he is supposed to be regulating, even to the point of undermining the authority of his own concessions management staff. "If you're having problems," he said to the assembled concessioners, "if a personality is giving you a problem, we're going to get rid of the problem or the personality, whichever is faster." If you can imagine the commissioner of internal revenue making that statement to a group of taxpayers about to be audited, you can appreciate the flavor of Watt's demeanor toward the concessions



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industry.

The secretary's unprecedented expressions of friendliness toward the concessioners have created deep concern about whether Mr. Watt appreciates the delicacy of his role as regulator of legalized monopolies allowed to function in the midst of our publicly owned natural wonderlands; or whether he knows that despite its low public visibility, concessions management is vital to the well-being of the parks — that commercial overdevelopment is often the critical factor in resource overuse and degradation.

The way in which concessions problems are going to arise is subtle and bears special watchfulness. Even the exuberant Secretary Watt is not likely to encourage the construction of high-rise condos in Yosemite Valley or to suggest the abolition of the park service in favor of private enterprise. Watt's entry point is the budget. Certain tasks need to be done, but the park service, he says, lacking funds, can't do them as well as the public deserves. But, he adds, we can meet the problem by letting a concessioner take over, and assuring that he does the job right. Campgrounds are his first test. Some campgrounds are in poor condition and may stay that way for a time under a budget-starved park service. Watt is also emphasizing the poor condition of some existing concession facilities. The public, he notes, is entitled to high quality, well-maintained concession services. And, as secretary, he says he can assure that we have them by encouraging concessions to provide quality services — and giving them the necessary incentives to do so.

Is anything wrong with either of these policies? Not obviously; indeed they both respond to real problems. The danger will arise at the next step, when concessioners demand more profit in return for the responsibilities imposed upon them. Again, there is nothing wrong with concessioners profiting from their operations. But what concessioners want most is the opportunity for additional development — the chance to build more facilities and sell more services. And that is precisely where the critical problem arises, for one of the central tasks of the Interior Department (indeed, its fundamental legal duty) is

to maintain a balance between preserving park resources and providing visitors with needed commercial services. If one focusses only on improving the quality of facilities for visitors, on the "reasonable" business demands of concessioners for a profit, and on the willingness of visitors to pay for those services, there is likely to be a real development boom in the parks. So far that seems to be the sole focus of Watt's concerns. The campground issue is illustrative.

Obviously one could make life easier for the financially pressed park service by turning park campgrounds over to private concessioners — something that has not been done in the past. Why not? The explanation may be that plain, unadorned campgrounds of the type characteristic of national parks are not likely to be very profitable places for private enterprises. There is simply not much to sell in an ordinary park campground. But, of course, campgrounds can be developed elaborately, as we see in many privately run facilities. And the more they are developed, the more there is to sell, and the more profit there is to be made. The commercial imperative is to develop, to find new markets and exploit them. Indeed, in a campground, it may be essential to have substantial development in order to make a profit.

The direction Watt is taking in concessions management — as illustrated by the campground "test case" he has proposed — is not only a radical departure from national park tradition; it is a venture onto extremely thin legal ice.

Under a statute known as the Concessions Policy Act of 1965, Congress has imposed strict legal limits on the interior secretary. In that law, Congress recognized the existence of a fundamental and permanent tension between the desires of concessioners and the responsibilities of the Interior Department in managing the parks. As entrepreneurs, concessioners are always interested in the growth and development of their businesses; the more services and facilities they can provide, the more they prosper. That is the very essence of entrepreneurship — to develop market possibilities to their maximum. The Concessions Policy Act

recognized, conversely, that it is of the very essence of national parks that they not be places developed to the maximum of their business potential. Indeed it is precisely what we refrain from doing by way of commercial exploitation that gives a place its identity as a national park — a place where we don't cut trees, mine coal, or build apartments and shopping malls.

At the same time, as Congress made clear, the national parks are supposed to accommodate visitors and therefore it is important to have some commercial facilities in them. Congress agreed that "parks are for people," but it never meant by that principle to permit any activity that could turn a profit. Quite to the contrary, Congress has decreed that only the minimum commercial activities "necessary" to accommodate visitors, and only those which are "appropriate" for the special reasons people come to the parks may be allowed. The fundamental idea mandated in the Concessions Policy Act is "minimum response to demonstrated need." This is the centerpiece of congressional policy on concessions.

Under this policy, for example, a large park like Yellowstone would be said to "need" some hotel rooms and gas stations if overnight visitors are to be accommodated. But it does not "need" elegant little shops, though such facilities might well turn a profit and appeal to some visitors if they were allowed. Similarly, it is "appropriate" to have a mule concession in Grand Canyon: People come there to experience the canyon. But it is not appropriate to have race tracks, hockey rinks or tennis courts in the national parks.

Standing in isolation, the words of the law — "necessary" and "appropriate" — may seem very flexible. Who can say exactly what is necessary or appropriate? But, despite some notable lapses from time to time, the general tenor of the statute has been very well understood up to now both in the Congress and in the Interior Department. The test of Secretary Watt will be how he interprets the "necessary" and "appropriate" requirements of the law. Like his predecessors, he will receive continual requests to permit additional development by concessioners who see the "underutilization" of the parks. Unlike his predecessors, however, he is generating some of those pressures by his own statements ("We are going to ask you to be involved in areas that you haven't been allowed to be involved in before"). And unlike his predecessors he seems not to realize that if he accommodates the ordinary demands of entrepreneurs in commercial markets, he will not be doing his job or fulfilling his legal duty — for the Concessions Policy Act makes clear that most ordinary business activities must be prohibited in the national parks.

In the past, minimization of concessioner presence in the national parks has been viewed as the course of prudence as well as legality. If there are no private campgrounds, for example, there are less opportunities and pressures for illegal development. Mr. Watt, unwisely, has taken just the opposite tack by embracing and encouraging concessioner aggressiveness. If he is going down that route in ignorance, there is still time to change paths. If he realizes what he is doing, and he plans to trash the Concessions Policy Act, he had better gird for a major legal confrontation.

Joseph L. Sax is a professor of law at the University of Michigan, and is the author of *Mountains without Handrails: Reflections on the National Parks* (Ann Arbor, University of Michigan Press, 1980).

**OPINION**

# Thoughts on rosaries, the MX, the environment and Armageddon

One day in the 1950s, Soviet Premier Nikita Krushchev stood at the podium in the United Nations in New York, removed his shoe and pounded on the dais. He told the people of the United States, "We will bury you."

A few days later, as the general fear of a widespread nuclear war escalated, a radio station in Baltimore featured the praying of a rosary over the air. They were seeking the intervention of an apparently indifferent Almighty to prevent the launching of the missiles and bombs.

Maybe it worked. No warheads were exchanged and the two rival countries settled down again to their uneasy peace.

Rosaries have pretty much gone out of style, but missiles have not. President Ronald Reagan has recommended the basing of 100 new MX missiles — each equipped with 10 nuclear warheads — in existing silos. The MX is slated for Kansas, Arkansas, Nebraska, Colorado, Missouri, Wyoming, Montana, Arizona and North and South Dakota.

It is a perverse twist that Reagan's siting decision for the most deadly weapons known represents a victory for the environment. The states of Utah and Nevada will be spared the construction of former President Jimmy Carter's "racetrack" scheme. Under that proposal, the military would have built 4,600 shelters with highways connecting them to shuttle 200 missiles back and forth, theoretically keeping the Soviets in the dark about their exact location.

In retrospect, the racetrack concept seems so grandiose and costly that it is hard to believe anybody took it seriously. The environmental problems with such a massive system are obvious. Millions of acres of land would be torn up. Water resources would be drained. Air quality would deteriorate. Thousands of people would be moved into areas that are currently sparsely populated to build and run the system.

But despite these impacts, the MX is not really an "environmental issue" in most senses of the term. It is one issue that addresses even more fundamental matters: world peace and the very survival of the planet, not just the Great Basin. The environment has been served — unless, of course, there is a nuclear war.

Matters of the national defense are not to be taken lightly. Scarcely anyone wants to be blown to smithereens by the Russians. The current "window of vulnerability" theory says that sometime in the mid-1980s the United States will fall far enough behind the Soviets in defense preparations that the latter could launch a successful, pre-emptive first strike on our land-based missiles. The MX

was essentially an attempt to protect our land-based missile system. Carter chose the figure of 4,600 shelters because that was the number of missiles the Soviets would be allowed under terms discussed in the strategic arms limitation talks. The Russians would have to launch all of their missiles to be certain of destroying all of the MX warheads. Critics of Reagan's plan point out that now the enemy need only knock out 100 silos. Reasoning by which 4,600 nuclear explosions are somehow better than 100 is one of the intellectual peculiarities of the age of nuclear war.

However, Reagan has scrapped the second strategic arms limitation treaty — SALT II. So, he argues, given the level of attainable nuclear capacity the Soviets can reach, no land-based system can ever be perfectly safe. *The New York Times*' Tom Wicker agrees: "Without some...negotiated and verifiable limitation on the other side's weaponry, no land-based missile is likely ever to be absolutely invulnerable."

There are other reasons why the MX is a questionable weapons system. The United States has substantial air- and sea-based weapons systems, which are far more difficult than any land-based one for an enemy to target and destroy. In addition, several defense experts argue that the MX missile will be obsolete by the time it rolls off the assembly lines.

But most disturbing is the administration's overall approach to insuring world peace. It is a throwback to the bluff and bluster of the 1950s, the same attitude that had Krushchev pounding his shoe at the U.N. Whatever the faults or virtues of the SALT II treaty, it would seem to be in everyone's best interest to engage in serious, immediate negotiations to limit the arms race. Reagan has shown little interest in this.

Instead, he is sending a clear message to the Russians: "We can build them bigger and faster than you can." In our own unmistakable language of military hardware, we are telling the Russians that we are going to bury them. The logical, and seemingly inevitable, response from them is to resort to a bigger and better arms race.

So, Utah and Nevada rangelands have been spared massive environmental degradation by President Reagan's MX basing decision, and for that we can only be grateful. Me, I think, I'm going to dust off my rosary.

— DSW

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# LETTERS

## PATHETIQUE

Dear HCN,

While some of Tchaikovsky's symphonies have titles, none to my knowledge is programmatic, and not even the *Pathétique* keeps someone named Peter hanging from a tree. Surely the allusion at the beginning of Jim Robbins' otherwise fine article is to Prokofiev's musical fable, *Peter and the Wolf*.

Bruce Berger  
Aspen, Colorado

Dear HCN,

The symphony "Peter and the Wolf" was written by Prokofiev, not Tchaikovsky ("Crying Wolf," HCN, 9/18/81). I'm surprised your editor didn't catch it.

Dan Whipple  
Lander, Wyoming

(Ed. note: The mistake was made by Associate Editor Dan Whipple.)

## SPEAK MY LANGUAGE

Dear HCN,

The "special" on wildlife really was special, particularly "Crying wolf. . .," "Memoirs of a gopher choker" and "Loon-acy. . ." (HCN, 9/18/81).

But the piece that stirred my sluggish brain cells is "Afield," by Don Snow. I read twice through with care, trying to get in tune. Could Mr. Snow please explain why respected and admirable gorgeous trout are "given to chasing whores?" This statement is beyond my comprehension.

Why is Mr. Snow's father a "low vicious person" or "an awkward fellow" or "a bumpkin?"

When you publish this type of essay I would like an accompanying glossary that includes, for example, "Lethes of Lost Trout," "toot the glass horn," "planters," "grass medians" and "Stuckeys."

Snow isn't speaking my language. Probably persons in his own age group understand perfectly. Personally, I prefer standard English and would prefer that my beloved HCN omit vulgarities, although a judicious standard slang can be very effective. After studying Snow's article I don't feel communicated with and I wonder if he has reached "the spirit of his (yaho) father." Presumably, his father is in the

same age group that I am; at most, a generation behind.

Dick Randall, by contrast, explains clearly at the outset just what a gopher choker is. I can identify with the author all the way through his thoughtful, humorous, informative article. On the other hand, I feel that Snow could have left his betrothed out as she had no relationship to the point, if any, that he was trying to make. I couldn't care less for his betrothed, or whether she "kicks his ass," even though he probably deserves it.

Myra Connell  
Lander, Wyoming

## "A CHICAGO EVERY DECADE"

Dear HCN,

In "New Talk of Spurning Immigrants" (HCN, 7/24/81), Dan Whipple makes an impassioned plea against any reduction in the current level of immigration. He implies that others have a right to share in the blessings of a country that welcomed our own immigrant forefathers with open arms. If the world's population were no greater now than it was in 1800, I could readily agree with Whipple. But now 500,000,000 people go hungry every day; and to open our doors to even a fifth of them would be no boon to them, since their arrival would lead to such fierce competition for already scarce resources that most of the poor newcomers might be no better off than they are now, and the country might be devastated.

Our current legal immigration quota of 400,000 a year is clearly inequitable and ungenerous in terms of the numbers who would actually immigrate if given a ticket and allowed to cross the border, and most of those 400,000 are affluent by world standards before they leave their native countries. Yet 400,000 a year adds up to a new Chicago every decade. With arable land being gobbled up by burgeoning cities, with scarce resources vanishing at an alarming rate, is it any favor to anybody to encourage American's industrialized society to add another Chicago every ten years?

In addition, our current immigration policy says to the world that we still don't believe all the alarms about limits to growth. Instead of looking at the population problem entirely from an American perspective, we would be wise to look beyond our borders. In a recent *New Yorker* article about India, Ved Mehta writes: "Perhaps India's greatest

calamity is the growth of the population, with the consequent disruption of the natural cycle — the disappearance of trees and forests, the erosion of topsoil, the pollution of rivers — which means more droughts, more floods, less food to eat, less oxygen to breathe."

I don't agree with Garrett Hardin's view that we should turn our backs on the world's starving millions. We should help them all we can. But it's not helping them to let their best educated and most highly skilled workers emigrate to this country. We would truly be helping them — and ourselves into the bargain — by urging that humanity achieve population equilibrium and by setting a good example with a no-growth population policy, with a genuine effort to conserve resources and protect the environment, and with an end to all immigration in excess of emigration.

Jim Maguire  
Boise, Idaho

## THE HARD ONES

Dear HCN,

I was glad to see your OPINION (HCN 9/18/81) regarding the numerous oil and gas leasing and development issues facing our existing wilderness system and proposed additions. The issue of leasing the public's land, wilderness or not, in the magnitude that has occurred in the last decade and will continue, is remarkably important. In Utah, for example, it can be summed up best by noting what isn't leased for oil and gas is leased for coal, geothermal resources or oil shale. This doesn't even address the 250,000-plus hardrock mining claims on our public lands here in Utah.

The point is, I hope HCN readers will take seriously your challenge to "learn about and speak for . . . the hard ones." Speak feverishly, in fact. While HCN reports on and conservationists and wildlife groups battle to preserve the Rocky Mountain Front, the Gros Ventre, the Washakie or Bob Marshall, the real "hard ones" go unnoticed. In northeastern Utah there rests the Mt. Naomi Further Planning Area, a spectacular 50,000-acre mountainous region, which is either under oil and gas leases or pending leases, awaiting only an environmental assessment, not an environmental impact statement, to review the leasing decisions.

Some 300 miles to the southwest sit the Pine Valley Mountains. RARE II recommended wilderness. It is also either under lease or pending lease applications. It also awaits only a Forest Service environmental assessment to

discuss the leasing decisions.

And remarkably enough, the High Uintas wilderness recommendation (RARE II recommendation and Primitive Area) has already gone through an environmental analysis. This draft analysis proposed blanket leasing the wilderness recommendation along the North Slope of the Uintas. Public concern was significant enough to initiate changes in the proposal — special credit should be given to Wasatch National Forest. The decisions could be made final around November 1, 1981 in only an environmental assessment. It is likely this decision will be made long before the Washakie, for example, and without an EIS.

We anticipate the environmental assessment will be positive and resolve significant resource conflicts by recommending large tracts of land for no leasing. Clearly, the lack of consistency by the Forest Service in processing leasing in wilderness and proposed wilderness (environmental assessment vs. environmental impact statements) and the magnitude of the issue needs careful attention by both the federal agencies and the public. It is very possible to wake one morning and see the western landscape "locked up" in de facto ownership by oil and gas, and other leases.

Dick Carter  
Utah Wilderness Association  
Salt Lake City

## MA BELL

Dear HCN,

Your short article on "Ma Bell routs rural box routes" (HCN, 9/4/81), strikes home. What happens where rural people have no rural delivery?

We have a rural street address but no mail delivery—still have to go 12 miles into Aspen to a number there for our mail. Ma Bell has created the American habit of looking in the phone book for a mailing address. Consequently much of our mail is addressed 11247 Castle Creek Road. But the Aspen post office has no such address and so our mail is returned to sender.

We have asked Ma Bell about the problem which is of their own making. Their reply is, "We can't be responsible for a post office problem." And so we in Pitkin County are caught with Ma Bell's responsibility for our not receiving much of our mail. Ask Mr. Edwards how the post office can find this "handy for mail delivery."

Isabel Mace  
Aspen, Colorado

(continued from page 12)

PERMIT NUMBER:	Wy-0023230
FACILITY LOCATION:	Fourbar Unit, Battery #1, SE¼, Section 20, T48N, R105, Park County, Wyoming
PERMIT NUMBER:	Wy-0023248
FACILITY LOCATION:	Fourbar Middle Dome Battery, SW¼, Section 3, T47N, R105W, Park County, Wyoming
PERMIT NUMBER:	Wy-0025038
FACILITY LOCATION:	Little Buffalo Basin, Tensleep Battery #1, NE¼, Section 12, T47N, R100W, Park County, Wyoming
PERMIT NUMBER:	Wy-0025348
FACILITY LOCATION:	Little Buffalo Basin, Tensleep Battery #2, SE¼, Section 12, T47N, R100W, Park County, Wyoming
PERMIT NUMBER:	Wy-0025356
FACILITY LOCATION:	Little Buffalo Basin, Embur Battery #1, NW¼, Section 12, T47W, R100W, Park County, Wyoming
PERMIT NUMBER:	Wy-0025364
FACILITY LOCATION:	Little Buffalo Basin, Wenco Station, NE¼, Section 12, T47N, R100W, Park County, Wyoming
PERMIT NUMBER:	Wy-0025372

Facilities are typical of tractors located in Hot Springs and Park Counties, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The discharges are to Buffalo Creek (Class IV Water), Greybull River (Class II Water) and Paradise Creek (Class II Water).

The discharges must meet Wyoming's Produced Water Criteria effective immediately, Chapter XII of the Wyoming Water Quality Rules and Regulations insofar that as long as the Produced Water Criteria is met, the water is suitable for beneficial use. There is no evidence to indicate that limitations more stringent than the Produced Water Criteria are needed to meet Wyoming's Water Quality Standards. The Department will continue to evaluate the 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 monitored quarterly. The proposed expiration date for the permits is December 31, 1986.

(19) APPLICANT NAME:	Town of Kemmerer, Wyoming Water Treatment Plant
MAILING ADDRESS:	P.O. Box 287 Kemmerer, Wyoming 83101
FACILITY LOCATION:	Lincoln County, Wyoming
PERMIT NUMBER:	Wy-0000116

The Town of Kemmerer operates a typical water treatment plant with the purpose of clarifying and disinfecting raw surface water for use as potable water. The process consists of lime softening and alum flocculation with sand filters. Filter backwash and sludges are routed to a single cell pond for settling prior to discharge to the Hams Fork River (Class II Stream).

Proposed permit requires compliance with effluent limitations which are considered by the State of Wyoming to represent best available treatment effective immediately. A quarterly self-monitoring and reporting schedule is proposed and the permit will expire December 31, 1986.

(20) APPLICANT NAME:	Town of LaBarge, Wyoming - Wastewater
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MAILING ADDRESS:	P.O. Box 302 LaBarge, Wyoming 83123
FACILITY LOCATION:	Lincoln County, Wyoming
PERMIT NUMBER:	Wy-0022080

The wastewater treatment facilities serving the Town of LaBarge, Wyoming consist of a 2 cell aerated lagoon followed by a single cell non-aerated lagoon and a chlorinator. The facility discharges to the Green River (Class II Water) via an unnamed ditch which flows approximately 200 yards before reaching the river.

The proposed permit requires immediate compliance with effluent limitations based upon National Secondary Treatment Standards and Wyoming's In-stream Water Quality Standards. Periodic self-monitoring of effluent quality and quantity is required with reporting of results monthly. The proposed permit is scheduled to expire November 30, 1986.

(21) APPLICANT NAME:	Town of Thermopolis, Wastewater Treatment Plant
MAILING ADDRESS:	P.O. Box 665 Thermopolis, Wyoming 82443
FACILITY LOCATION:	Hot Springs County, Wyoming
PERMIT NUMBER:	Wy-0020192

The wastewater treatment system serving the Town of Thermopolis is a rotating biological disc system with an anaerobic digester and chlorination. The plant discharges to the Big Horn River (Class II Water).

The proposed permit requires immediate compliance with National Secondary Treatment Standards and effluent limitations based upon Wyoming's In-stream Water Quality Standards.

Because of the high dilution factor in the receiving stream the level of ammonia which could be discharged is considerably higher than the normal ammonia concentration of raw sewage, thus no ammonia limitations are included in the proposed permit. At this time it appears that violation of Wyoming's In-stream Standards for dissolved oxygen will not occur provided National Secondary Treatment Standards are achieved. However, this position will continue to be evaluated (and the permit modified if necessary) as more information becomes available.

The proposed limitations on fecal coliform bacteria are actually more stringent than necessary to meet in-stream standards, however, they are limitations which are technologically easy to achieve considering the relatively high total residual chlorine limitation.

Self-monitoring requirements in the proposed permit require the monitoring of all limited parameters on a routine basis with reporting of results monthly. The proposed permit is scheduled to expire on December 31, 1986.

(22) APPLICANT NAME:	Wyoming State Board of Charities and Reform
MAILING ADDRESS:	Wyoming Soldiers and Sailors Home RFD #1 Buffalo, Wyoming 82834
FACILITY LOCATION:	Johnson County, Wyoming
PERMIT NUMBER:	Wy-0022268

The Wyoming State Board of Charities and Reform operates the Wyoming Soldiers and Sailors Home which is located approximately two miles west of the Town of Buffalo, Wyoming. Wastewater treatment at the Home consists of an extended aeration package plant and chlorination. The discharge flows in a small ditch for approximately ¼ mile before entering Clear Creek (Class II - Primary Contact Water).

The proposed permit requires compliance with effluent limitations based on National Secondary Treatment Standards and Wyoming's In-stream Water Quality Standards.

The proposed permit requires immediate compliance with effluent limitations. Periodic self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The proposed permit is scheduled to expire December 31, 1986, however, it is expected that the Home will connect to the Town of Buffalo's Sanitary Sewage Collection System prior to that time.

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16-High Country News — Oct. 16, 1981

# Maremma, Komondor, Kuvasz...and sheep

by Araby Colton

Guarding dogs, the centuries-old predator control of the Old World, from the Pyrenees to the Russian Caucasus, are being introduced to the United States.

The guarding dog's ancestry is mysterious. He may have come west with the Mongols from central Asia; he may be descended from the Roman Empire's mastiff war dog.

He bears exotic names, like Maremma, Shar Planinetz, Komondor, Kuvasz, Karabash and Great Pyrenees. He has been protecting sheep and goats from predators and thieves for thousands of years; he is indispensable to the European sheep industry.

Unlike herding dogs, which are lively and responsive to the shepherd's commands — on which they depend — guarding dogs are passive, placid, and work without supervision. Raised from infancy with sheep, often suckled on a ewe, the mature guarding dog has an unbreakable bond with his sheep. They are his family.

He is big, up to 36 inches at the shoulder, weighing up to 150 pounds. His heavy coat, sometimes impenetrable, protects him from heat, cold and predatorial teeth.

How does a large, slow dog guard sheep? His mere presence, in most cases, does the job. Lorna Coppinger, a biologist at Hampshire College, Amherst, Mass., said, "Much of the time we cannot tell directly how effective the guardians are because when they are with the sheep nothing happens."

However, if defense of the sheep is called for, the placid dog becomes a ferocious fighter. Dispensing with ritual signs or threats, the dog moves quickly and seizes the predator by the back. The intruder is killed, or at least given a vicious shaking. Since coyotes and other wild predators cannot risk wounds or broken bones — they must be able to hunt to survive — it is a rare predator who will face up to a guarding dog.

Whether these dogs will really help the American sheep-raiser in his struggle with killer dog packs, marauding coyotes or the Minnesota wolf remains a subject for debate. Most stockgrowers, for whom every killed sheep is cash out-of-pocket, say "no."

But at least three groups of researchers who have been studying the dogs for several years say "yes," with qualifications.

Samuel Linhart, wildlife biologist with the U.S. Fish and Wildlife Service, Denver Research Center, conducted a study of four Komondor dogs, from initial obedience training through performance on sheep ranches in Montana and North Dakota.

The study found conclusively that sheep losses to coyotes were significantly less while the dogs were working



then immediately after.

Jeffrey S. Green, U.S. Department of Agriculture, Science and Education Administration and Wildlife Scientific Aid, is researching, at the U.S. Sheep Experimental Station, Dubois, Idaho, the feasibility of using guarding dogs to protect bands of range sheep. On the basis of a questionnaire mailed by Green and his staff to over 120 people using guarding dogs, it was found that the majority of the respondents rated the performance of their dogs as good to excellent.

Only years of evaluation will provide specific details of the overall effectiveness of guarding dogs, said Green. "However, the fact cannot be ignored that dogs across the country are effectively protecting sheep and reducing losses...there are dogs that currently are, literally, keeping people in the livestock business."

Lorna and Raymond Coppinger run the Livestock Dog Project at Hampshire's New England Farm Center. Twenty-year

researchers into the behavior and physiology of dogs, the Coppingers have been breeding, training and studying the European livestock guarding dogs since 1976. Based on reports on the performance of the 150 guarding dogs they have leased to cooperating farmers, the Coppingers concluded, "From both historical and biological points of view, guarding dogs hold the promise of an environmentally sound, cheap way of reducing predation on livestock."

However, despite the generally good reports on the guarding work of these dogs in the U.S., all the experts cited agree that success with them demands a complex and subtle meshing of several factors.

They should be raised, from a very early age, on the place they will be working, with the sheep they will be protecting. Because they mature slowly, they demand patience from the handler, affectionate praise for correct behavior and no abuse.

Their deep bond with their sheep,

their shepherd and their ranch cannot be broken arbitrarily or they may not work out.

The prospective buyer should choose the breed whose temperament he is comfortable with, and which is suited to his operation. For instance, the Great Pyrenees is considered less aggressive to strangers than the Komondor.

Because the price of these dogs is high, and the period of maturation and training may extend to two or three years, the owner must wait patiently for the dog to begin to give a financial return.

Certainly, the European guarding dog is no panacea, nor is he a robot. He is simply an enormously trained performer who demands respect and understanding. He is environmentally beneficial, requires no new technology and no large capital investment.

Araby Colton is a California-based freelance writer specializing in wildlife and environmental issues.

(continued from page 15)

(23)	APPLICANT NAME:	Wyoming State Board of Charities and Reform
	MAILING ADDRESS:	Wyoming State Training School Lander, Wyoming 82520
	FACILITY LOCATION:	Fremont County, Wyoming
	PERMIT NUMBER:	Wy-0021466

The Wyoming Board of Charities and Reform operates the Wyoming State Training School which is located on the north-east side of the City of Lander. Wyoming wastewater treatment consists of a single cell lagoon of approximately three surface acres which discharges to Chittim Gulch (Class IV Water).

The proposed permit requires that the existing facility be operated at maximum efficiency until completion of the new City of Lander treatment plant (expected in 1983) at which time the School will connect to the city's sewage collection system and will abandon their own system.

Periodic self-monitoring of effluent quality and quantity is required with reporting of results quarterly. The proposed permit is scheduled to expire December 31, 1986.

#### STATE/EPA TENTATIVE DETERMINATIONS

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

#### PUBLIC COMMENTS

Public comments are invited any time prior to November 16, 1981. Comments may be directed to Wyoming Department of Environmental Quality, Water Quality Division, Permits Section, Hathaway Building, Cheyenne, Wyoming 82002, or the U.S. Environmental Protection Agency, Region VIII, Enforcement Division, Permits Administration and Compliance Branch, 1860 Lincoln Street, Denver, Colorado 80295. All comments received prior to November 16, 1981 will be considered in the formulation of final determinations to be imposed on the permits.

#### ADDITIONAL INFORMATION

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

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

Public Notice No. Wy-91-011

## Announcing...

### October 30

High Country News explores the region's largest state with a special look at Montana, from the rugged Missouri Breaks country of the Charles M. Russell Refuge to the faded glory of Marcus Daly's city of Butte. The words of the late Clancy Gordon and K. Ross Toole, and comment by Gov. Ted Schwinden.

### November 13

Our staff tries to read the tea leaves of the U.S. Census Bureau's 1980 count; then tally up the trees in the Rockies' forests which have succumbed to pine bark beetles. Finally, a chat with some former secretaries of interior about the state of federal lands today.

