High Country News 75¢

Vol. 12 No. 7 Lander, Wyoming Friday, April 4, 1980

Photo by Stan Rasmussen, Water and Power Resources Service

UTAH'S WASATCH MOUNTAINS stand between the haze-covered Bonneville Basin on the right and the Green River's east-flowing tributaries.

Debate roils over Utah's troubled waters

by Michael Moss

SALT LAKE CITY — To the east of this city, on the other side of the High Uintas, the Green River enters Utah for a brief run through Flaming Gorge, dips into Colorado, and swings back through eastern Utah until it joins the Colorado River in the canyonlands.

The Green and its tributaries in Utah are part of the Colorado River Basin's collective water base that was tallied and divvied up a quarter of a century ago.

Utah has an allocated share of that supply, but has yet to tap much of it before it leaves the state for the Southwest. The reason as some see it is that the water is where the people aren't.

The people are some 100 miles west, over the mountains, in the Bonneville Basin, which contains Salt Lake City and 80 percent of the state's population.

Driven by a combination of industrial development and one of the highest population growth rates in the country, the Bonneville Basin is headlong into a mighty rush for the American Dream.

The key to sustaining that development is water. And water here is spelled C.U.P. — the mammoth, controversial Central Utah Project.

Only one-fifth completed, the CUP has a flock of proponents and a handful of critics who disagree on most points except one — resolving the issue, to build or not to build the CUP, could well be a turning point for Salt Lake's boom.

MOVING THE WATER

As early as 1900, persons of vision dreamed of bringing the Green's east-flowing headwaters — the Strawberry and Duchesne rivers — west to the Bonneville Basin.

That vision burned in the minds of the parched Mormon settlers until it formed, in 1913, the Strawberry Valley Project. That reservoir led to other schemes until the CUP was formally proposed by the U.S. Bureau of Reclamation in 1956.

An engineer's delight, and a cartographer's challenge, the CUP is an en-

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In the News

Opinion

Sampling bland GOP fare: Is this a taste of the 80s?

It is a little early to critique our election year meal, though many commentators have already begun licking their plates. For some of us, the skimpy bill of fare may still lie cold and untouched on the plate next November.

Still, it seems worthwhile to comment on some of what has been set before us, particularly by the Republican Party, which had a lot of enthusiastic chefs in the kitchen a few months ago. It is an opportune year for Republicans, everyone says, and for a while the campaign promised to be lively.

But Republicans have not had much new to say about energy and the environment, two areas that, besides being **HCN**'s bailiwick, are now integral and important in resolving our economic and foreign affairs problems. The Republican frontrunners offer the usual bland nostrums: speed energy development, cut regulation. Just like Jimmy Carter.

The exception has been John Anderson, the Illinois congressman-candidate, who caught our attention by advocating a 50-cents-per-gallon gasoline tax. It was a tart and eye-opening tidbit. If Anderson figured right, people were more willing than most politicians realized to make sacrifices and innovative adjustments.

Anderson is fading now, though he may have collected enough delegates to cut an important, if unpopular, figure at the Republican convention. He has many more friends in the media than in his own party: Reporters made much of the way he backed the grain embargo in cornfed Iowa, pushed gun control before hunting groups, and supported abortion rights in conservative New Hampshire.

But while we enjoyed the tough medicine of his proposed gasoline tax, Anderson has many unremarked flaws as a candidate. He is an outright advocate of nuclear power, who fantasizes, Jerry Brown-style, a trouble-free fusion-powered future. He backed the Energy Mobilization Board and federal funding for synthetic fuels through guaranteed markets — two pieces of legislation which may soon have a tremendous negative impact on the West.

In other areas — on social issues, taxes, and national defense — he has taken positions specific enough for most of us to find fault. And his flirtation with a third-party candidacy — especially when Republican daggers are out — shows a bent toward political suicide.

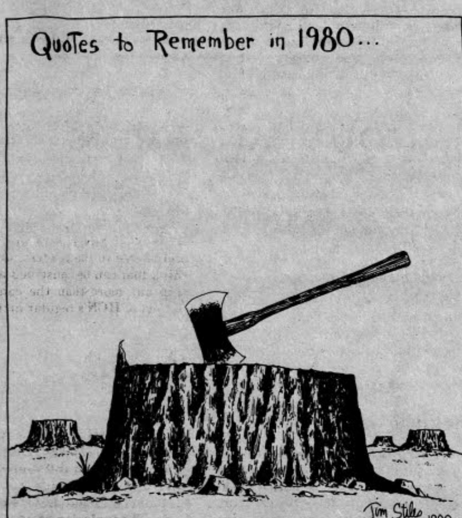
But party regulars who fault the Andersons of the world for failing to embrace a supposedly invigorated Republican ideology lose much of their credibility when they serve up Ronald Reagan. An aging actor who has been giving the same simplistic set-speech for six years is not a convincing embodiment of depth, imagination or boldness.

And kingmakers in the Grand Old Party have failed to ask the obvious question about the Anderson campaign: Why, mouthing unpopular stands on gun control, abortion, fair housing, the draft and other issues, is this fellow winning so many votes in Republican primaries, and not just from crossovers?

Our guess is that the American public is responding, however subliminally, to the troublesome issue of energy in 1980. The one candidate who stopped trying to please everybody and invited voters to sit down to a bitter meal of reduced energy consumption has gained a surprising following among Republicans, and, as his foes will tell you, Democrats and Independents.

Those with fantasies of the Republican '80s might give this development some thought.

— GOG



"... seen one redwood, you've seen 'em all."
— Ronald Reagan

VERY DISTURBED

Dear HCN,

I am very disturbed by letters appearing in **High Country News** from leaders of environmental organizations of Nevada.

I do not feel well enough informed on the situation in Nevada or elsewhere in the Southwest to comment on range, ranching and environmental matters there. For similar reasons I think it inappropriate that those who are not thoroughly familiar with the situation in Montana and Wyoming criticize the efforts being made here.

We are, I believe, making major strides forward jointly with the ranching community in protecting environmental values from myriads of threats from would-be developers. To have this attacked by presumed friends is unfortunate or worse. Past or occasional abuses are being corrected here, and ranching continues to be an environmentally desirable land use.

Francis J. Walcott
Absarokee, Mont.

EMOTIONAL FRENZY FUNNIES

Dear HCN,

A **"slap"** came today in the **HCN** Book Review section concerning **Desert Images.** Peter Wild spoke out with such ferocity against two people (Ed Abbey and David Muench)...who really do love and respect desert land and have devoted a lifetime of work towards it. I do believe in freedom of the press but not in distortion of the stories and issues.

I have been awakened to the fact that if your writers are given an OK to proceed with such emotional frenzy funnies, creating wider gaps, in any hope to save what's left of the environment, I don't need to read **HCN.**

Bonnie Muench
Santa Barbara, Calif.

WIDENING RIFT

Dear **HCN,**

So long, Marjane (Ambler, **HCN's** recently departed managing editor), and good luck; we readers will miss you, too. Your most urgent point as I saw it was the widening rift between livestock (mostly) and conservation interests. I was part of one conservation outfit that tried closer, friendlier collaboration in the late '40s. Sorry, it got nowhere.

But please don't blame the Bureau of Land Management for all undesirable recent and current events. Its clients called most of the shots from 1934 until 1964 and seem to be calling a lot of them now, with help from longtime allies.

The Grand Canyon Burros (**HCN** 2-22-80) are one small but comparatively visible aspect of a broader problem. I doubt if anybody wants all the wild free-roaming horses and burros killed off, but neither can we let them take over forage consumption to the point that it is detrimental either to traditional wildlife needs or justified numbers of domestic animals. Seems hard to find sanity at either end of the line.

William Voigt, Jr.
Blackshear, Ga.

OVERTHRUST NO BUST

Dear **HCN,**

I support your efforts, but there are a few criticisms I can make, from the standpoint of having spent nearly all my working career within the energy industry or some aspect of it, and as a registered professional engineer and Colorado School of Mines graduate in petroleum refining engineering.

When you describe a hypothetical oil field in the manner you used in your Overthrust Belt article (**HCN** 3-21-80, p. 10), it makes a strong implication that the whole area of the Overthrust Belt will have only a very small impact on domestic supplies of oil and gas.

This is absolutely not the case, as you yourself stated earlier in the article when you included the Forest Service's figures indicating a potential for the area estimated to be greater than Alaska's Prudhoe Bay fields. You also included the comment that the area is in the "infant stages of development." Experience of the oil industry has shown that such estimates are more often lower than not as to the actual quantity of hydrocarbons eventually discovered.

It will be a long time before the reserves are fully developed, and if the pattern of the industry is repeated, the chances are that in another five to ten years, it is not too optimistic to expect that the Overthrust Belt can sustain a production of more than 1.5 million barrels of oil per day and upwards of 2 billion cubic feet per day of natural gas. By "sustain," I mean 15 to 20 years, which is comparable to predictions for the life of the presently discovered Prudhoe Bay fields. That certainly doesn't bear any resemblance to your remarks about a single large field providing 6½ days of oil and 26 days of gas supply at our current rate of consumption. I hope you get the point.

John F. Austin
Control Products Group Inc.
Denver, Colo.

MAD ABOUT AD

Dear HCN,

Seeing an ad for ETSI in HCN caused a double take; but the complexity of the problem, including the nation's real need for energy and the entire spectrum of society and the environment give cause for thought by concerned individuals.

But — ? STYLEHOMES? I had to look twice to be sure I wasn't reading the **Riverton Ranger** or the **Casper Star.** Their very business concept is symptomatic of America's "build it faster, cheaper, and then throw it away," philosophy.

Editorial discretion should also include what advertisers are accepted and offered to the readers, and I don't think that can be construed as censorship any more than the content and context of HCN's regular articles.

John Minnerath
Crowheart, Wyo.

(Ed. note: HCN's policy as of last year is to accept ads from anyone willing to pay for the space. We ask only that the message not contain factual errors and that it be in good taste. The inclusion of an ad on our pages, therefore, does not imply an endorsement of the advertiser's product.)

High Country News

The independent natural resources biweekly of the Rockies

Published biweekly at 331 Main, Lander, Wyo. 82520. Telephone 307-332-4877. Second class postage paid at Lander. (USPS No. 087480) All rights to publication of articles herein are reserved.

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Single copies 75 cents.

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Dear Friends,

Bern Prideaux

At home one day in 1974 then-news editor Bruce Hamilton set down his pen, climbed into the attic and peered around. Just as he'd feared. No insulation. He squirmed as he tried to finish a series about the energy conservation virtues of packing walls and ceilings with the stuff.

Despite Bruce's discomfort, the paper came out on Friday as usual. Just as routinely the landlord, Bern Prideaux, stopped by to pick up a fresh copy. Bruce mentioned his trip to the attic and his article.

That was Friday. Monday after work the blast of a horn broke Bruce's country silence. It was Prideaux in a yellow construction cap emerging from his Blazer with a three-foot-thick roll of pink fiberglass fluff. He said he had read the article.

"I'll cut. You crawl up there and lay this stuff out," he ordered.

Prideaux was like that. He was one of **HCN's** most responsive readers. He was also demanding, impulsive and imperious — and as full of mirth and curiosity as a 12-year-old boy.

We shared with him a strong love of the out-of-doors. He showed Bruce and Joan how to handle a horse and a fly rod. They introduced him to cross-country skiing and canoeing. But as soon as he began visiting at the office the exchange went beyond mere hobby skills.

Prideaux was a pharmacist who came to Lander from Nebraska as a young man. He began to buy property in and around town and became one of Lander's most prominent business leaders. While most Lander businessmen ignored us, Prideaux would pace from room to room with gruff greetings for all. Sometimes he'd stand squarely in front of our desks and ask what we thought we were doing that was so important.

That question — and variations on it — kept the conversation going for years. We tried to tell him what made us tick and he, in turn, did a fair job of interpreting the town's eccentricities for us. When his arguments made us soften on an issue, he chuckled, saying that we weren't as unreasonable as his friends had told him we would be.

Occasionally he carried the darts we let loose in the paper right to their targets, by taking copies of the paper to his friends in the community. Eyes twinkling, he'd return with tales of their reactions. He also brought us clips and brochures to read on everything from tracking wild animals to Utah Power and Light's expansion plans.

It was a stimulating exchange for us, who otherwise would have had a monotonously young-to-middle-aged new-to-Wyoming outlook on things. We often didn't agree. Whether the beaver that was nightly plugging Prideaux's irrigation ditch had any redeeming qualities was a particularly hot topic that provided months of spirited debates.

In 1977 we moved our office to one of Prideaux's buildings downtown. Prideaux was an admirably fastidious man — and never seemed entirely comfortable with the way deadlines devastated office order in his building. And we were never quite as comfortable with ourselves, knowing it bothered him.

But Prideaux the practical, Wyoming-wise businessman and **HCN's** young immigrant dreamers never ceased to enjoy their differences. We feel an awful emptiness around here already.

Bern Prideaux died of a stroke last week at the age of 82.

— the staff

Utah's troubled waters...

(continued from page 1)

tanglement of aqueducts, dams, reservoirs and powerplants, divided into six major construction zones. The largest and most controversial is the Bonneville Unit.

Like other parts of the CUP, the Bonneville Unit has evolved considerably since the original plan, and it is difficult to find a precise, current description. But the latest figures and maps show plans for 10 new dams and reservoirs, two enlargements of existing structures, 140 miles of aqueducts, tunnels and canals, 200 miles of drain pipes, and an assortment of power plants, pumping plants and dikes.

The numbers are impressive. The maps are awesome. And the price tag is downright staggering: An estimated $1 billion for the Bonneville Unit, with upwards of $3 billion to $4 billion for the entire CUP. Inflation and other factors have dissolved the ceiling on how much it could actually cost.

The CUP, nonetheless, has its share of friends.

Project backers include the governor of Utah, the state's congressional delegation, the entire state legislature, a slew of water resource development agencies and potential water users, and a majority of the state's citizens.

The backers say that besides bringing in federal dollars, the CUP will bring several hundred thousand acre-feet of water a year to needy cities, industries, farmers, and eventually coal and oil shale developers.

It would also lay claim to Utah's unused share of the Colorado River water, a benefit that some say all by itself makes the CUP worthwhile.

"The Central Utah Project is not an artifact of an earlier era nor an outmoded water resource development plan that the present political leadership of this state clings to because we have inherited it from our venerable predecessors," Utah Gov. Scott Matheson said recently. "I am convinced that it is a viable and vital project that preserves rather than precludes our options for the future."

If the governor sounds a bit defensive, it's because he has reason to be. The CUP has had its troubles.

A STUCK MOLE

The project was placed on President Carter's 1977 "hit list" of wasteful water projects to be scrapped. It is receiving close scrutiny from budget-conscious members of Congress, necessitating an annual parade to Washington of project supporters-turned-lobbyists to monitor the budget process.

The Bureau of Reclamation, now called the Water and Power Resources

An engineer's delight and a cartographer's challenge, the CUP is an entanglement of aqueducts, dams and reservoirs.

The EPA connection: CUP criticism takes a political bath

Political tradeoffs, possibly including an attempt by the Carter administration to gain Utah's support for the proposed MX missile system, have apparently influenced federal decisions on the Central Utah Project.

The U.S. Environmental Protection Agency earlier this year, on the brink of recommending an independent review of the CUP that would have delayed and possibly jeopardized construction, suddenly withdrew its objections to the project.

According to administration sources who asked to remain anonymous, EPA's decision to back off was influenced by the Department of Interior, which as the project's lead agency has committed the administration to building the CUP.

The charges have been publicly denied by other administration officials, who say that EPA's concerns were resolved in a series of meetings with Department of Interior officials.

But environmentalists are highly critical of the compromises that EPA worked out in those meetings. And according to the same unnamed sources, several points EPA raised, including the economic ills of the CUP, were never addressed.

BAD ECONOMICS

At issue is EPA's review of part of the Bonneville Unit of the CUP.

An environmental impact statement on that unit was completed in 1973. That statement drew a raft of criticism, largely for being too vague, and the Bureau of Reclamation was persuaded to do separate studies on each of the systems within the Bonneville Unit.

The first to be scrutinized was the Municipal and Industrial System, known as the M & I. The M & I is intended to supply 90,000 acre-feet of water annually for the Salt Lake and Provo metropolitan areas in the Bonneville Basin.

Last April, a draft environmental impact statement on the M & I was completed. Two months later, then EPA Regional Administrator Alan Merson wrote the bureau, charging that the project was "environmentally unsatisfactory."

Merson cited as the most serious environmental concerns: inadequate instream flows to protect fisheries, increased salinity in the Colorado River, and drinking water and public health questions.

But the entire first page of the one-and-a-half page letter was devoted to challenging the economics of, and the need for, the project.

"The evidence suggests," Merson wrote, "there are alternative sources of water that can be developed...at less cost to the environment and the local water user and federal taxpayer...Using these alternative water sources would not engender the extensive streamflow depletions and water quality impacts associated with the Bonneville Unit M & I System."

Furthermore, Merson found the project to be contrary to the president's water policy initiatives that emphasize water conservation.

"The project will defer the need for water conservation measures for several decades," he wrote, "and this is in a metropolitan area with one of the highest per capita water use rates in the nation."

"EPA got a call..."

— Peter Carlson

Merson's findings on the M & I were the basis for a subsequent review made by EPA Administrator Douglas Costle. **High Country News** has obtained two undated draft letters, from Costle to the head of the Council on Environmental Quality, Gus Speth, and to Interior Secretary Cecil Andrus.

Those letters, drafted by EPA staff in Merson's regional office, again cited serious environmental problems with the M & I system, and stressed the conflict with national water conservation efforts and the availability of less damaging project alternatives.

"I am referring this matter to the Council on Environmental Quality for resolution," the draft Costle letters said.

Referral to the CEQ for resolution is provided for under section 309 of the 1970 Clean Air Act Amendments. (The section was attached to the amendments as a followup to the National Environmental Policy Act passed the previous year.)

Using NEPA and CEQ guidelines, EPA is charged with reviewing a project's impacts on public health and welfare, and the environment. Those criteria include economic analysis and the availability of project alternatives.

Some 12 projects have been referred to the CEQ since 1970. Both CUP backers and opponents agree that referral of the CUP would have considerably delayed or even killed construction of the project, and offered critics another forum for airing their concerns.

But the two draft Costle letters were never sent.

EPA BACKS OFF

"EPA got a call from the (the president's) Domestic Council saying do not refer this project," said Peter Carlson of the Environmental Policy Center in Washington, D.C. "For various political reasons, Interior Secretary Cecil Andrus has committed his agency to constructing the CUP, and EPA's involvement was just not acceptable."

"The Interior Department is a stronger agency, and we got called off," said an EPA official close to the issue.

The charge, which has been substantiated by two other administration officials, is refuted by EPA Director of Environmental Review William Hedeman.

"We had been in close contact with Interior officials and feel that our concerns were adequately met. Had we felt there was something meriting referral of the CUP to the CEQ, we would have referred it," he said.

Apparently, much of EPA's reversal is based on a temporary minimum instream flow agreement signed by federal and state agencies. Under that agreement, which was reached several months after the Costle letters were drafted, water will be released to provide some 44,400 cubic feet of water for fisheries during the next 15 years.

But environmentalists are dissatisfied with the agreement. A permanent pact is yet to be worked out, they say, and if the filling of the reservoir falls behind schedule or other water use demands are not met, the agreement calls for a minimum flow of half that amount.

"The guaranteed amount of water still involves a 50 percent destruction of habitat," said EPC's Carlson, "And only four of the nine affected streams are covered."

The instream flow agreement also obligates the federal agencies to drop any further objections to the CUP on any grounds, and enlists their full support for speedy construction of the project.

Other concerns raised by EPA over the project's impacts on salinity and public health were met by Bureau of Reclamation promises to conduct studies, Hedeman said.

But apparently left unanswered were the agency's criticism of the project's economics and inadequate consideration of alternatives.

EPA officials said that they had not received any response from the Bureau of Reclamation to their economic concerns.

WAS IT MX?

The political connection of the CUP to the proposed MX project has been alluded to by many persons associated with both projects.

In a March 6 article, **Deseret News** Washington correspondent Gordon White noted that after the MX became a Carter priority, "Utah has found itself marvelously favored by Mr. Carter."

"The number of federal policy reversals in the past three months has been amazing," he noted. "Early in January $20 million was added to the appropriation request for the once scorned Central Utah water project."

EPA's decision not to refer the project to the CEQ for resolution, whether it was due to political influence or not, has pleased Utah officials.

Asked what he thought EPA's role should be on the CUP issue, and in particular on the instream flow issue, Utah Gov. Scott Matheson said, "It was not appropriate for EPA to interfere on that issue. We negotiated the agreement and EPA would not have helped. In fact, I stepped in and said that if they (EPA) stepped across the line I'd shoot them."

But for EPA staff out in the field, not using the CEQ referral process is a frustrating case of a carrot without a stick.

"They can listen to us all day long," one official said of the Bureau of Reclamation, "and then simply decide not to do a thing."

Service, is having trouble finding a site for one of the CUP's proposed dams on the Provo River that is not seismically active or otherwise unstable.

Cost overruns have voided the existing contract for repaying the federal government for building the CUP, necessitating a potentially controversial public vote on a new, higher repayment contract sometime this summer.

And a water tunnel-boring machine known as a mole has become stuck in its hole, forcing the agency to cancel a contract and lose some $17 million in investments.

Also disturbing to project backers is the network of CUP critics that has formed around the state. They're an oddly mixed bunch, including a student-Sierra Club leader in Logan, a former criminal prosecutor in Salt Lake, a grandmother of 11 in Provo, and a contingent of fly fishermen throughout the basin.

Critics cite extensive environmental damage, including the dewatering of 100 or more miles of trout streams, negative benefit-to-cost ratios, and a lack of need for the project's water.

Project opponents also bring up issues of taxation without representation, conflict of interest, mismanagement, dam safety, and, in the words of one particularly frustrated environmentalist-critic, "anything we can think of to help stop it."

In Utah, it seems, one is either for the CUP or against it.

TAKING SIDES

"It's a black and white issue, with no middle ground," said Paul Van Dam, who as Salt Lake county attorney gained the distinction of being the only elected official in Utah to publicly criticize the CUP.

"I only questioned the Bonneville Unit as proposed, and in fact supported a scaled-down version and the entirety of other CUP units," he continued. "But I was immediately cast as an opponent and that was that."

There's a zealousness on both sides.

Van Dam's CUP criticisms, contained in two detailed project studies, precipitated a hail of counterattacks. Sen. Orrin Hatch (R) charged the attorney with setting his office up as a "hit squad aimed at the Bonneville Unit" and using his powers to engender an "under-the-table, backdoor attack on the project."

Thomas Power, an associate professor of economics at the University of Montana, did a 208-page study, funded by the Audubon Society, on the CUP's economics. When he concluded that the CUP's claimed benefit-to-cost ratio of 1:1 was more like 0.32:1, or 32 cents worth of benefits for every dollar spent, the response from project backers was equally brusque.

"The only purpose of such a study is to try to mislead the public, delay construction progress and jeopardize an essential water supply to meet the needs of many people," said Lynn Ludlow, manager of a key area water agency. "Such action results in increased water costs for future generations to pay."

When several professors from the University of Utah testified as private citizens against the CUP in a 1973 environmental lawsuit, the manager of another water agency wrote the university president, "As I witnessed the parade of professors, flowing locks and all, the crusade was so evident and indicative to me of public servants who haven't enough to do so they mind someone else's business at the expense of the public."

Project supporters, in turn, are invariably cast as "good ol' boys," with vested interests in pushing for uncontrolled economic growth for Utah, and supportive of the CUP regardless of the environmental and social costs.

Wading through the rhetoric on both sides is a challenge. But there are two other major obstacles to understanding the CUP.

First, even a superficial review of the project involves perusing a stack of technical documents reaching several feet high. The CUP has been analyzed, scrutinized and investigated — over and over. Many of the data and conclusions are flat-out contradictory on such key issues as the project's costs and benefits and the presence of alternative water sources.

With the experts in disagreement, most of the public is left to either indifference or choosing sides with less than adequate information.

"Although my reports did generate a dialogue, there probably aren't a hundred people in this basin of 600,000 who have read them," said Van Dam, "and less than that could discuss any substantive points of the project, such as the added costs to their water bill."

Photo courtesy of the Water and Power Resources Service

THE STRAWBERRY VALLEY DAM and Reservoir, completed in 1913, was one of Utah's first water projects. The office has since grown many-fold and moved to Provo, where engineers with the Water and Power Resources Service are designing plans to expand the Strawberry, a key feature of the Bonneville Unit.

The environmental impact documents for the Bonneville Unit alone are five inches thick. "The public doesn't want to plow through those big books," said Reed Olsen, public relations director for the Division of Water and Power Resources.

In their place, the agency distributes a slick, poster-size summary that dismisses project alternatives in less than 300 words, and describes most of the fishery impacts as benefits.

A second obstacle to understanding the CUP is confusion surrounding the slippery term "need." Utah does not have a water plan, per se. The "public interest" is hapazardly defined by a smattering of water laws and precedents, with no uniform policy for resolving conflicts with private interests.

Any debate over the CUP invariably revolves around the question, "Do we really need the water?" Others in turn ask, "Do we really **want** the water if it will bring more uncontrolled industrial and urban growth to Salt Lake?"

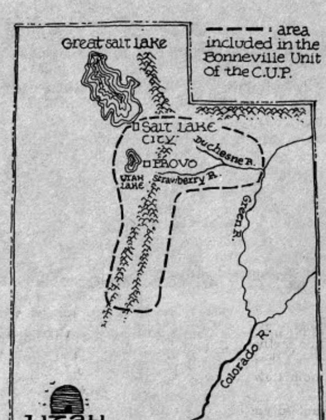
Both are serious policy questions that most persons involved agree need to be answered if Utah is to have a sensible water future.

Meanwhile, however, the CUP rolls along. And there is one disturbing fact that hovers over all discussions.

There are studies, albeit controversial, that claim, given even the highest rate-of-growth scenario the Utah Chamber of Commerce can dream up, CUP water is still not needed in the Bonneville Basin. Not now, and not through the year 2020.

Project backers disagree, citing their own facts and figures that seem to show a need for CUP water.

It is around this issue that many project critics have rallied.



There are studies that claim, given even the highest rate of growth scenario, CUP water is still not needed.

SOFT PATH WATER

Gerald Kinghorn, 38 years old with receding curly hair, arrived at Paul Van Dam's office door in 1975. A veteran of the anti-war and free-speech movements, he soon became infamous in Utah as a public defender of pornographic film makers.

Kinghorn was born in Salt Lake and has had a peripheral interest in the CUP for many years. That interest blossomed in 1977 when President Carter put the CUP on his hit list. Kinghorn and his boss Van Dam set about, with county commission approval, to figure out what the project would mean for Salt Lake County.

What they found, bordering on sacrilege, hardly met commission or nearly anyone else's approval. In short,

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they concluded that the county didn't need CUP water, that the county was being ripped off, and that there were cheaper and less environmentally damaging alternatives.

Through water conservation measures, groundwater utilization, full use of west-flowing front range streams, and canal seepage control, the county could have adequate water through the year 2020 or longer without CUP water, their report claimed.

The reaction was bitter, but Kinghorn has persisted.

He is now director of Salt Lake County's Division on Water Quality and Water Pollution Control, set up under Section 208 of the Clean Water Act to develop a water quality management plan for Salt Lake County.

He remains a strong believer in CUP alternatives, and recently testified before a congressional panel that "we can do a whole lot more for a whole lot less."

Kinghorn is Utah's Amory Lovins of water. He has designed a county water plan based on "dual water systems" that is soft path, relying on small scale, appropriate technology water development.

Sitting behind his desk, in the basement of the county building on State Street, and underneath a copy of "Desiderata" and a Sierra Club calendar, he explained, "In a dual water system, low quality water is delivered to homes for low quality end use such as watering lawns, and high quality treated water is delivered for high quality needs inside the house."

"There are about 20 such systems in the county now, and the potential for more is almost limitless," he said.

Using Kinghorn's estimates, providing water to Salt Lake via the CUP would cost county taxpayers and consumers $225 million. His plan, based on dual water systems, would cost a quarter of that, or $60 million, and largely involve only retrofitting existing structures.

Kinghorn's plan has been coolly received. "We would be very interested in investigating the potential for this type of operation," Daniel Lawrence, director of the State Division of Water Resources, wrote Kinghorn last May, "but we do not see that implementation of dual water systems negates the need or advisability of the Jordanelle Dam (part of the Bonneville Unit) as a means of water supply for Salt Lake County."

In other words: We'll study the matter, but the CUP must go on.

REMAINING HURDLES

There is mixed opinion about just how long the CUP will go on. Kinghorn believes it is doomed to drown in a flood of cost overruns, funding cutoffs, and public sentiment reversals in favor of his cheaper dual water systems. Other critics are not so confident.

A dredge-and-fill 404 permit from the U.S. Army Corps of Engineers for the Bonneville Unit was approved this week. The Corps rejected several arguments for denying the permit, including claims by the National Wildlife Federation that the 1973 environmental impact statement on the Bonneville Unit was no longer adequate because "the project has changed substantially, and significant new circumstances and information exist."

The basis of the Corps' approval was the controversial state-federal agreement on maintaining adequate instream flows to protect fisheries — a compromise which environmentalists say is almost as environmentally damaging as the original proposal. (see sidebar).

There are, however, several major stumbling blocks for the CUP.

(see next page)

State boards snub citizen input

"No one in this valley has ever voted for or against, for that matter, any of the men who control our water and have virtual life and death power over all development in Salt Lake Valley," said Gerald Kinghorn, director of Salt Lake County's water quality management plan.

Indeed, much of the controversy over the Central Utah Project surrounds the way in which water is managed in Utah.

Since the first water commissioner was appointed in 1880, a slew of companies and agencies, both private and public, have sprung up to acquire and manage water.

The list includes not-for-profit irrigation companies managing the state's canal network, for-profit utilities, municipal water departments and special districts with water use interests.

Foremost among the latter are metropolitan water districts and the regional water conservancy districts. They were organized in the mid-1930s after it became clear that agricultural and energy interests could no longer assume all of the costs of larger water projects.

A new source of funds was needed, and municipal and industrial users were tapped. The districts were charged with guaranteeing repayment of a reclamation project, such as the CUP, to the federal government.

The metropolitan water districts have the power to incur bonded debt and to acquire, operate and manage equipment and property. They can also levy taxes, without constitutional limit.

The regional water conservancy districts umbrella the metro districts and have the same powers, including the ability to raise money by ad valorum (property) taxes, borrow money, issue bonds and collect tolls for water sold.

There are several highly controversial aspects to these districts.

Metro districts can and do contract with the regional districts for the delivery of water. But many regional district board members wear other hats that may conflict with their board roles.

Robert Hilbert has been a board member of the Central Utah Water Conservancy District since 1964. The CUWCD, overseeing 12 Utah counties in the Bonneville Basin area, is a major backer of the Bonneville Unit of the CUP. Yet Hilbert is also the staff director of a county water district that is buying CUP water.

"There is a clear conflict of interest," Beth Kaeding of the Citizens for a Responsible Central Utah Project said at a recent hearing on Hilbert's reappointment to the board.

"As manager of the Salt Lake County Water Conservancy District, he has contracted with CUWCD for 70,000 acre-feet of CUP water, the largest block of water in the CUP system," she said. "Only one other entity has contracted for water, and without Salt Lake County's petition the CUWCD would be in grave trouble."

Hilbert responds that the county district's board made the decision to buy CUP water, not he.

Also controversial is the selection of district board members. Metro district board members are appointed by city officials. But regional district members are appointed by a state district court judge.

Because judges themselves are appointed, and because regional districts can levy taxes, "it's clearly a case of taxation without representation," says Kaeding, adding that "the only reason we haven't sued is a lack of litigation funds."

Furthermore, the Central Utah Water Conservancy District board, which includes Salt Lake County under its administrative umbrella, is appointed by the 4th District Court Judge, whose district does not include Salt Lake County.

And, finally, the members of both types of district boards are selected largely by geographic criteria, with an aim for a rural-urban balance. Board members are almost exclusively businessmen, engineers, ranchers or other special interest water users, and attorneys. There is one woman on the 19-member CUWCD, who also comes closest to being a public interest representative, being a lobbyist for the League of Women Voters.

Population criteria are also ignored. Hilbert is one of only five members of CUWCD from Salt Lake County, even though Salt Lake has most of the population and tax base in the district.

Once established, there are no statutory provisions for dissolving a water conservancy district.

Photo by Bud Rusho, Water and Power Resources Service

LOOKING NORTH up Rock Creek into the High Uintas. The proposed Upper Stillwater rockfill dam with its asphaltic membrane and reservoir would fill the valley to the middle of the picture, where the 187,000-acre primitive area and proposed wilderness begins. The reservoir would flood 2,000 acres of moose and beaver habitat, dewater 26.5 miles of quality fishing streams and leave an annual bathtub ring as the reservoir fluctuates between its 138-acre and 340-acre levels.

The existing contract with the Central Utah Water Conservancy District, the principal buyer of CUP water, was written in 1965. Since then CUP costs have quadrupled, and the old contract will not provide the "repayments" that Congress requires.

A new contract will have to be negotiated and approved by the voters in the 12-county araa and by the Department of Interior. That vote is to be neld during an election this summer. If voters reject the higher repayment schedule, the CUP would in effect be killed.

Project critics, fearing a strong media campaign by CUP supporters, give low odds to voter rejection of a new contract.

Then there are still unresolved issues over Native American water rights. And that mole is still stuck in its tunnel.

Gerald Kinghorn, Utah's Amory Lovins of water, has a soft path for Salt Lake City's water future.

ONE LAST PUSH

"My whole life has been survival," said State Water Director Lawrence, as he slowly revolved a plexiglas cube of assorted coins.

"Coming through the Great Depression, my goal in life has been to make enough money to live. I'm sure this has biased my opinions. Because the idea of not consumptively using water is just too hard for me to understand," he said.

Lawrence was 63 years old this month. On his bookshelf is a copy of "Dams and Other Disasters;" on his wall several photos (some with dams, some without) and various awards and degrees; in his out-in basket, marked with yellow highlighter, a pamphlet entitled "Exercise and the Aging Process."

For Lawrence, the CUP is a last chance shot at the kind of massive water project his predecessors only dreamed of and his children will probably never duplicate. As he picks up the telephone, he knows the time is short.

A BETTER CHOICE?

Driving from Foothill onto Interstate 80 in the outskirts of this city by the Great Salt Lake, one is given the choice of turning towards Denver to the east, or Reno and California to the west.

It's an uncomfortable choice between two urban sprawls, and the crossroads is symbolic of a future that Salt Lake City may face.

Already the city's urban tentacles reach into the Wasatch Mountains and far along their front. Already painfully present is crime, noise and other urban distress. Already a brown cloud is gathering menacing particulates and may soon obscure the mountains from a downtown vantage point.

Yet with those magnificent Wasatches towering above, a snow-covered bastion of rocks framed by early spring skies, CUP critics cannot help wondering if there isn't a better choice for Salt Lake City.

That path could begin, they say, with the end of the CUP. ●

EPA denies Dakotans 1080 for dog control

by Kevin Woster

PIERRE, S.D. — The Environmental Protection Agency has denied a request by the South Dakota Agriculture Department for special permission to use 1080 poison for prairie dog control.

At the urging of state agricultural interests the department entered its request in October, saying the toxic compound is necessary to manage exploding prairie dog populations on the western South Dakota prairie.

In denying the request, EPA said the state hasn't proven that dog control efforts with the approved chemical, zinc phosphide, are ineffective. The state also failed to show that the increased cost of zinc phosphide was causing a hardship, EPA said.

Federal and state animal damage control agents are working with ranchers near the Badlands National Park and Buffalo Gap National Grasslands to limit the spread of dog towns, which already cover thousands of acres.

Those agents report a high success rate using zinc phosphide, generally considered a safer alternative to the long-term toxicity of 1080.

Jack Merwin, head of the state Game Fish and Parks Department, said when used properly zinc phosphide will kill from 90 to 95 percent of the prairie dogs in a treated area. Merwin said he expects the dog populations to be under control by 1982, without 1080.

But ranchers maintain the dog towns are increasing and question the wildlife department's success figures. They say the issue is not yet settled.

Unhappiness over the prairie dog control program has prompted several legislative attempts to limit federal and state control in western South Dakota. The most far-reaching measure passed by the lawmakers placed a freeze on federal acquisition of land within the state.

The bill, sponsored by Pennington County extension agent Lyndell Petersen, was heralded by many west river ranchers as the beginning of the Sagebrush Rebellion in the state — though less than 10 percent of the land is federally owned.

The bill easily passed both houses, but was vetoed by Republican Gov. William Janklow, who said it was poorly written and ineffective.

But unhappiness continues to simmer in the agriculture community and more fighting with the feds is anticipated. The state Agriculture Department also plans to reapply for the 1080 exemption.

Kevin Woster is a freelance writer and reporter for the **Argus-Leader** in Sioux Falls, S.D. This article was paid for by the HCN Research Fund.

Financial whiz bargains with FS over land

by Ken Western

BOZEMAN, Mont. — The U.S. Forest Service is trying to match wits with financial wizard Malcolm Forbes, parrying proposals and counterproposals in an attempt to purchase Forbes' 12,000-acre ranch near Yellowstone National Park.

Forbes, publisher of the national financial magazine **Forbes**, has rejected a Forest Service offer of $5.6 million for the ranch. He is rumored to have considered subdividing the property into 20-acre plots for homes and seasonal cabins.

The Forbes ranch, located five miles northwest of Gardiner, Mont., extends along eight miles of the Yellowstone River. The property contains 3,200 acres of essential habitat for grizzly and serves as a winter range for elk coming out of Yellowstone. The property also includes the rock formation "Devil's Slide" and the ghost towns of Aldrich and Evandale.

"Our primary concern is the wildlife," Mike Williams of the Forest Service said, but noted that purchase of the ranch would provide access to 10,000 acres of recreational area that can be reached now only by crossing the ranch.

Forbes purchased the land in 1970. The price he paid for it has not been revealed, but the Forest Service offer matches the current appraised value of the ranch.

Forbes has developed some property in Colorado, prompting concern among observers that a similar action may follow in Montana.

Negotiations for purchase of the ranch began a few years ago, and the property is viewed by the Forest Service as a high priority in Region I. The ranch is situated primarily in the Gallatin National Forest, with about 150 acres in the Absaroka-Beartooth Wilderness.

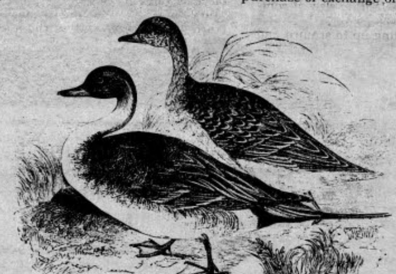
Although an agreement has yet to be reached, "We're optimistic that something will be concluded this year," Williams said.

If the entire property cannot be purchased due to an impasse over price, Williams said, it's possible that some sort of arrangement might be made under which Forbes would sell the property but keep a home on a 40-acre tract, or perhaps retain the ranch headquarters and a tract of land.

"They've given us first refusal on the property," Williams said. "So I think it could be assumed that they'd be inclined to have the land under public management for the wildlife amenities."

The property would be purchased with Land and Water Conservation money. Purchase of the ranch will require congressional approval, but officials say that should present few problems.

Under Public Law 295, which was passed in 1926, the government was instructed to improve and extend the winter feed facilities for big game in Gallatin National Forest and Yellowstone National Park through the purchase or exchange of lands.



Waterfowl felled by cholera

by Phil White

PIERRE, S.D. — A serious outbreak of fowl cholera is killing thousands of waterfowl in the Central Flyway this spring, according to a U.S. Fish and Wildlife Service biologist.

Chuck Sowards, assistant area manager for South Dakota and Nebraska, said, "It's probably the worst we've ever had in the Central Flyway."

During a 2½-week stretch in March, FWS personnel picked up 18,000 dead birds in the Rainwater Basin of south-central Nebraska. Sowards said nearly half of the victims were white-fronted geese and that pintail and mallard ducks have been hit hard.

Sowards said the bacterial disease began manifesting itself in the Arctic last fall when 10,000 snow geese died. "Although we can't say for sure, that die-off has been attributed to cholera," Sowards said.

Cholera deaths occurred in Canada, at DeSoto Bend and Plattsmouth near Omaha, Neb., and at Squaw Creek, Mo., during the fall migration.

"This spring we had an outbreak at Optima Reservoir in Oklahoma — the first time it's occurred there," Sowards said. Birds have also died from cholera on the Platte River and at Lake McConaughy in western Nebraska.

"The latest outbreak started around March 22 at Lake Andes, South Dakota, where 300 birds died in less than a week," Sowards said.

Cholera spreads rapidly where large concentrations of waterfowl and shorebirds occur. The only countermeasure is to dispose of carcasses to prevent contact with healthy birds.

Sowards said the cholera outbreak gives FWS biologists further concern because the endangered whooping cranes leave their Aransas, Tex., wintering area in early April to fly to their Canadian nesting area. The cranes frequently rest in central Nebraska and the Dakotas.

Sowards said the cholera has so far killed only a few of the 200,000 sandhill cranes that use the few miles of unchannelized Platte River in central Nebraska as staging areas in February and March each year.

Fish hawks herald man's fate

Good news about the osprey is good news about man and the environment.

by Tom Jenkins

The hawk alternately flew in circles and hovered above the lake. Then suddenly, it tucked its wings and plunged falcon-like in a dive toward the water. At the last moment, it extended its feet and in a watery explosion struck the surface with its talons. The bird was completely submerged for a second or two, then rose quickly, clutching a slippery fish tightly in its claws. It shook the water from its plumage in midair and flew off to a tree at the lake's edge to devour its catch.

Capable of spotting a neutral-colored fish underwater from a height of 150 feet, the osprey can dive almost unerringly to snare it. The two-foot-long bird is found in areas where bays, lakes, slow-moving rivers and groups of ponds provide an adequate diet. It can catch fish up to four pounds in weight.

Close, firm waterproof plumage, with oily feathers overlapping like tight-fitting scales, are part of its vital fishing equipment. Its feet are large and strong, covered with rough granular scales and sharp projections under each toe, which aid in snagging its quarry. Unlike those of other hawks and owls, its talons are very large, with a reversible outer toe that enables it to securely grasp fish. Thus equipped, the osprey seldom drops its prey — except when it is occasionally highjacked by an eagle. The faster eagle sometimes harries the osprey until it drops its catch, and diving quickly, the eagle retrieves the stolen meal in midair.

One of the widest-ranging of all birds, the osprey is found throughout the northern hemisphere, except in the Arctic. Pesticides almost wiped it out in some parts of the United States until DDT was banned in 1972. But, all in all, it has proved to be remarkably adaptable. Some of its established nesting sites are Talbot Lake in Jasper National Park, Vermillion Lake in Banff National Park, Creton Valley in British Columbia and Yellowstone Canyon in Yellowstone National Park.

The osprey is a distinctively handsome bird, with dark brown upper parts, white underneath and a white head with a broad black line running from its forehead through the eye. At close range, it has a slightly owlish expression, with a strongly hooked bill. Its head is relatively small, but its elongated feathers can be raised in a short crest, giving it an agitated look.

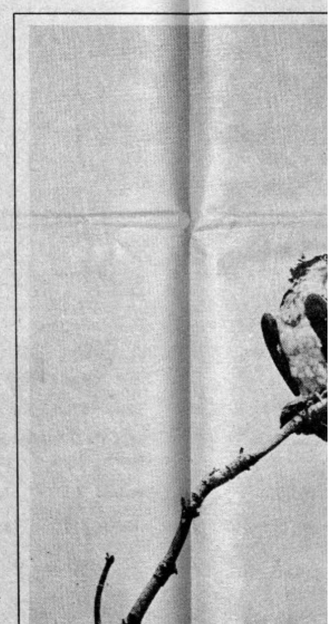
The flight of the osprey is awe-inspiring, particularly the speed of its fall from a great height. It alternates deliberate wing strokes with short glides. It often flies in circles and figure eights as it hunts over water.

In courtship, the male osprey often makes short aerial dives in a series that can last as long as nine minutes. The mated pair sometimes can be seen pursuing one another 500 to 1,000 feet above the nesting area in spectacular configurations of flight.

In most places the osprey is a solitary nester. The nest is usually located in a conspicuously isolated tall tree. But telegraph poles, bridges and other artificial sites are sometimes used, as well as rocky canyonside pinnacles. Some pairs have even set up housekeeping on top of a working crane.The nest is usually so thick with sticks, grass and trash that it becomes a deluxe thicket large enough for small tenant birds to build their nests within it.

During incubation and the care of fledglings, the adult male osprey catches all the food. Often before carrying a fish back to the nest, the male will devour the head. At the nest the female has to forcefully pull the fish out of her mate's powerful grasp; then she uses her strong beak to snip off pieces of flesh to feed the nestlings. After the young have been fed, the female eats whatever is left.

At present, the fish hawk is making a comeback. All major populations of the osprey are either stable or increasing, even those along the eastern coastal areas that had been hardest hit by the effects of DDT. Likewise, the populations in the Rockies, the Cascades, along the Great Lakes and throughout



Canada and Alaska seem healthy again.

Because of the osprey's sensitivity to chemical pollution, it serves as a kind of environmental health barometer. Therefore, the good news about the osprey is good news about man and the environment.

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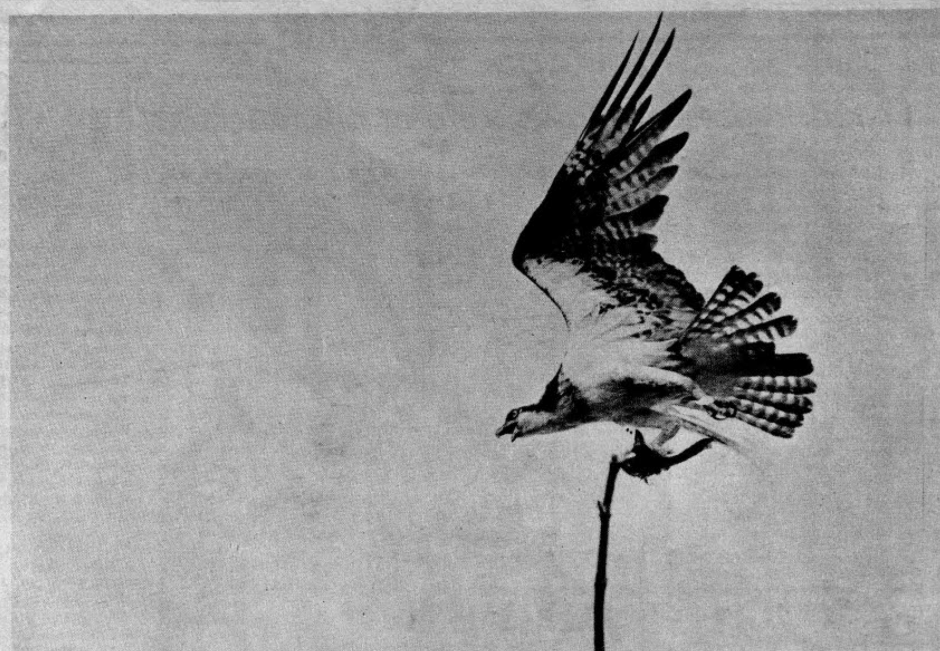
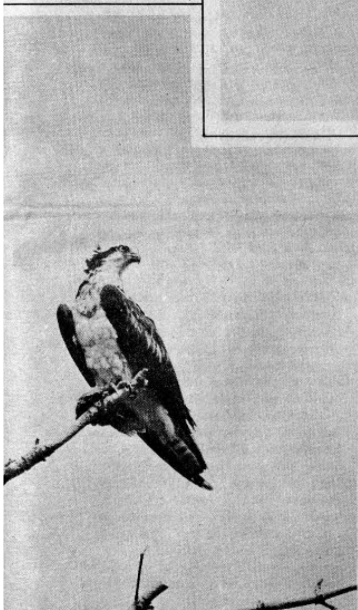
Tom Jenkins is director of communications and arts at the Red Rocks campus of Community College of Denver.





Photos by
Tom Jones

ENERGY

Fraud freezes oil leases; reform bill falters

by Geoffrey O'Gara

The future of federal gas and oil leasing has been thrown into turmoil by evidence of extensive fraud, an Interior Department shutdown of the present program, and a report critical of legislation intended to overhaul the system.

A month ago, Interior Secretary Cecil Andrus suspended new on-shore oil and gas leasing after a six-month investigation indicated oil companies were "rigging" lease lotteries by submitting thousands of relatives' and friends' names to improve their chances of winning a federal lease.

Last week, that investigation bore its first fruit, as Eason Oil Co., a division of International Telephone and Telegraph Corp., pleaded guilty to fraud in obtaining seven oil and gas leases in Wyoming.

But Interior officials could not savor their victory: The General Accounting Office, the investigative arm of Congress, issued a report last month highly ciritical of the legislation Interior officials hope will revamp the leasing system and prevent further abuses. The GAO cast doubt on Interior's claim that the proposed legislation would result in higher federal revenues or speed oil and gas development. It also pointed out that Andrus's suspension of leasing was costing the federal government $3.5 million a month in lost filing fees and rentals.

Today, Andrus is expected to outline his next step, which will probably be a partial resumption of leasing.

Under the present system of on-shore federal leasing, applicants pay a $10 fee to enter a lottery for noncompetitive oil and gas leases. If they win, they pay a rental fee of $1 an acre per year and a 12.5 percent royalty on any production.

The leasing bill proposed by the Carter administration is designed to initiate competitive bidding for many federal oil leases, and thus raise revenues. It would also limit speculation in oil leases, which can presently be sold and resold at a profit by middlemen. And it would promote speedy development by shortening the term of leases.

Photo by Jeff Clack

INDEPENDENT OIL COMPANIES operate rigs like this one on federal oil leases in the Continental Oil Field near Linch, Wyo. The independents, who do most of the exploration on federal oil leases in the West, may play a smaller role under proposed leasing reforms, according to a recent congressional study.

INDEPENDENTS HURT?

Rep. Richard Cheney (R-Wyo.), prompted by calls from independent oil company officials, asked the GAO last summer to investigate whether the Interior bill would inhibit the independents' participation in oil and gas exploration and throw the lion's share of federal leases to major oil companies. The GAO report concluded that larger lease areas and expensive bids might have this effect.

At the same time, the GAO lauded Interior efforts to curtail speculation and promote faster development of leases. But the report said that such changes might be made without "a major overhaul," through administrative and regulatory reforms.

The administration's proposal is now before both House and Senate, and the Senate Energy Committee is supposed to provide the first big test of the legislation's future later this month.

Besides the administration bill, which would convert about half of on-shore leasing to competitive bidding, there is a bill by Sen. Dale Bumpers (D-Ark.) that would make all lease bidding competitive, and another by Sen. Mark Hatfield (R-Ore.) that would limit competitive leasing to about 30 percent of prospective federal production, primarily those areas most likely to produce oil. A Bumpers aide told reporters his bill would be approved by the committee.

Amendments to set aside some leases for independents will be considered.

MUSHROOMING FRAUD

In the meantime, evidence gathered during the Interior investigation of lottery fraud is being presented to a grand jury in Denver. Interior officials were reluctant to specify the amount of fraud involved or the number of indictments sought, but insiders said thousands of acres of land in all the Rocky Mountain and Great Plains states were involved.

In the case of Eason, the company admitted that an Eason lawyer had filed over 20,000 lease lottery applications over two years for seven leases in Wyoming. Eason agreed to give up the leases, covering over 8,000 acres, and to help the investigators with their ongoing work, in exchange for immunity for the company employees involved in the fraud.

Federal District Court Judge Frederick Winner told the **Wall Street Journal** that the maximum fine for Eason's crimes, $10,000, "doesn't provide the proper punishment for such a serious felony." Winner said the corporation or its officers may be ordered to engage in "some kind of public service" at sentencing later this month.

Hot Line

WORKER RADIATION. Federal health and safety regulators are considering lowering the radiation exposure standards for uranium miners, according to McGraw-Hill's **Mine Regulation and Productivity Report.** The process of changing the standard, though, may take two years or more. The National Institute for Occupational Safety and Health expects to make recommendations later this year. But any action will have to wait until after rule-making on an upcoming Environmental Protection Agency proposal for exposure standards for nuclear workers other than miners, which could extend into 1981.

EXPLOSIVE OIL SHALE REPORT. If oil shale is to be developed, said a recently published federal report, the industry must be careful not to start out with a bang: Oil shale dust suspended in the air could explode. The report, summarizing research done by a private firm for the U.S. Bureau of Mines, concluded that while oil shale is not as risky as coal dust, precautions will have to be taken to prevent explosions at mine sites. Oil shale contains kerogen, an organic substance that can be heated and transformed into oil, and which, if suspended in the air, could blow up.

CHEYENNE PACT BACKED. The Northern Cheyenne Tribal Council, often wary in the past of energy development, has entered a preliminary agreement with an energy company to allow oil and gas exploration on its Montana reservation. The Chairman of the Northern Cheyenne Tribal Council, Joe Little Coyote, told the **Billings Gazette** that oil drilling was "a lot more environmentally acceptable than coal mining." The tentative agreement, with Atlantic Richfield, would last 25 years. In addition to a $6 million bonus for the tribe, the agreement calls for a 25 percent royalty, training and employment of tribe members, and a $3-an-acre rental fee.

DECADE OF SHORTAGES. A group of Northwest utilities is predicting annual electricity shortages in western Montana, Idaho, Oregon and Washington, especially if nuclear plants in Washington and coal-burning power units planned at Colstrip, Mont., are delayed. The Pacific Northwest Utilities Conference Committee, representing 120 public and private utilities, predicted an annual growth in energy needs of 3.4 percent for the region, requiring an additional 7,000 megawatts of electricity by 1991. But new energy projects will provide only about 5,000 megawatts, according to the **Associated Press** reports. David J. Lewis, director of the committee's planning office, said above-average rainfall could boost hydroelectric production and alter the "grim picture" of the forecast, however.

RAGES AT WAGES. The Chemical and Atomic Workers Union's oil refinery workers tentatively agreed to end their strike against the oil industry recently, only to be blasted by the Carter administration for ignoring voluntary wage-price guidelines. The strike, which affected many refineries in the Rocky Mountain region, was settled when Gulf Oil Corp. offered workers wage increases of roughly 10.5 percent each year for two years. Refinery workers currently earn an average $9.55 an hour. Though administration officials told the **Wall Street Journal** the settlement was "unacceptable," union locals proceeded with ratification votes. Federal officials are expected to pressure oil companies not to pass the wage increase along to consumers in the form of higher prices.

WOODBURNING HEATS UP. Wood heat is now warming five million households in the United States, according to a recent poll funded by the Wood Energy Institute in Washington, D.C. In addition, 18 million household, or 23 percent, have one or more working fireplaces, according to the poll. Fireplace ownership is highest in the Rocky Mountain and Pacific states, lowest in the Southern and Eastern parts of the country. New England has the highest proportion of households with wood stoves — 17 percent. Over one million wood heating units were sold in 1978, the Institute reported, up from 200,000 in 1972, and consumers spent about $1 billion for stoves, chimneys, installation, and accessories.

CHURCHES WIELD STOCKHOLDER CLOUT. Twenty-five religious groups have attacked the American nuclear power industry with a series of stockholder resolutions calling for a halt in nuclear construction and development. One filed by two Catholic orders with Consolidated Edison demands that the Indian Point reactors near New York City be shut down. Overall, the 15 resolutions hit 12 utilities, two investment firms and the General Electric Co.

APACHES RAID TAXES. In what could be a landmark case, the U.S. 10th Circuit Court of Appeals in Denver has ruled that the Jicarilla Apache Indian tribe has the right to tax lessees of reservation lands. The court struggle began four years ago when the tribe imposed a severance tax on oil and natural gas leases on the New Mexico reservation. A dozen oil companies challenged the move, and the New Mexico federal district court ruled that Indian taxes, on top of state taxes, were an unconstitutional burden on interstate commerce. But by a 5-2 vote the appeals court held that Congress had bequeathed Indian tribes the right to regulate their lands and set lease terms. With similar suits pending against Navajo tribe severance taxes in Arizona and New Mexico, oil company officials are expected to appeal the Jicarilla Apache decision to the Supreme Court.

TVA BOWS TO WYOMING. After months of dispute, the Tennessee Valley Authority has agreed to subject its uranium project in Wyoming to state laws and taxes. State officials, who feared TVA would exercise its power as a federal utility to claim exemption from state and local laws, said they were satisfied with the agreement they wrote and TVA modified. TVA owns the Morton Ranch in Converse County and plans to build a uranium mill there in 1981. In the agreement TVA said it would comply with the state's industrial siting act, which requires industry to help surrounding communities adjust to the impacts of development. The three-page document also requires that TVA pay county taxes and the state severance tax.

UDALL WOULD HALT NUKES. Energy Secretary Charles Duncan says he may resume licensing of nuclear plants in May, but Arizona Rep. Morris Udall (D) is calling for a more cautious approach. In legislation introduced at the end of January, Udall asked for a three-year ban on nuclear plant construction — unless the Nuclear Regulatory Commission satisfies three conditions: stricter requirements on plant location, an NRC review of safety regulations, and a plan for ensuring that existing plant safety problems are remedied. In a United Press International story, Udall acknowledged that the measure had little chance of passage. "What I'm really trying to do is get a national debate going," he said.

OIL SHALE GO-AHEAD. Oil companies eager to start work on federal oil shale leases in Colorado won a courtroom victory this month as a Denver judge ruled that a 1973 general environmental impact statement on oil shale development would adequately serve for several leases. Judge William Doyle of the Tenth U.S. Circuit Court of Appeals denied a request from environmental groups that four oil companies be required to file separate environmental statements on two oil shale leases. Doyle gave an interesting reason for the ruling, quoted in McGraw Hill's **Mine Regulation** newsletter: "Unquestionably," he wrote, "this entire proceeding is an 'end run' which is designed to skirt NEPA...why do I concur in the result while disapproving of all the elaborate substitution procedures? It is because this nation is in the throes of an unprecedented energy crunch...If oil shale is to be developed, it must proceed at once...it is no longer possible to spend precious time struggling to bring enforcement."

PIPELINE WOOS TRIBE. The Northern Tier Pipeline Co., which hopes to build an oil-carrying pipeline from Washington state to the Midwest, has offered the Salish and Kootenai Tribal Council about $10 million for permission to cross the Flathead Reservation in Montana. About 60 miles of the pipeline would run across reservation lands, crossing the Flathead River near Moiese and leaving the reservation near Jocko Lake, skirting the once-proposed Jocko Primitive Area. The $10 million, paid over a 20-year period, is roughly what the company would save by not having to route the 42-inch pipeline around the reservation, company officials told the tribes. Northern Tier also offered to pay the cost of hiring a consulting firm to advise the tribe on the project. The Tribal Council has rejected several earlier Northern Tier overtures.

SPREADING COAL JELLY. You won't find it on the grocery shelf next to Smuckers' jam, but researchers are exploring the possibility of transforming coal to jelly form to make transportation easier. Zinder-Niss, a U.S. consulting firm, is looking for ways to transport coal to Asian and European markets that lack bulk loading facilities, and coal jelly is being investigated. The firm told McGraw-Hill's **Coal Week** that a mixture of 30 percent water and 70 percent powdered coal would be easier to move overseas, and would present fewer problems than a more watery solution or coal-oil mixtures.

Overthrust inventory leaves fraction for wilderness

About 13 percent of the lands administered by the Bureau of Land Management in the Overthrust Belt have been selected as wilderness study areas.

The oil industry says the belt may contain large undiscovered reserves of oil and gas. In the states where the belt has received the most industry attention, Wyoming and Utah, only a small part was chosen by the BLM for wilderness study. In Wyoming, 47,000 acres or four percent of the belt received wilderness study status. In Utah, 16,000 acres or one percent has the status.

Wildlands fared better in Montana and Nevada, where about 15 percent of the BLM acreage in the belt remains under wilderness consideration.

The largest precentage for wilderness study was designated in Arizona, 48 percent, but the Overthrust Belt acreage there is small — only about 580,000 acres total. The smallest percentage, about a tenth of one percent, was designated in Idaho, which also contains only a small piece of the belt.

Slightly behind the accelerated Overthrust Belt inventory are BLM's various statewide wilderness inventories. Wilderness study areas have already been proposed in Colorado, Idaho and Montana. These recommendations are now subject to a 90-day public comment period. Statewide wilderness study decisions are due in early April in Utah and Wyoming, also to be followed by a 90-day comment period.

All of these wilderness studies must be complete and a recommendation made to the president by 1991, though many recommendations are expected before that.

Bulletin Board

HOT WASTE PETITION

The Headwaters Alliance and Friends of the Earth are circulating petitions in Montana to ban the disposal of most radioactive wastes within the state. Exempted from the ban would be radioactive material used for medical, educational or scientific purposes. Copies of the petition, which is directed at placing an initiative on the November ballot, can be obtained by writing P.O. Box 882, Billings, Mont. 59103.

FORESTS MISMANAGED

The U.S. Forest Service is losing out, a report by the Cascade Holistic Economic Consultants has concluded. By subsidizing the timber industry on public lands, the Forest Service is losing money throughout the West and discouraging production increases on private lands. For a copy of the report, **Subsidizing the Timber Industry**, send $2 to: CHEC, P.O. Box 3479, Eugene, Ore. 97403.

MIDWEST WIND POWER

The potential of wind-generated electricity is the focus of a conference to be held April 25-26 in Rochester, Minn. Sponsored by Alternative Sources of Energy and the Rochester Energy Information Center, it will include workshops for both manufacturers and consumers of wind systems. The conference, including a dinner, costs $40. Write: REIC, 1926 2nd St., SE, Rochester, Minn. 55901.

BULLFROG FILMS

Looking for movies on energy? Bullfrog Films, Inc., has a collection that includes: "Bill Loosely's Heat Pump," "Lovejoy's Nuclear War," "New Western Energy Show," and "Log House." A number of other films on the topics of solar, nuclear, wood and "energy awareness" are avilable. Rentals are from $18.50 to $57.50 and sales from $165 to $675. For more information write: Bullfrog Films, Inc., Oley, Pa. 19547.

Trackings

followups on previous stories

Lead in Kellogg

(see **HCN** March 21, 1980 for previous story)

Idaho state health officials will conduct another study this month to verify reports that children living in Kellogg are being exposed to increasing levels of lead pollution.

The study's scope and funding source, however, have generated strong criticism from federal health officials.

The new study will involve a two-day blood testing clinic to be done by the state Health and Welfare Department. The testing will be followed up by a two-member health team stationed in Kellogg to teach residents how to avoid lead exposure through hygiene and dust reduction techniques.

Federal health officials, including Dr. Peter Drotman of the Center for Disease Control in Atlanta, say there are some serious flaws in the state study.

The blood sampling will be limited to only 200 children (previous testing involved over 1,000). The study will not include any comprehensive neurological or psychological testing. And some $120,000 for the blood testing and followup health teams is being provided by the Bunker Hill Co., operator of the smelter that produces most of atmospheric lead pollution in the Kellogg area.

In fact, the building in which the blood testing will be conducted is owned by Bunker Hill Co.

"Since it's the company itself that's the source of most of the lead in the area, you'd wonder about the objectivity," said Drotman.

The Center for Disease Control conducted a study in 1974 that found lead exposure in this heavily industrialized northern Idaho town was the highest in the country.

Some area residents, dissatisfied with the conclusions of a 1975 state study (also funded by Bunker Hill) that there was no evidence of any long-term health effects of lead exposure in Kellogg, are calling for a federal investigation.

State health officer Dr. Edward Gallagher argues that other residents, however, are "exhausted from a lot of hit-and-run experiences" with public health testers. Critics say that Gallagher and industry officials are using that argument to legitimize the scaled down testing program.

—MM

STUDYING YELLOWSTONE

The Yellowstone Institute, a five-year-old educational organization, will be offering courses this summer on the wildlife, geology and ecology of Yellowstone National Park. The program of 15 courses, none of them more than a week long, is sponsored by the Yellowstone Library and Museum Association. Field studies of Yellowstone geothermal geology, wildflowers, and wilderness horsepacking are among the offerings. For more information write Yellowstone Institute, Box 515, Yellowstone National Park, Wyo. 82190, or call (307) 733-6856.

PUBLIC LANDS ENERGY

The University of Utah and the Environmental Law Institute are sponsoring their fourth conference on energy and the public lands. This year's theme is the "Challenge of Synthetic Fuels." Topics will include how environmental law and policy affect synfuels production, economic and institutional incentives for synfuel technologies, and the water needs of energy developers versus other users. The conference will be April 17-18 in Salt Lake City and costs $250 for individuals and $600 for institutions. Contact: Conferences & Institutes, University of Utah, (801) 581-5809.

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 PERMIT UNDER THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 (FWPCAA), 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 (2) TWO INDUSTRIAL FACILITIES, (1) ONE COMMERCIAL FACILITY, (1), ONE STATE GOVERNMENT FACILITY AND (2) TWO OIL TREATER FACILITIES; TO MODIFY (2) TWO INDUSTRIAL PERMITS AND (1) ONE MUNICIPAL PERMIT; AND, TO RENEW (1) ONE INDUSTRIAL PERMIT, (2) TWO COMMERCIAL PERMITS, (2) TWO STATE GOVERNMENT PERMITS, (1) ONE MUNICIPAL PERMIT, (1) ONE FEEDLOT PERMIT AND (12) TWELVE OIL TREATER DISCHARGE PERMITS WITHIN THE STATE OF WYOMING.

APPLICANT INFORMATION

(1) APPLICANT NAME: GLENROCK COAL COMPANY

MAILING ADDRESS: P.O. BOX 159
GLENROCK, WYOMING 82637

FACILITY LOCATION: DAVE JOHNSTON COAL MINE
CONVERSE COUNTY, WYOMING

PERMIT NUMBER: Wy-00028525

The Dave Johnston Coal mine provides fuel to Pacific Power and Light Company's Dave Johnston power plant, which is located in Converse County, Wyoming. The mine is located approximately 12 miles north of the power plant.

To date there has been no wastewater discharge from the mine, however, continued operation of the mine, along with construction of a sewage treatment plant to serve the office and maintenance buildings, will result in 4 potential discharge points. Discharge point 001 is the outfall from sedimentation pond SP-1, which will receive truck wash water, water treatment plant waste, well water overflow and storm runoff. Discharge points 003 and 004 will be from settling ponds SP-3 and SP-4, which will receive area runoff. These ponds are all designed to completely contain the runoff from a 10 year-24 hour precipitation event. The proposed permit sets effluent limitations for these discharge points, which are based on National Best Practicable Treatment Standards.

Discharge point 002 will consist of effluent from the sewage treatment plant and is required by the permit to meet National Secondary Treatment Standards.

Because the U.S. Environmental Protection Agency is in the process of developing toxic effluent limitations for the coal mining industry, the proposed permit contains a "re-opener" clause, which allows the permit to be modified once those regulations are finalized.

The proposed permit requires self-monitoring of effluent quality and quantity on a regular basis with reporting of results quarterly. It also contains provisions requiring the control of runoff from disturbed areas. The permit is scheduled to expire on June 30, 1984.

(2) APPLICANT NAME: HALLIBURTON SERVICES

MAILING ADDRESS: NORTH OF RIVERTON
RIVERTON, WYOMING 82501

FACILITY LOCATION: 1 MILE NORTH OF RIVERTON
FREMONT COUNTY, WYOMING

PERMIT NUMBER: Wy-0028550

Halliburton Services operates an oil, gas and water well servicing facility located on U.S. Highway 29, approximately 1 mile north of the City of Riverton, Wyoming. Water which is used to wash trucks and equipment is to be treated in a grit-oil separator prior to discharge to an unnamed drainage which flows approximately 2 miles to the Wind River (Class II water). The volume of discharge will range from 0 to 3,000 gallons per day.

The proposed permit contains effluent limitations which have been determined by the State of Wyoming to be "best available treatment" self-monitoring of effluent quality and quantity with reporting of results quarterly. The proposed permit will expire on April 30, 1985.

((3) APPLICANT NAME: CAL SCHRANDT

MAILING ADDRESS: P.O. BOX 923
DOUGLAS, WYOMING 82633

FACILITY LOCATION: SCHRANDT MOBILE VILLA,
ORIN JUNCTION, WYOMING

PERMIT NUMBER: Wy-0028533

The Schrandt Mobile Villa is a small operation located at Orin Junction, Wyoming. The wastewater treatment facility serving the park is a Case-Cotter package treatment plant which discharges into a perforated outfall line which in turn discharges to a railroad right-of-way located in the North Platte River (Class II water) drainage.

The proposed permit requires only that the existing plant be operated at maximum efficiency until July 1, 1980. As of July 1, 1980, the effluent must meet National Secondary Treatment Standards. It is expected that compliance will be achieved by elimination of the discharge through a leach field following the package plant.

After July 1, 1980, any discharge must be monitored on a regular basis with reporting of results quarterly. The permit is scheduled to expire on December 31, 1984.

(4) APPLICANT NAME: WYOMING AIR NATIONAL GUARD

MAILING ADDRESS: P.O. BOX 2268
CHEYENNE, WYOMING 82001

FACILITY LOCATION: JET FUEL SEPARATOR POND,
LARAMIE COUNTY, WYOMING

PERMIT NUMBER: Wy-0028576

The Wyoming Air National Guard will be the operator of a runoff control pond located at the junction of Prairie Avenue and Del Range Boulevard, which is just north of the Cheyenne Wyoming Airport. The pond will receive runoff and washdown water from the Guard's facilities at the Airport.

The pond will have 3 potential points of discharge to Dry Creek (Class IV water). Two of the discharge points will be from a pair of jet fuel-oil separator units; the third is the emergency runoff spillway.

The proposed permit sets limitations and requires control of the pollutants oil and grease, total suspended solids and pH. It allows discharge from the spillway only under emergency conditions and requires self-monitoring and reporting of effluent quality data. The proposed permit is scheduled to expire on May 30, 1985.

(5) PERMIT NAME: ATLANTIC RICHFIELD COMPANY

MAILING ADDRESS: P.O. BOX 5300
DENVER, COLORADO 80217

FACILITY LOCATION: COAL CREEK MINE,
CAMPBELL COUNTY, WYOMING

PERMIT NUMBER: Wy-0028193

(continued on page 14)

TVA stalls on Edgemont uranium mill clean up

The Tennessee Valley Authority, owner of an inactive uranium mill in Edgemont, S.D., is continuing to delay cleaning up the site, in the hope that the federal government will foot the bill.

At its March 26 meeting, the TVA board voted not to authorize a proposed $30 million project to decontaminate the mill and dispose of the leftover uranium tailings.

At issue is a debate over whether the TVA's Edgemont mill should be included in the 1978 Uranium Mill Tailings Act. That law targets federal funds for cleaning up and permanently disposing uranium tailings from some 25 sites in the Colorado River Basin.

The Edgemont mill was not among those 25 sites covered by the act because when the law was passed TVA still had an active license to operate the mill. (TVA bought the mill in 1974 as part of a $6 million package that included uranium ore stockpiles, mineral rights, and an ore reserve.)

The federal utility argues that a special government appropriation should pay for the cleanup because 80 percent of the uranium produced by the mill was used by the Atomic Energy Commission for weapons.

The TVA also says that it has been unable to operate the mill because of stricter regulations by the Nuclear Regulatory Commission.

TVA is attempting to get the Edgemont site included in the 1978 act through congressional legislation.

Nuclear Fuel, a McGraw-Hill publication, quoted TVA sources as saying they were debating whether to pressure members of Congress in the West or in the Tennessee Valley. The Senate Environmental and Public Works subcommittee on nuclear regulation, chaired by Sen. Gary Hart (D-Colo.), is considering TVA's proposal.

Besides the federal government, the TVA is also considering a possible claim against the Susquehanna Corp., from which TVA bought the mill in 1974. The Justice Department is reportedly also exploring the possibility of recovering the cost of decommissioning other mills from the original owners.

If TVA is unsuccessful in passing the buck on cleanup, the costs would be passed on to TVA customers.

The TVA board has authorized a $10.4 million operation contract with Silver King Mines, Inc., to build a permanent uranium tailings disposal site. To be located two miles from the mill, the site will receive some 7.5 million tons of contaminated material over the next seven years.

Meanwhile, the Environmental Protection Agency is investigating the presence of offsite radioactivity in Edgemont.

"There are some 64 locations in Edgemont with significantly elevated risks of lung cancer due to high levels (of radioactivity)," said John Giedt, assistant director of EPA Region VIII's radiation program.

The investigation is being conducted jointly by the EPA, the federal Department of Housing and Urban Development and the state of South Dakota.

Photo courtesy of Sioux Falls Argus-Leader

RESIDENTS OF COTTONWOOD, S. D., a community near Edgemont, continue to be exposed to blown tailings and radioactive radon gas from the TVA mill."

Big Hole wilderness plan stirs ire

About 700 persons turned up at a congressional hearing in Dillon, Mont., last month, most of them to protest a proposal that would create the West Big Hole Wilderness on the Montana-Idaho border.

The hearing, chaired by House Interior Committee Chairman Mo Udall (D-Ariz.) heard opposition to the 86,000 acre proposal from industry, timber and ranching groups. Representatives from conservation and recreation groups, and several private citizens, argued in favor of protecting the area.

The West Big Hole area straddles the Continental Divide, with alpine lakes and habitat for elk, moose, and mountain goats. The U.S. Forest Service has proposed building logging roads into the lodgepole pine forests for clear-cutting. In addition, energy company officials want the area kept open for gas and oil exploration.

The West Big Hole Wilderness bill, (H.R. 5344) sponsored by Rep. Pat Williams (D-Mont.), is supported by the Beaverhead Forest Concerned Citizens and the Wilderness Society, but environmental groups would also like to see a 24,000 acre recreation area adjacent to the wilderness. That provision, which would include recreation areas at Miner and Twin lakes, is not part of Williams' bill.

Northwest mounts new water defense

In a major escalation of the western water war, members of Congress from the Pacific Northwest are pushing for new sanctions against proposals to divert the Columbia River to the Southwest.

Federal law passed in 1968 prohibits the Secretary of Interior from initiating any studies on diverting the Columbia's waters from its basin. Now, Senators Frank Church (D-Idaho) and Henry Jackson (D-Wash.), and Rep. Bob Duncan (D-Ore.) are sponsoring legislation to expand that ban to include "any federal official."

The renewed interest in defending the Columbia's waters was apparently spurred by a recent Environmental Protection Agency draft water study that includes a review of various Columbia diversion schemes currently floating around.

The legislation could be viewed as good electoral politics, since both Church and Duncan face strong reelection challenges this year.

But it also reflects a potential threat to the Columbia River from such proposed water-gulping projects in the Southwest as synthetic fuels plants, the MX missile system, and the Intermountain Power Project.

Fewer visitors spurs park bus plan

The number of visitors last year to Rocky Mountain national park areas dropped almost 20 percent from 1978 levels. The park service is blaming gasoline shortages for the decrease.

The news has prompted at least one park to reconsider its internal transportation situation. Officials at Wyoming's Grand Teton National Park have applied for $30,000 in Title III federal funds for a new park mass transit system.

While it won't help solve the problem of getting tourists to Wyoming, the operation would provide buses running six times a day from the Jackson Hole Visitor Center to points throughout the park.

The system is similar to that operated by Grand Canyon and Yosemite National Parks. Teton's northern neighbor, Yellowstone National Park, does not yet have any plans for mass transit.

Wind erosion strips 3 million acres

Soil erosion due to wind is up almost 300 percent over last year, according to the Soil Conservation Service. From last November through February this year, the wind damaged over three million acres of crop and rangelands in the ten state west-central region.

Hardest hit was Texas, with almost one-third of the total. But wind erosion has also increased in Kansas, Montana, Nebraska, New Mexico, and the Dakotas. Colorado and Wyoming are down from last year's levels.

The agency blames low precipitation and lack of snow cover. But the figures add impetus for the recently reauthorized Great Plains Conservation Act. The act authorizes $50 million a year for cost-sharing soil conservation programs with farmers and ranchers in the region.

Radioactive sites in Colorado still hot

One year after nearly 40 sites containing old radium deposits were discovered in the Denver area, only three of the sites are being cleaned up. And those operations are being done at the owners' expense.

The Colorado Department of Health admitted in a recent statement that "very little progress has been made in having the radioactive materials removed."

Department officials say they are exploring a number of solutions, including obtaining federal funds to clean up the properties and enacting state legislation creating a site for disposing of hazardous materials. But officials say they are having technical and legal difficulties formulating those proposals.

Altogether, the department believes the state has some 6,000 sites with some level of radioactive contamination.

 (continued from page 12)

The Atlantic Richfield Company is now constructing an open pit coal mine in southern Campbell County which will be known as the Coal Creek Mine. The existing discharge permit for the mine allows water discharge from 2 separate points. Precipitation runoff from the plant area and equipment washdown water is routed to a settling pond; the outfall from that pond is designated as discharge point 001. Precipitation runoff from the area surrounding the mine pit and pit dewatering water is routed to another pond; the outfall from that pond is designated as discharge point 002.

The Company has now requested that a third discharge point be added to their permit. The third point (003) is the outfall from a settling pond which will receive runoff from the batch plant area plus equipment washdown water.

Discharge 001 flows into an unnamed dry gulch which is a tributary of the Belle Fourche River, discharge 002 flows into an unnamed dry gulch which is a tributary of Coal Creek and discharge 003 flows into Blackjack Draw. All receiving streams are Class IV waters.

The proposed permit contains effluent limitations, which in the best engineering judgment of the State of Wyoming, is "best available treatment" for the coal mining industry. However, since Federal effluent guidelines for this industry are currently under review, the proposed permit contains a re-opener clause which allows the permit to be modified if future Federal regulations are adopted which are more stringent.

The proposed permit contains a provision which requires control of runoff from disturbed areas. The proposed permit also contains self-monitoring provisions and a requirement that self-monitoring data be submitted to the regulatory agencies on a quarterly basis.

The proposed permit is scheduled to expire on March 31, 1985.

(6) PERMIT NAME: UNC MINING & MILLING SERVICES, INC.
A SUBSIDIARY OF UNITED NUCLEAR CORP.

MAILING ADDRESS: P.O. BOX 2996
CASPER, WYOMING 82602

FACILITY LOCATION: NORTH MORTON MINING OPERATIONS,
CONVERSE COUNTY, WYOMING

PERMIT NUMBER: Wy-0024571

UNC Mining and Milling Services, Inc. operates the North Morton Ranch uranium mining operation located northwest of Douglas, Wyoming, in Converse County. The operation consists of underground mine shafts and the current discharge permit lists 14 separate discharge points to 11 separate playas, as well as Cowell Draw and the North Fork of Box Creek (all are Class IV waters).

The Company has now requested that an additional discharge point (015) be added to the permit. The new discharge point will be the outfall from a dump valve in the pipeline carrying mine water from the mine shaft No. 1 settling pond to the mine shaft No. 2 treatment facilities.

The proposed permit allows the additional point of discharge (which would flow to Playa-1) and requires all discharges to meet effluent limitations which are considered by the State of Wyoming to be "best available treatment". The proposed permit contains a "re-opener" clause which allows the permit to be modified if more stringent "best available treatment" standards are developed at the Federal level.

In addition, the proposed permit requires control of runoff from disturbed areas, periodic self-monitoring of effluent quality and reporting of results quarterly.

The permit is scheduled to expire on May 30, 1985.

(7) PERMIT NAME: TOWN OF WHEATLAND, WYOMING

MAILING ADDRESS: 600- 9th STREET
WHEATLAND, WYOMING 82201

FACILITY LOCATION: TOWN OF WHEATLAND,
PLATTE COUNTY, WYOMING

PERMIT NUMBER: Wy-0020150

The wastewater treatment facilities serving the Town of Wheatland, Wyoming consist of a large 3 cell non-aerated lagoon system. The lagoon system discharges to Rock Creek (Class II stream) which is a tributary of the Laramie River. Due to the relatively low dilution factor in Rock Creek (Q 10 of 3.2 MGD vs. a design flow of .5 MGD), it is possible that high levels of ammonia may become a problem in the receiving stream. While at present there has been no data collected which would justify the inclusion of ammonia limitations in the Town's permit, it is believed that the Town's permit should be modified to include a self-monitoring requirement for ammonia.

The proposed modification requires that effective immediately the effluent meet National Secondary Treatment Standards and a requirement of no discharge of total residual chlorine. The permit limitations on fecal coliform bacteria are sufficiently stringent to insure no violation of Wyoming Water Quality Standards for that parameter.

At this time it appears that violation of Wyoming's in-stream standard for dissolved oxygen will not occur provided National Secondary Treatment Standards are achieved. However, this question will be re-evaluated (and the permit modified if necessary) as more information becomes available.

Since the wastewater treatment system at Wheatland consists of lagoons, the (EPA approved) less stringent limitations for total suspended solids are included in the permit. It is Wyoming's position that it is not economically practical for a lagoon system to be designed to meet a total suspended solids limitation of 30 mg-1. Wheatland has specifically requested that these less stringent limitations be applied in their situation.

The permit requires that once effluent volumes reach 80 percent of the limited volume, the permittee must begin preliminary planning for expansion and, if necessary, upgrading of the facility.

Periodic self-monitoring of the effluent is required with reporting of results monthly. The permit will expire on March 31, 1985.

(8) PERMIT NAME: UTAH POWER & LIGHT COMPANY
MAILING ADDRESS: P.O. BOX 899
SALT LAKE CITY, UTAH 84110

FACILITY LOCATION: NAUGHTON POWER PLANT,
LINCOLN COUNTY, WYOMING

PERMIT NUMBER: Wy-0020311

Utah Power and Light Company's Naughton Power Plant is a coal-fired steam electric generating plant located south of the Town of Kemmerer, Wyoming. The plant consists of 3 separate units. Unit 1 is rated at 160 mw and went on line in May of 1963; unit 2 is rated at 220 mw and went on line in October of 1968; and, Unit 3 is rated at 330 mw and went on line in October of 1971. The facility as a whole is being interpreted as being an "old" facility as defined under Federal effluent guidelines. The effluent conditions contained in the proposed permit are "best available treatment", as determined through the best engineering judgment of the Wyoming Department of Environmental Quality. The proposed permit contains a "re-opener clause" so that if, during the life of the permit more stringent standards for this industrial category are developed, the permit may be modified to include those more stringent standards.

Because this facility discharges into the Colorado River Basin, the impact of the discharge upon the salinity levels in the lower portion of the basin must be considered in accordance with the salinity standards established by the Colorado River Salinity Control Forum. The Forum policy states that when "practicable" there shall be no discharge of salt from industrial sources. In accordance with this policy, the Department requested the Company to prepare a benefit-cost analysis for elimination of this discharge. From the calculations provided by the Company and which the Department believes are reasonable estimates, the most efficient alternative (unlined evaporation ponds with in-plant alterations) would yield less than 14 cents of benefit for each $1.00 spent. Therefore, the Department has determined that it is not "practicable" to require elimination of this discharge. The proposed permit does require continued monitoring of the total dissolved solids (salinity) content of the discharge so that salinity impacts may be reassessed in the future.

Periodic self-monitoring of the effluent is required, with reporting of results quarterly. The permit will expire on June 30, 1984.

(9) PERMIT NAME: BIG HORN SPORTS, INC.

MAILING ADDRESS: BOX 121
TENSLEEP, WYOMING 82442

FACILITY LOCATION: DEER HAVEN LODGE,
WASHAKIE COUNTY, WYOMING

PERMIT NUMBER: Wy-0023400

Big Horn Sports, Inc. operates a facility located on the western slope of the Big Horn Mountains which is known as Deer Haven Lodge. The Lodge consists of a kitchen and dining room, a bar and lounge, 12 cabins and 6 motel units.

The wastewater treatment system serving the Lodge consists of 4 septic tanks which discharge into a small single cell aerated lagoon followed by a chlorination and siphon discharge system. The discharge enters West Tensleep Creek (Class II water).

The proposed permit requires compliance with Secondary Treatment Standards effective immediately. Flow data for both the receiving stream and the discharge is lacking (there has been no discharge since early 1978), however, it is estimated that the in-stream dilution factor is at least 25:1. The proposed permit limitations for fecal coliform bacteria and total residual chlorine are based on this 25:1 dilution factor and an in-stream standard of 1,000 organisms-100 mls for fecal coliform bacteria and .002 mg-1 for total residual chlorine.

The proposed permit requires periodic self-monitoring of effluent quality with reporting of results quarterly. This permit is scheduled to expire on May 30, 1985.

(10) PERMIT NAME: RONALD LYNDE

MAILING ADDRESS: P.O. BOX 491
CODY, WYOMING 82414

FACILITY LOCATION: PAHASKA TEPEE,
PARK COUNTY, WYOMING

PERMIT NUMBER: Wy-0021407

Pahaska Tepee is a resort, motel, restaurant and shop complex located just outside the east entrance to Yellowstone National Park. Wastewater treatment at the facility consists of an aerated lagoon followed by a chlorinator and a final settling pond. The discharge is to the North Fork of the Shoshone River (Class II water).

The proposed permit requires compliance with secondary treatment standards efective immediately. The proposed effluent limitations for the parameters fecal coliform bacteria and total residual chlorine are more stringent than necessary to meet in-stream water quality standards (it is estimated that the dilution factor is at least 100:1); however, the proposed limitations are easily achievable with the type of treatment system which is currently in place.

The proposed permit requires periodic self-monitoring of effluent quality with reporting of results quarterly. The permit is scheduled to expire on May 30, 1985.

(11) PERMIT NAME: WYOMING HIGHWAY DEPARTMENT

MAILING ADDRESS: P.O. BOX 1708
CHEYENNE, WYOMING 82001

FACILITY LOCATION: BITTER CREEK REST AREA,
EAST BOUND LANE,
SWEETWATER COUNTY, WYOMING

PERMIT NUMBER: Wy-0020958

FACILITY LOCATION: BITTER CREEK REST AREA,
WEST BOUND LANE,
SWEETWATER COUNTY, WYOMING

PERMIT NUMBER: Wy-0020966

The Wyoming Highway Department operates 2 rest stops on Interstate Highway 80, approximately 38 miles east of the City of Rock Springs, Wyoming. The facilities are known as the Bitter Creek Rest Areas; there being 1 for the east bound lane and another for the west bound lane. Both are served by small package wastewater treatment plants which discharge to the Bitter Creek drainage (Class IV water) via unnamed dry draws.

The proposed permit requires compliance with secondary treatment standards effective immediately. The Highway Department has committed to eliminate both discharges during the 1980 construction season, therefore, the permits expire on November 30, 1980.

The proposed permits require periodic self-monitoring of effluent quality with reporting of results quarterly.

(12) PERMIT NAME: CITY OF CODY, WYOMING

MAILING ADDRESS: 1338 RUMSEY AVENUE
CODY, WYOMING 82414

FACILITY LOCATION: CITY OF CODY WATER TREATMENT
PLANT, PARK COUNTY, WYOMING

PERMIT NUMBER: Wy-0023647

The City of Cody, Wyoming operates a water treatment plant located on Beck Lake, which lies just south of the City. The plant draws water from the lake, adds alum and lime to aid in the removal of suspended solids, filters the water through sand filters, adds chlorine and then distributes the finished water to the City's water supply system. Wastewater results from the backwashing of the filters. The filter backwash water is routed to two settling ponds which discharge back to Beck Lake (Class II water).

The proposed permit requires self-monitoring of effluent quality on a regular basis with reporting of results quarterly. The permit is scheduled to expire on May 30, 1985.

(13) PERMIT NAME: TRUE RANCHES, INC.

MAILING ADDRESS: P.O. DRAWER 2360
CASPER, WYOMING 82602

FACILITY LOCATION: LAK FEEDLOT, NW¼,
SECTION 7, T44N, R60W,
WESTON COUNTY, WYOMING

PERMIT NUMBER: Wy-0023353

True Ranches, Inc. operates a cattle feedlot known as the LAK Feedlot, which is located on the banks of Stockade Beaver Creek (Class II stream) near Newcastle, Wyoming. The feedlot is uncovered, is approximately 5 surface acres in size and has a maximum capacity of 6,000 beef cattle.

The feeding pens are constructed at the top of a hump; drainage from approximately half of the pens flows to the south into an irrigation ditch which, in turn, feeds meadows below the feedlot. There is no danger of contamination of the Creek from this part of the run-off. Runoff from the remaining half of the pens drains to the north, then to the west and is captured in runoff control ponds. These ponds are designed to completely contain the runoff from a 25 year-24 hour storm event (3.0 inches).

The proposed permit requires immediate compliance with the "best available treatment" requirement, which is no discharge of runoff except in the case of precipitation events in excess of the 25 year-24 hour event. The proposed permit also contains requirements concerning sediment removal from the ponds, dead animal removal, decanting of the ponds, sludge and solid waste disposal and control of wastes from dipping vats and pest and parasite control units.

The permit is scheduled to expire on March 31, 1985.

(14) PERMIT NAME: ATLANTIC RICHFIELD COMPANY

MAILING ADDRESS: P.O. BOX 5540
DENVER, COLORADO 80217

FACILITY LOCATION: RIVERTON DOME FIELD, SW¼,

SE¼, SECTION 25, T1S, R4E,
FREMONT COUNTY, WYOMING

PERMIT NUMBER: Wy-0000671

(15) PERMIT NAME: MORSEY-WELLS OIL & GAS CORPORATION

MAILING ADDRESS: P.O. BOX 662
JEFFREY CITY, WYOMING 82310

FACILITY LOCATION: SHEEP CREEK FIELD, CHEYENNE
LEASE 030080-A, SW¼, SECTION 14,
T28N, R92W, FREMONT COUNTY, WYOMING

PERMIT NUMBER: Wy-0025887

Facilities are typical oil treaters located in Fremont County, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The discharges are to the Little Wind River and Sheep Creek (Class II waters), respectively.

The discharges must meet Wyoming's Produced Water Criteria effective immediately. No chemical limitations have been imposed on these facilities except for oil and grease (10 mg-1) and pH (6.5 — 8.5). This is due to the extreme aridness of the area which allows for beneficial use of the water for agricultural purposes. 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, 1983.

(16) PERMIT NAME: PBM OIL COMPANY

MAILING ADDRESS: MEETEETSE, WYOMING 82433

FACILITY LOCATION: WEST SAGE CREEK FIELD, EMMETT
LEASE, NE¼, SW¼, SECTION 14,
T57N, R98W, PARK COUNTY, WYOMING

PERMIT NUMBER: Wy-0023485

(17) PERMIT NAME: TEXACO, INC.

MAILING ADDRESS: P.O. BOX 2100
DENVER, COLORADO 80201

FACILITY LOCATION: GARLAND CONSOLIDATED BATTERY,
GARLAND FIELD, NE¼, LOT 52,
T56N, R97W, BIG HORN COUNTY, WYO.

PERMIT NUMBER: Wy-0002364

(18) PERMIT NAME: UNION OIL COMPANY

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

FACILITY LOCATION: WAGNER LEASE, SE¼,
SECTION 14, T57N, R98W,
PARK COUNTY, WYOMING

PERMIT NUMBER: Wy-0001180

(19) PERMIT NAME: TEXACO, INC.

MAILING ADDRESS: P.O. BOX 2100
DENVER, COLORADO 80201

FACILITY LOCATION: GRAHAM BATTERY, GARLAND FIELD,
SE¼, SW¼, LOT 59, T56N,
R97W, BIG HORN COUNTY, WYOMING

PERMIT NUMBER: Wy-0002267

(20) PERMIT NAME: ATLANTIC RICHFIELD COMPANY

MAILING ADDRESS: P.O. BOX 5540
DENVER, COLORADO 80217

FACILITY LOCATION: LONGS CREEK WELL NO. 1, SE ¼,
SECTION 5, T31N, R94W,
FREMONT COUNTY, WYOMING

PERMIT NUMBER: Wy-0028037

(21) PERMIT NAME: BRINKERHOFF DRILLING, INC.

MAILING ADDRESS: 2410 ANACONDA TOWER
555-17th STREET
DENVER, COLORADO 80202

FACILITY LOCATION: TRIBAL NO. 22, SHELDON LEASE,
NE¼, SECTION 22, T5N, R2W,
FREMONT COUNTY, WYOMING

PERMIT NUMBER: Wy-0025291

(22) PERMIT NAME: SOHIO PETROLEUM COMPANY

MAILING ADDRESS: P.O. BOX 673
RUSSELL, KANSAS 67665

FACILITY LOCATION: SOUTH SAND DRAW UNIT, SE ¼,
SECTION 36, T32N, R95W,
FREMONT COUNTY, WYOMING

PERMIT NUMBER: Wy-0000493

Facilities are typical oil treaters located in Fremont, Park and Big Horn Counties, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The PBM, Texaco (WY-0002364) and Union facilities discharge to Class II waters, Polecat Creek, the Shoshone River and Sage Creek, respectively. Arnoldus Lake (Class III) receives the other Texaco discharge (Wy-0002267). The Arco, Brinkerhoff and Sohio facilities discharge to Class IV waters, the West Fork of Long Creek and Teapot Wash.

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 permits is December 31, 1983.

(23) PERMIT NAME: HUSKY OIL COMPANY

MAILING ADDRESS: P.O. BOX 380
CODY, WYOMING 82414

FACILITY LOCATION: HALFMOON TANK BATTERY,
SECTION 23, T102W, R51N,
PARK COUNTY, WYOMING

PERMIT NUMBER: Wy-0000353

(24) PERMIT NAME: MARATHON OIL COMPANY

MAILING ADDRESS: P.O. BOX 120
CASPER, WYOMING 82601

FACILITY LOCATION: BYRON CONSOLIDATED BATTERY,
LOT 46, SECTION 23, T56N,
R97W, BIG HORN COUNTY, WYOMING

PERMIT NUMBER: Wy-0001732

(25) PERMIT NAME: SOHIO PETROLEUM COMPANY

MAILING ADDRESS: P.O. BOX 30
CASPER, WYOMING 82602

FACILITY LOCATION: ALKALI ANTICLINE UNIT, SW¼,
SECTION 29, T95W, R55N,
BIG HORN COUNTY, WYOMING

PERMIT NUMBER: Wy-0000507

Facilities are typical oil treaters located in Park and Big Horn Counties, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The Husky facility discharges to Sulphur Creek, and the Marathon and Sohio facilities discharge to the Shoshone River (all are Class II waters).

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 permits is December 31, 1983.

(26) APPLICANT NAME: BANKS OPERATING COMPANY

MAILING ADDRESS: P.O. BOX 487
GILLETTE, WYOMING 82716

FACILITY LOCATION: BANKS FEDERAL NO. 1, SW¼, SW¼,
SECTION 5, T48N, R90W,
WASHAKIE COUNTY, WYOMING

PERMIT NUMBER: Wy-0028592

(27) APPLICATION NAME: JUNIPER PETROLEUM COPORATION

MAILING ADDRESS: 1660 LINCOLN STREET
DENVER, COLORADO 80264

FACILITY LOCATION: EAST LANCE CREEK UNIT "B", 19 WELL
TANK BATTERY, SE¼, SECTION 26,
T36N, R64W, NIOBRARA CO., WYOMING

PERMIT NUMBER: Wy-0028584

Facilities are typical oil treaters located in Washakie and Niobrara Counties, Wyoming. The produced water is separated from the petroleum product through the use of heater treaters and skim ponds. The discharges are to Class IV waters, Cottonwood Creek and Crazy Woman Creek, 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 Banks permit is December 31, 1984, and for the Juniper permit is December 31, 1982.

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 FWPCAA will be protected.

PUBLIC COMMENTS

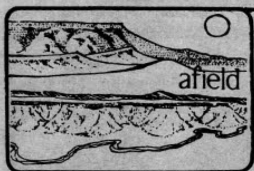
Public comments are invited any time prior to May 2, 1980. Comments may be directed to the Wyoming Department of Environmental Quality, Water Quality Division, Permits Section, Hathaway Building, Cheyenne, Wyoming 82002, or the U.S. Environmental Protection Agency, Region VIII, Enforcement Division, Permits Administration and Compliance Branch, 1860 Lincoln Street, Denver, Colorado 80295. All comments received prior to May 2, 1980 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-80-003



by Hannah Hinchman

JACKSON HOLE, Wyo. — "Spring skiing" is spoken of so reverently in these parts we decided this was a good time to try downhill skis. We ventured to Teton Village, northwest of Jackson, on a warm, clear Saturday. Teton Village itself is a complex of ski condominiums and ski-related structures along the base of the steep Teton Range. The people who designed the buildings emphasized horizontal lines and a certain gradation of height so that the whole mass fits cleverly into the landscape. You would expect that those who planned Teton Village's appearance so carefully would be able to include an adequate sewage system in their scheme, but they did not. It's been a long, unpleasant battle to get them to meet Wyoming's standards for water quality.

We go high on the mountainside as soon as we can, as soon as I catch on to the motion of skiing well enough to handle a steeper pitch. From the clamor and color of the lift line we launch into quietness as our chair ascends. Just the hiss of the cable and faint delighted voices coming up from below. It is a relaxing ride and provides a good vantage point. But a Clark's nutcracker flies by at eye level and my first impulse is to hide, embarrassed to be seen in such a compromising position.

At each higher lift we see a difference in the people waiting in line. By the time we reach the lift for Thunder Bowl we have left behind the timid newcomers, the overdramatic novices and the fierce, remote teenagers, portable cassette players strapped to their chests and earphones in place. The people in the Thunder Bowl lift line seem quieter, absorbed, patient. The approaching skiers on the last stretch of slope form an elaborate choreography of overlapping sine curves.

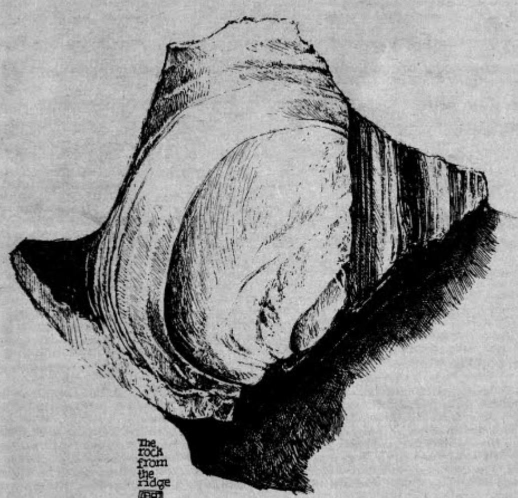
The lift deposits us on a ridge above a giant cirque. Ravens are balancing on the wind, we are in the region of trees twisted like taffy from the ceaseless blowing. There is an element of awe here that is not evoked on the lower slopes.

We begin our descent. Downhill skiing requires absolute attention and complete participation. The motion is aggressive and ebullient. You are playing with gravity's steady pull, but you're calling the shots, transforming its pull into speed and lightness. You must read the immediate terrain and make split-second responses. The topography is full of surprises; you must outwit it. You are in intimate touch with the mountainside.

At a breathing point in the run I look back up the bowl at the snowy meadows and realize their breadth. I see no permanent marks of man besides an unobtrusive ski lift that birds have appropriated for nests and perches. But there is no wilderness here. The cirque is filled with restless, thinking humans. Its wildness melts under so much attention, retreats over the ridge where it can resume its unexamined stillness. How many people with their curious stares does it take to evaporate wildness?

Still, downhill skiing is a graceful and thrilling exercise. It hones valuable skills of strength and attention, it's a way of actively experiencing the mountains. Perhaps some of the people who feel the urge to subdivide Jackson Hole for ranchettes will ski off some of their excess industriousness at Teton Village....

A few days later I'm relieved to find myself sweating on the top of a stony ridge north of Glenrock, Wyo. I've plodded up it, through silt mud as sticky as honey (they call it "gumbo"), over loose clanking metallic rocks, alongside vicious patches of yucca. Nothing graceful or thrilling about this. I feel shorter when I'm going uphill. But wildness is thick here. It seeps out of the stones. It's like an unbroken electrical field around an ancient pine whose roots flow out of an outcrop and dive into the ground again.



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WILD HORIZONS EXPEDITIONS, Box 2348-H, Jackson, Wy. 83001 (307) 733-5343. Guided backpacking, mountaineering, ski touring, field seminars in conservation. Emphasis on all aspects of conservation and wilderness education. Custom and family trips, small groups, free brochure.

BLACKIE. You say we can still be friends and partners, if not amorists. Where then are the black market scout-o-rama tickets? Looked in the cogstone, the pan pipes, beneath the nightshade leaf. I'll be at the Stockgrower's Bar, drinking amoretto; wear the foulard tie over your eyes and sing Berg's "Wozzeck." I'll try to pick you out. Cumquat.

HAWAII VACATION: Kona Coast, Old Hawaiian rural resort, health resort, Bed-Brkft, $88-134. wk., sl-db, 415-221-2121 1588 Fell St., Ca 94117.

"WIND RIVER TRAILS" by Finis Mitchell. Backpacking and fishing guide to the Wind River Mountains of Wyoming. Wilderness area of peaks, glaciers, forests, and lakes. $3.50 postpaid. Wasatch Publishers, 4647 Idlewild Road, Salt Lake City, Utah 84117.