

# High Country News

February 25, 1991

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A Paper for People who Care about the West

One dollar



John Horning

Upper Cataract Lake in Colorado's Gore Range

## Colorado enters a new water era

by Steve Hinchman

In Colorado, it is said, water flows uphill towards money. State water policy is the virtual prisoner of water developers. But not anymore. The death of Denver's Two Forks dam project has turned the state's archetypal Western water establishment on its head.

"The Denver Water Board's bubble has been burst, something the water buffaloes never thought could happen," says Chris Meyers, a lawyer for the National Wildlife Federation in Boulder. "There's a lot of chest-pounding and wake-attending now. But once people snap out of it, there will be recognition that the world is different."

How different is not yet clear. Some Front Range communities are now turning to a half-dozen or more other water proposals on the books, which Denver threatened would happen if it were not allowed to build Two Forks.

These projects, like Two Forks, would all move large amounts of water from outlying basins to urban areas [see box on page 10]. And, also like Two Forks, they would disrupt their local economies as well as cause massive environmental damage.

"The bottom line is that we are being forced to do smaller and less effective projects that will be, in the long run, more damaging than Two Forks," admits Tom Griswold, the City of Aurora's utilities director.

In addition, there are a score of smaller projects, located mostly on the Front Range, that would transfer agricultural water to the cities. Some rural areas, like Rocky Ford in the lower

Arkansas Valley, have already lost much of their water, and with it their economies, communities and way of life.

But many of these water projects and reallocations may never materialize. The reason is that the veto of the \$1 billion Two Forks project by the U.S. Environmental Protection Agency last November ended the water developers' monopoly on power and legitimized environmental and social concerns. It has opened the decision-making process, split the ranks of the once united water barons and elevated the long shut-out environmental community to major-player status.

Colorado appears to be entering a new era of water management.

One example is the new spirit of cooperation that is sprouting up in the Gunnison River Basin and the San Luis Valley. Ranchers, city officials, state legislators, realtors, environmentalists,

ski resort owners and even water conservancy districts are beginning to work together for the first time. There is a new sense of common destiny.

"We can't destroy the whole periphery of Colorado for the helter-skelter expansion of the suburbs," says state Sen. Bob Pastore, D-Alamosa. Pastore's home district is opposing the American Water Development Inc. proposal to pump groundwater to the Denver area. He and his district are part of the growing statewide movement to resist further transfers of water to other basins.

Another example is the Northern Colorado Water Conservation District. Northern is based in Fort Collins and has historically taken the traditional approach to water development. The district has engineered two major transmountain water diversions, and is currently sponsoring the Cache La Poudre project. But the district's lawyer, Greg Hobbs, says the district is now beginning to protect all uses of water,

including recreation.

"I view my mission as the principal counsel of Northern to keep as much water as possible in our district, even if it's just to flow down the stream unused," Hobbs says. "That is really new for a water lawyer and a water conservation district."

Hobbs points out that Northern supported the designation of part of the Cache La Poudre River as Wild and Scenic. He also notes that the Upper Gunnison district is resisting further diversions to protect recreational flows.

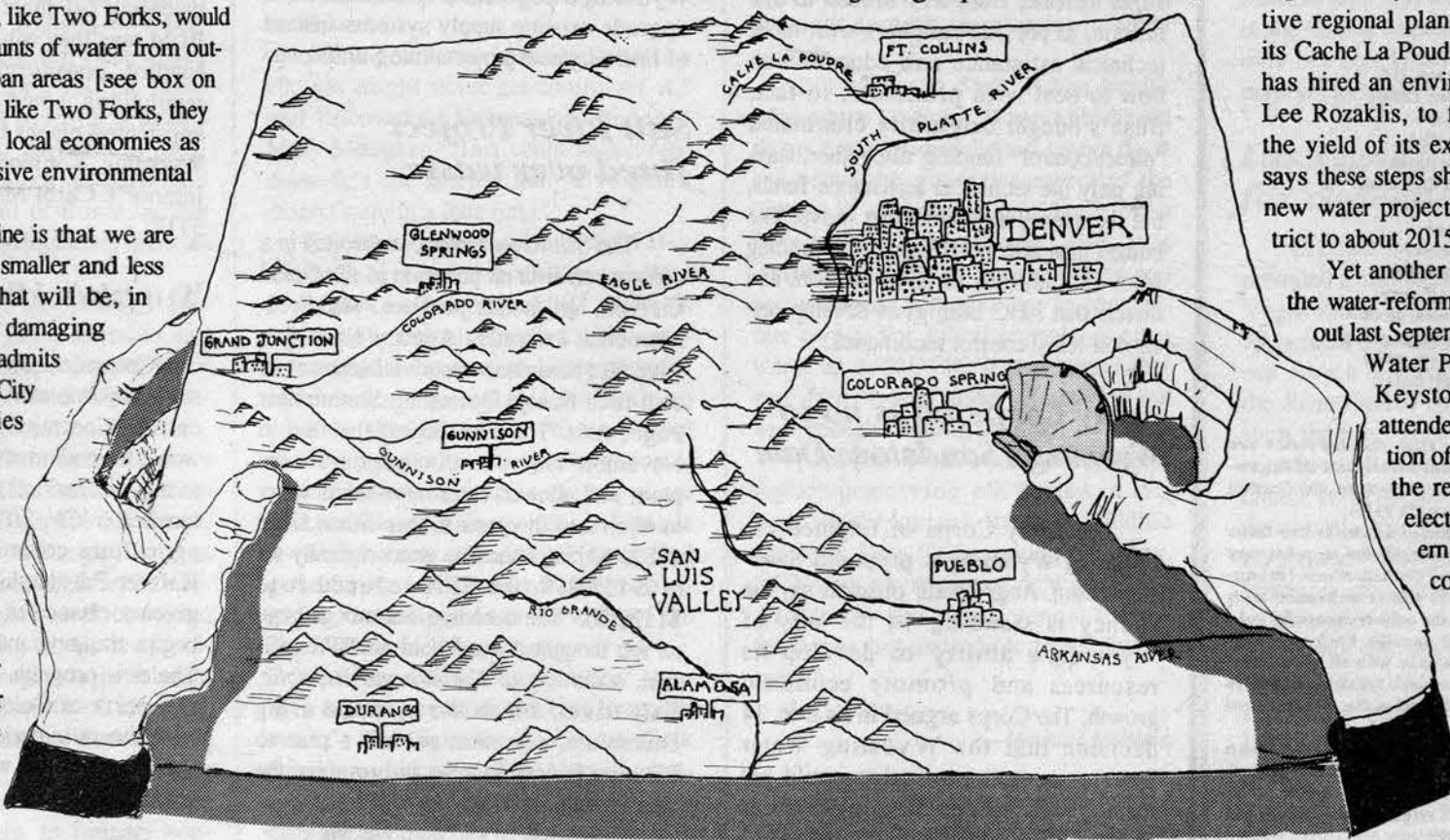
"The old institutions are now becoming the new institutions of protection for instream flows and recreational values," explains Hobbs. "Call it crass parochialism, but also realize that water is the most basic economic and quality-of-life resource we have in Colorado."

Northern has recently decided to focus on water conservation and operating efficiency, and long-range cooperative regional planning, before pursuing its Cache La Poudre project. The district has hired an environmental consultant, Lee Rozaklis, to find ways to increase the yield of its existing system. Hobbs says these steps should "put off a major new water project for the Northern district to about 2015 or 2020."

Yet another example of change is the water-reform legislation hammered out last September at the third annual Water Policy Retreat, held at Keystone. The session was attended by a growing coalition of environmental groups, the recreation industry and elected officials from Western Slope and headwaters counties.

Their proposed bills would promote water conservation and efficiency; require cities to investigate alterna-

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## HIGH COUNTRY NEWS

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## Dear friends,

### Mailbag

Debra Crawford-Arensmann writes from Hong Kong: "We've noticed in recent issues (recent to us, at least, because of the six-week time lag in the mail) that you have other subscribers from far places. We were a bit disappointed to learn that we don't qualify as your most distant subscribers, but perhaps we can claim the 'distinction' of being the most urban. In its 400 square miles (much of that unpopulated islands and undeveloped mountain areas), Hong Kong squeezes in 6 million people. That's roughly equivalent to packing the entire population of Colorado into the city limits of Colorado Springs. So you can see why we're hungry for news of the West and its open spaces." Debra's husband, Russ, worked with our computer layout wizard, Cindy Wehling, at the *Longmont (Colo.) Times Call* a few years ago. Both Crawford-Arensmans currently work on business publications in Hong Kong.

We're not sure why they're feeling inferior for not being far enough away. Indeed, we would need a globe and a tape measure to figure out who really is our farthest-flung subscriber. Other exotic mailing labels guide the paper to Kenya, Tanzania, Malawi, Uganda, Thailand and New Zealand.

A formerly far-flung reader graciously writes from Santa Cruz, Calif. "I have recently returned to the West after five years at school in Cambridge," says Dr. John K. Gamman, leaving us not quite sure whether to picture him in Massachusetts or, we think more probably, England. "*High Country News* helped keep me in touch with the issues

so crucial to understanding my homeland during my time away, and for that, thank you."

### A visitor!

Former intern Susan Bridges dropped by to tell us about her experiences as a Peace Corps volunteer in the Central African Republic. She said she will soon return there to work in health education. "Nothing is wasted over there," she said, adding that on returning to the United States she could not get over "the incredible waste." Susan worked as a canoe guide on the Colorado, Gunnison, Yampa and Platte rivers before coming to *High Country News*.

### Coyote slaughter

Michael Milstein's lead story about the federal Animal Damage Control agency (*HCN*, 1/28/91) is getting noticed in some of the right places. Michael tells us his article has been discussed in the Wyoming state senate, and reader Raymond F. Robinson of Reno, Nev., sent us a copy of his letter to Nevada's congressional delegation — Sens. Harry Reid and Richard Bryan and Rep. Barbara R. Vucanovich. Wrote Robinson: "If you can be interested in the matter of sane and reasonable predator control, I wish that you could have the time to read the detailed article on the problem published in the *High Country News*.... We need a fair, unbiased evaluation of the problem areas not decisions based utterly on old ingrained prejudices and the consideration of the almighty dollar. We cannot get that from the majority of the cattle interests, as is well recognized by those who don't wear chaps."

## HOTLINE

### ADC budget cut

President George Bush has proposed a 40-percent cut in federal funding for the Department of Agriculture's predator control activities, which annually kill tens of thousands of coyotes and other animals in the West (*HCN*, 1/28/91). In proposing the cuts in the 1992 budget, Office of Management and Budget officials noted that since the country spends millions of dollars each year to aid wildlife, paying to kill it is no longer cost-effective. While slashing money for direct killing operations from \$13 million this year to \$8 million in 1992, the administration's proposal includes a slight increase, from \$11 million to \$12 million, to provide ranchers with more technical assistance and education on how to deal with predators. In fact, Bush's budget originally eliminated "direct-control" funding altogether, leaving only the technical assistance funds, but the agency appealed that move. The budget plan also boosts research funding from \$8.7 million to \$9.3 million, and directs that ADC biologists develop better non-lethal control techniques.

### Army Corps says no to Wyoming's Sandstone Dam

The Army Corps of Engineers is opposing Wyoming's proposed Sandstone Dam. Angry state officials say the agency is standing in the way of Wyoming's ability to develop its resources and promote economic growth. The Corps argued in its Dec. 14 decision that the Wyoming Water Development Commission could not identify who needed almost two-thirds

of the 32,300 acre-feet per year of water Sandstone would impound. The Environmental Protection Agency agrees. EPA Regional Administrator James Scherer told the *Casper Star-Tribune* federal law requires that a need be demonstrated for a project in order to justify its impacts. "When a need is not identified for over half the project, it becomes difficult to say that there is a justification for the environmental degradation that would take place," he said. A commission study also reports that the irrigators slated to receive the specified third of Sandstone's water would not be able to pay for it. Sandstone proponent Rep. Pat O'Toole, D-Wyo., told the *Star-Tribune* that water must be available for demand to evolve. Wyoming's Legislature voted Dec. 20 to upgrade existing supply systems instead of building new projects like Sandstone.

### Salt River Project fined over waste

The Salt River Project, embroiled in a controversy over air pollution in the Grand Canyon, has another problem. The Environmental Protection Agency fined Salt River for hazardous waste violations at its coal-fired Navajo Generating Station near Page, Ariz. The EPA levied the fine in November 1989, after discovering that the plant had allowed chromium-laced water to seep into the ground four times since 1982. Although the fine was originally set at \$455,998, the EPA reduced it to \$113,500. "The discharge was not as large as we thought it was," said an EPA official, according to *The Arizona Republic*. Salt River, which has stopped using chromium, now must submit a plan to EPA on how to sample and analyze the contaminated ground.

### Renewal notices

In an effort to conserve resources — paper, postage and time — we are going to cut back on the number of renewal notices we send to subscribers. We think *HCN's* readers subscribe because they want the information the paper brings them, not because they have been prodded and cajoled through a clever renewal campaign. We hope you agree.

Starting in March, subscribers will receive only two renewal notices (instead of three) before their subscriptions end. The first one should arrive about six weeks before the end of your subscription. Your prompt reply to this notice will enable us to make sure your subscription runs uninterrupted and will save us the expense of additional follow-up notices. However, because the mail does not always get through, we will send a second "Quick" message when you have only one issue left on your subscription, if we haven't heard from you.

Circulation manager Kay Bartlett reminds you that when you send in your payment, be sure to include either your renewal notice, your address label or a photocopy of the label side of your notice. She needs that information to properly credit your payment.

We make every effort to keep our circulation information up-to-date and to make sure you get your paper every other week. With our small staff, biweekly production schedule and expanding circulation, this isn't always an easy task. We ask our readers' help to make this reduced level of renewal notices work.

— Larry Mosher and Mary Jarrett  
for the staff

### BLM simplifies oil shale claims rules

The Department of the Interior plans to streamline the process for patenting oil shale claims. Under the new proposal, which is open to public comment until March 11, oil shale discoveries would be considered valid if the shale was at least one foot thick and yielded 15 gallons of shale oil per ton of rock and at least 1,500 gallons per acre. Furthermore, the government would be precluded from challenging existing claims for lack of assessment work — no matter how long the claim lay idle — so long as the claimant resumed assessment work before the challenge was filed. Critics charge that the new rules are not in the public interest and will make patenting oil shale claims too easy; the BLM says they will ensure that claims are handled "consistently and equitably." The regulations would apply to some 1,600 unpatented claims in Colorado, Utah and Wyoming. For more information, contact Interior's Carol MacDonald at 202/208-5717.

### 'Surplus elk' bills killed

Colorado's elk won't be sold as live-stock anytime soon. The state House Agriculture Committee killed two bills that would have allowed the Division of Wildlife to trap elk and sell them to private wildlife ranches (*HCN*, 2/11/91). Members of the agriculture committee said the DOW's Habitat Partnership Program should be given a chance to work before the state begins trapping and selling game animals. The new program, which is being tried in two parts of Colorado, aims to involve landowners in decisions about game management in places where wildlife conflicts with agriculture.

## WESTERN ROUNDUP

### TB threatening West's wild elk herds

With outbreaks of deadly tuberculosis infecting domestic elk ranches in Montana and Canada, federal and state wildlife managers fear the disease could spread — or already has — to wild elk herds in the West, especially the giant herds that help make the Yellowstone region famous. Biologists are not sure what they could do to save the animals if that happened.

"It's pretty damn scary," said Wyoming Game and Fish Department spokesman Larry Kruckenberg. "We are gravely concerned about this."

Biologists say the threat tuberculosis poses to wildlife far overshadows that of brucellosis, a disease carried by some Yellowstone bison (*HCN*, 2/11/91). Tuberculosis in humans can be treated with antibiotics, but there is no cure for it in wildlife. The only sure way to stop its spread is to kill all animals that possibly have been exposed to the disease.

Elk breeders deny that, saying elk should be killed only if they test positive for exposure to the disease. But breeders agree that current tests are largely inaccurate.

No tests have yet been done on the 80,000 wild elk around Yellowstone to tell whether they have been exposed to tuberculosis, but Montana game officials may begin testing hunted elk next fall. And while there is no evidence the disease has spread to wild herds — something that might not become evident for many decades — many are worried that if it does, or has, it could threaten the elk hunting industry. Elk hunting brings \$25 million to Wyoming each year, and nearly as much to Montana and Idaho.

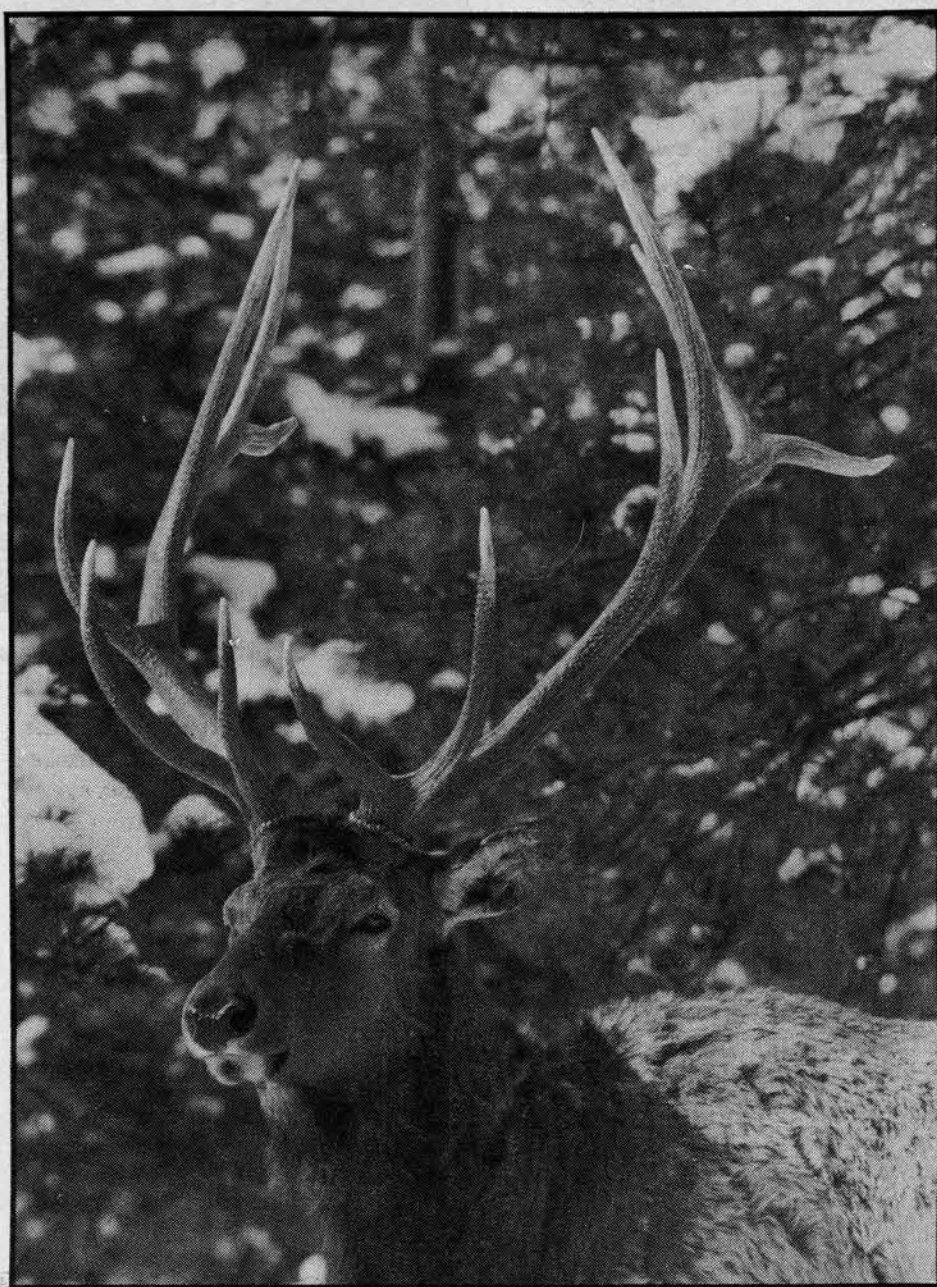
"It's a petrifying situation," said University of Calgary Professor Valerius Geist, an elk authority who has long criticized game farming as a way to incubate disease. "What exactly are you going to do but kill hordes of animals?"

At the center of current concern is a game farm in Corwin Springs, Mont., just north of Yellowstone National Park and right in the middle of an elk migration route. Owned by Welch Brogan, the now-quarantined ranch holds about 140 domestic elk; 28 have tested positive for exposure to bovine tuberculosis.

Montana State Veterinarian Donald Ferlicka said the elk probably have been infected since at least 1987, although state officials and, apparently, Brogan have only known of the outbreak for a few months. Many of the tuberculosis outbreaks in Alberta, Canada — where authorities have quarantined close to half of the province's roughly 130 elk farms — have been traced back to Brogan's ranch. So has another infection in Montana, where state livestock officials have barred all movement of domestic elk until the tuberculosis infections are curtailed.

In 1989, Brogan was charged with illegally capturing game animals and with failing to maintain a proper fence after he lured about 80 wild elk into confinement with his infected herd for several days. When Montana wardens noticed the extra animals and told Brogan they wanted to inspect his ranch, said Warden Sgt. Jim Kropp, Brogan turned the wild elk loose before the wardens returned. A justice court convicted Brogan of the charges, but he is appealing the decision. Brogan is in Alaska, where he owns a caribou farm. His wife, in Montana, refused to provide his phone number there.

Even now, the quarantined ranch is not completely secure. In January war-



Kent and Donna Dannen

#### Bull elk

dens killed two wild deer that somehow got into the game ranch. Deer, like most wildlife, can also contract and carry tuberculosis. Before the quarantine that isolated the ranch elk, they often grazed in an open pasture surrounded only by an electric fence that was commonly breached during power failures by ranch elk escaping and wild elk entering.

Tuberculosis, an ultimately fatal disease, infects certain organs, especially the lungs, and is transmitted through contact or bodily fluids, causing lesions and malnutrition. Tuberculosis passes best between closely confined domestic animals, but Geist said Wyoming's state feeding grounds and the elk's practice of licking each other during courtship would allow it to spread easily in wild herds, too.

"If it gets loose in the Yellowstone elk, we might never get control of it," said Yellowstone National Park biologist Mary Meagher. "This could be horrendous. It's the scariest thing I've heard around here in a long time."

In Wyoming, where a controversy has been brewing over whether to allow game ranching, state wildlife officials say the tuberculosis scare is a good argument against the practice. Montana game officials have downplayed the threat to wildlife, though, and say hunters need not worry about eating elk, since it would be obvious if an animal were infected. Geist said authorities in Canada — where many diseased elk have fled game farms — have lagged in acknowledging the danger, so as not to draw the wrath of alarmed sportsmen.

Calling Geist a "do-gooder" who "got his degree from the Ben Franklin store," Bob Spoklie, a Montana elk breeder and director of the North American Elk Foundation, said wildlife officials are overreacting to the problem. Elk

ranchers — who mainly raise elk for their antlers to be ground up and sold as aphrodisiacs in the Orient — are committed to ridding their herds of the disease, he said.

"It isn't like it's a big epidemic," Spoklie said. "It's something that flies around in the air and sticks to everything."

He said breeders are worried about wild elk passing tuberculosis to their domestic animals, because game officials have been slow in testing wildlife for infection. Testing inaccuracies raise questions about the true extent of the outbreak, Spoklie said. Elk ranchers, he said, contribute nearly \$20 million to Montana's economy and should not have to kill entire herds, since the test is accurate enough to pinpoint infected animals.

But Montana State Public Health Laboratory Director Doug Abbott said that is exactly what the test cannot do. It can prove the general presence of the disease in a herd, he said, but it often fails on specific animals. Still, it is unlikely that whole domestic herds will be destroyed. Montana has to compensate owners for killed animals — often worth up to \$10,000 if they appear disease-free — and state officials do not have enough funding for that.

"The public has invested millions of dollars preserving elk habitat in this area," said Montana Regional Wildlife Manager John Cada, noting the irony. "If it's not taken care of right away, this disease has the real potential to now jeopardize this incredible public investment."

— Michael Milstein

Michael Milstein reports for the *Billings Gazette* from Cody, Wyoming.

## HOTLINE

### Earth First! in hotter water

A federal grand jury has broadened charges against five Earth First! activists, claiming that attacks by the group from 1987 to 1989 were part of a master plan to damage nuclear power plants and other facilities in the West. A new indictment combines previous charges and alleges a single plot, reports *The Arizona Republic*. Key to the case is an alleged attempt by members of the radical environmental organization to topple high-voltage lines for the Central Arizona Project, a mammoth desert irrigation project (*HCN*, 6/19/89). The purported attempt is considered part of a training exercise for a broader attack on lines leading to three nuclear power plants. The indictment also charged that some of the defendants cut 29 power poles leading to a uranium mine near the Grand Canyon and sabotaged ski lifts. An April 2 trial date has been set for Mark Davis, Margaret Millett, Marc Baker and Ilse Asplund, all of Prescott, Ariz. Also indicted was Dave Foreman of Tucson, who helped found Earth First! a decade ago and who resigned from it last summer. Most of the charges against him stem from his distribution of his book *Ecodefense: A Field Guide to Monkey-wrenching*, according to his attorney, Jerry Spence. "He's being indicted for writing a book, and that is a new low in American jurisprudence," Spence told the *Republic*.

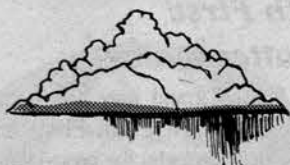
### Grizzly killers may have to prove self-defense

Arguing that some people could be abusing the claim of "self-defense" when shooting a grizzly bear, the Interagency Grizzly Bear Committee is considering a recommendation to make hunters who kill bears prove it was a matter of life and death. According to Chris Servheen, the committee's technical administrator, proof would be established by tougher investigations by wildlife law enforcement officers. Hunters who claim self-defense currently are not penalized for shooting the animal, which is protected by the Endangered Species Act. The committee is investigating four grizzly bear killings last fall, three by hunters claiming self-defense. Meanwhile, despite strong public opposition, federal officials are proceeding with a plan that would allow hunters to shoot designated "nuisance" grizzlies outside Yellowstone National Park. Nuisance bears are those that have become habituated to human food and do not shy away from populated areas. Servheen noted that the hunt has been held only twice in four years in the Glacier National Park vicinity, with only one bear killed. He expects similar numbers for the Yellowstone area.

### Las Vegas plans for cleaner air

Officials in Las Vegas, Nev., have unveiled a plan to clean up the air in Las Vegas valley. The city, which has grown 39 percent over the last decade, has serious carbon monoxide problems, reports the *Reno Gazette-Journal*. "It is time to stem the tide," said Clark County Commissioner Bruce Woodbury. "If the choice is between continued growth and decent air quality, growth will have to be slowed." The plan calls for stricter industrial emissions standards and higher penalties for violators. Woodbury hopes this will send a message to California industries looking to relocate to Las Vegas because of its traditionally lax pollution standards. The plan also asks for \$20 million annually to improve mass transit and create ride-sharing and park-and-ride systems.

## HOTLINE



### Does Utah cloud seeding worsen Wyo. drought?

Four years of drought in parts of Utah and Wyoming have prompted politicians in both states to address ranchers' growing concerns about the potential negative effects of cloud seeding over Utah's Wasatch Range. A recent study of the areas' precipitation records by the University of Wyoming's Water Research Center proved inconclusive, according to the center's associate director, Vic Hasfurther. Hasfurther did say, "From a scientific standpoint, I can't sit there and say that Utah is doing bad things," reports the *Casper Star-Tribune*. But Dan Perdue, the planning coordinator for Wyoming Gov. Mike Sullivan, says, "I still think there are a lot of unanswered questions." Sullivan plans to ask the Legislature for \$70,000 to enable Wyoming to participate in a Utah State University study of cloud seeding.

### Paving over a way of life

Residents of tiny Polebridge, Mont., have so far been unable to halt construction of a bridge through their community to Glacier National Park's northwest border. The Federal Highway Administration plans a \$1.8 million, two-lane, concrete bridge over the North Fork of the Flathead to replace a one-lane wooden span destroyed by a 1988 wildfire. Residents of the isolated town near the Canadian border — population about 50 — fear that an enlarged bridge will bring Glacier traffic through Polebridge. Rebuilding the one-lane timber bridge would retain the town's character and have less impact on the pristine river, says Tom Owen, one of the area's few residents with a telephone. Owen describes Polebridge as an historic rural community with few amenities and one long, dusty access road. "People live here because they like the lifestyle, the risks, the hardships," Owen explained. "They don't want to see that change. We're frustrated about the government being able to step in and do whatever they want." Resources, Ltd., a community activist group led by Owen, filed suit on Dec. 4 to halt the project, charging that the Army Corps of Engineers had approved the project despite violations of pollution laws, infringement on the Flathead's Wild and Scenic River designation, and strong local opposition. A U.S. District Court rejected the suit in December. The FHA and the Corps say the bridge is "necessary" for reasons of safety and convenience; Glacier National Park says it needs the bridge to gain access to a new ranger station built in anticipation of the enlarged span. Resources, Ltd., says the community will appeal the court decision.



Larry Wilson

## Livermore Lab enters oil shale sweepstakes

No matter how many times oil shale singses those who try to pry it from the earth for profit, there always seems to be another group with another plan, usually involving tax dollars, ready to pick up "the rock that burns."

The latest is the Lawrence Livermore National Laboratory. It has developed a long-term plan whose goal is to build a commercial-scale oil shale retort, most likely on Colorado's Western Slope, that would produce \$30-a-barrel shale oil by the year 2000.

Although Livermore has been doing shale research for over a decade, 1992 could be the year it takes its shale-retorting experiment out of the laboratory and into the field, said Robert Cena, head of the Lawrence Livermore oil shale division. Livermore has been running a four-ton-per-day shale retort at its facility in Livermore, Calif., on a \$4 million yearly Department of Energy budget.

The lab then plans to find corporate partners and build a 100-ton-per-day, \$20 million pilot plant that would run for three to six months. A 1,000-ton-a-day retort would be the next step before tackling a 10,000-ton-per-day retort, Cena said.

But a few things may have to happen first. One is transferring to Livermore the \$8 million in federal matching funds allocated to the recently cancelled Occidental Petroleum Oil Shale Test Facility. Occidental President Ray Irani announced cancellation of the project to a group of New York investors Jan. 14. Earlier this month Colorado politicians and shale backers traveled to Washington, D.C., to find out the status of the \$8 million allocation and ways to entice private firms or government agencies, including Livermore, to pick up the federal cash and take over the task.

The money was not allocated specifically to Occidental, but to anyone willing to match the funding and build a shale facility on the federal tract, said Jim Evans of the Northwest Regional Council of Governments.

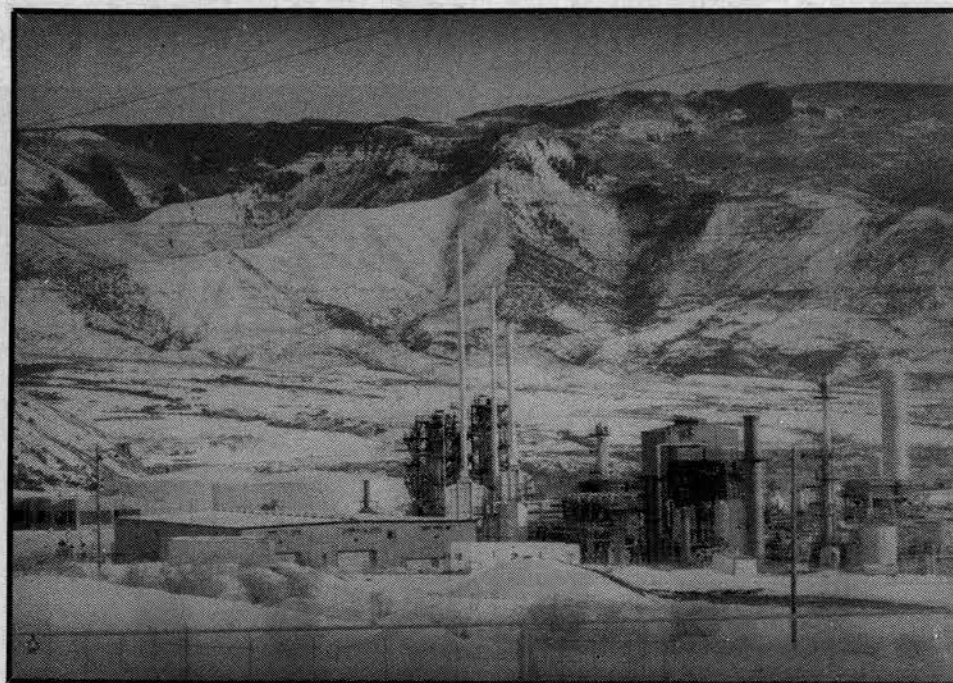
If that \$8 million "and some additional support" could be redirected to Livermore's plans, Cena said, the final design of the 100-ton-per-day retort could be completed in 1991 and construction could begin in 1992. Corporate funding is also being sought, Cena said, since Occidental's willingness to match federal dollars was part of the agreement.

"Five major oil companies are interested and don't want to see this research die on the vine," Cena said. Negotiations are under way with the private firms, and Cena said he was "fairly confident" some contracts for financial support would be signed in the next couple of months.

The planned Occidental site and test facility would be "ideal" for the retort, Cena said, because all accessory facilities — roads, water, shale mine and power lines — are in place. Also, the retort wouldn't have to run the entire gamut of regulatory and environmental permitting processes.

### Oxy's vision

Occidental's 1,200-barrel-a-day test facility was envisioned as a 10-year, \$200 million project that would have created up to 200 permanent jobs. Its goal was to produce and test commercially viable shale-based products, ranging from adhesives to asphalt, and a shale-fueled electric generating plant. The test mine and retort were to be located west of Meeker, Colo., on a tract that Occidental leased from the federal gov-



Lynn Burton

The Unocal facility, where retorted shale is prepared for shipment

ernment in 1973 for \$117 million, when the firm was planning a 50,000-barrel-a-day shale facility. Half the lease money went to state and local governments to pay for the project's impacts.

The project was a favorite of Occidental's late chairman, Armand Hammer, who helped develop its in-situ technology. This requires burning the shale underground before processing it above ground, which would avoid massive open-pit mining. In the fall of 1981, Occidental cancelled the larger project, laying off 500 workers. Exxon followed in May of 1982 when it killed its 100,000-barrel-a-day Colony Shale Project, leaving 2,200 workers unemployed.

Occidental's infrastructure includes roads, buildings, power lines, large water-pumping units, several monitoring wells and, most noticeably, two huge ventilation shafts. Both shafts, about 1,000 feet deep, are topped by steel headframes.

Under the initial plan for "temporary abandonment" of the project, Occidental will allow all the ventilation shafts to be flooded with groundwater, said Bill Hill, assistant area manager of the Bureau of Land Management's White River Resource Area. This would spare the company \$400,000 a year in pumping costs.

The BLM has an "extensive hydrological monitoring program" in place, Hill said. If the flooding causes any problems with underground or above-ground water, the BLM can force Occidental to mitigate those damages, even to the point of making it pump water from the shafts. The buildings and other improvements will remain in place, he added, but if the lease is abandoned a complete reclamation plan will be executed.

Occidental still wants to maintain its lease, said Hill. The original lease will expire in 1992, but the company won't have to start paying "substantial" lease royalties until 1997. In the meantime it can sell or assign the lease to another company, or try to develop the project again, Hill said.

The Department of Energy requested no money for shale research in the 1992 budget, although Congress allocated \$750,000 in federal matching funds for the Occidental facility in the 1990 budget and another \$8 million in matching money for the project in the 1991 budget.

Those funds were approved before the Persian Gulf war and the new talk of developing a national energy policy. The war and its energy-related impacts have

many shale enthusiasts hoping the government will include shale research for domestic or military purposes. Shale backers are expected to argue again that shale oil can be a secure domestic alternative to imported oil.

The two private firms currently developing oil shale have expressed no interest in getting involved in the test facility. The New Paraho Corp. is working on oil shale-based asphalt, and Unocal's 10,000-barrel-a-day plant and mine north of Parachute has produced 4.5 million barrels of shale syncrude under the terms of a \$400-million federal price-support contract. Spokesmen for both companies said they have their own shale properties and are happy with their current retorting and processing technology.

### The 'next generation'

The reason Livermore believes its above-ground retort can eventually produce oil from shale for \$30 a barrel is that "it's the next generation of retort," Cena said. The Hot Recycled Solid Shale Retort uses less energy, re-uses waste energy, is able to retort a higher percentage of raw shale and incorporates a number of other technological efficiencies and advances other retorts, such as Unocal's, do not, he said. Unocal's federal price-support contract guarantees the company about \$50 a barrel for its product, according to Unocal spokesman Chris Treese.

Shale's military connection started in the late 1970s, during the last energy crunch, when the Department of Defense began negotiations with Unocal that eventually led to the company's current \$500 million price-support contract, said Treese. The DOD wanted "a validation test of shale-derived diesel and jet fuel," he said. The DOE eventually took over the contract, but in the mid-1980s, shale-based jet fuel was tested in military jets and found to have a number of appealing qualities not found in regular jet fuel, Treese said. Treese had no estimate of what value those qualities had to the Pentagon.

Now, the combination of Livermore's future plans, available federal money, a real shooting war in the Persian Gulf and a seeming willingness to put oil shale in the nation's future energy mix has offset the disappointment from Occidental's pullout.

— Jon Klusmire

Jon Klusmire is the editor of *Trilogy*, a new outdoor magazine published in Lexington, Kentucky. He lives in Glenwood Springs, Colorado.

# How Portal, Ariz., forced a gold mining firm to back off

Aided by scientists and environmentalists from all over the country, residents of the small and isolated community of Portal, Ariz., have stalled plans for gold exploration in the biologically unique Chiricahua Mountains of southeastern Arizona. But the issue of mineral exploration on public lands still remains unresolved.

The Newmont Mining Corp., the largest producer of gold in North America, has voluntarily suspended its plans to explore for gold on 1.8 acres of the Coronado National Forest. Just before Christmas, James Hill, Newmont's vice president for corporate relations, announced that Newmont would defer exploration activity for one year, giving residents a chance to protect the area.

"There are some areas of public lands for which any mineral exploration is inappropriate, no matter how negligible the environmental impact of such exploration may be," Hill wrote. Nevertheless, in a phone interview, Hill said that if residents were unable to protect the area, "then that's another issue."

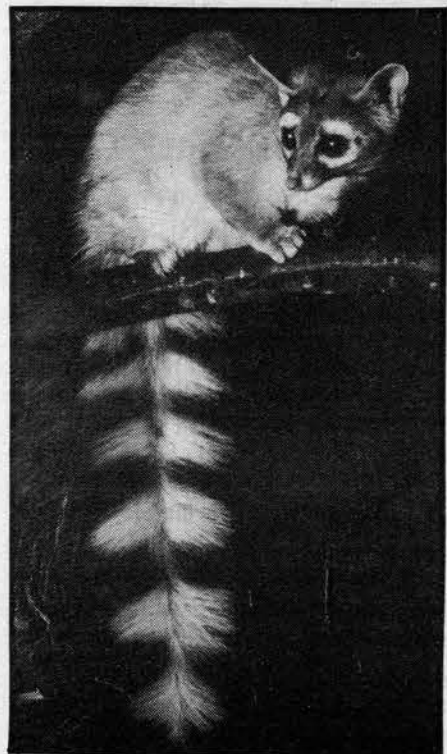
Residents speculate that the company chose to avoid the negative publicity that would have been generated from mining at Portal.

Newmont "has other areas to prospect for gold without nearly as much environmental and political baggage," says Wade Sherbrook, resident director of the Southwestern Research Station of the American Museum of Natural History. The research station, which is located in Portal, has sponsored over 600 different scientific studies of the region's ecology.

"That has been our saving grace," says Portal resident Robert Morse. "We've had people from all over who've done research here and know the area well."

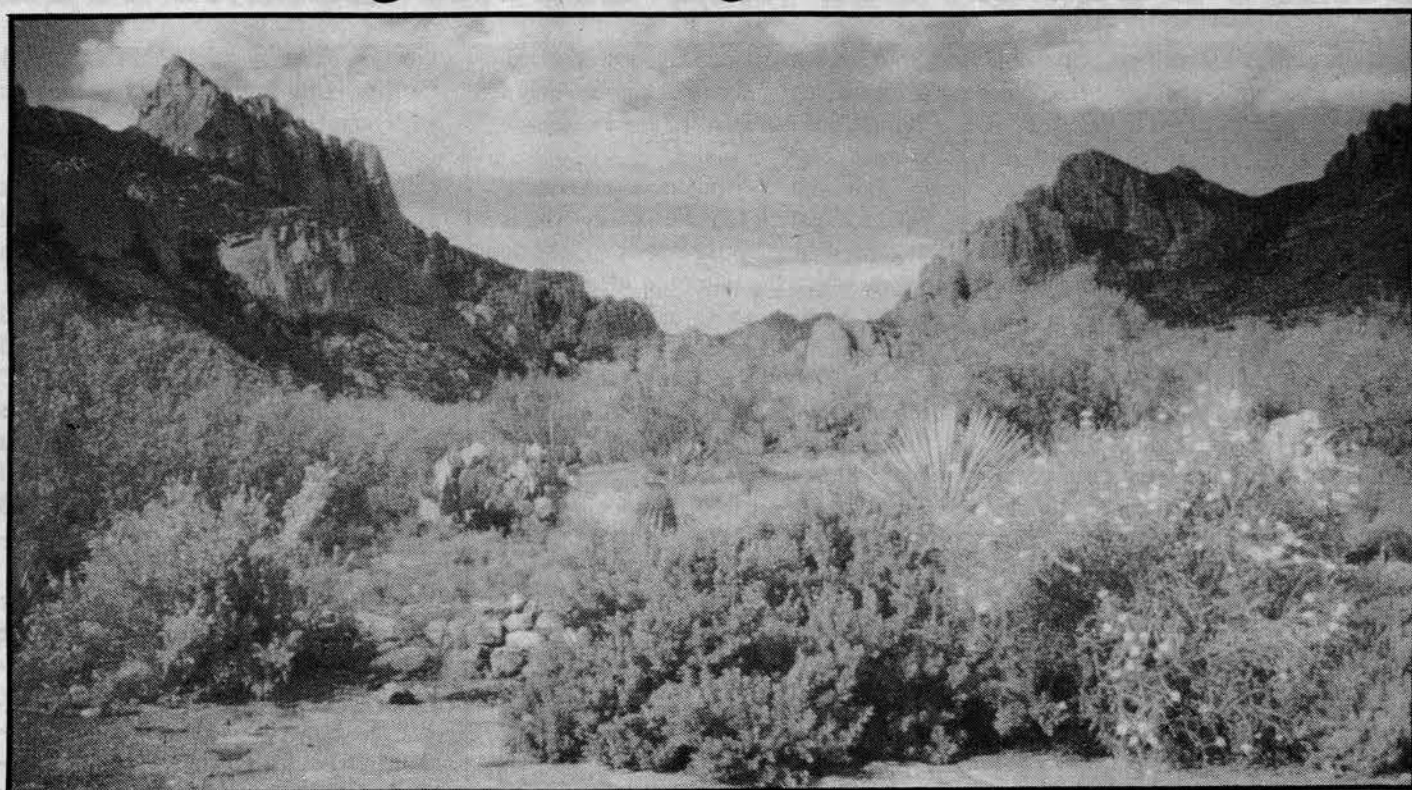
Newmont's mineral claims lie a half mile east of town, at the edge of Cave Creek Canyon, an area that some observers call the most beautiful place in Arizona. Although the exploratory wells would be located on a small abandoned mine site, the claims also border the Chiricahua Wilderness Area.

The Forest Service issued the permit last November after concluding there would be "no significant impact" from the four exploratory holes. But Howard Topoff, a research associate at the museum, says it's impossible for residents to divorce the concept of exploration from the concept of a mine. He and others argue that the area is an inappropriate place to mine, and should be permanently protected by making mining illegal.



Ringtail cat

Charles S. Rau



Karen Hayes

Arizona's Cave Creek Canyon in the biologically rich Chiricahua Mountains

"It's a mistake to have had the place open [to mining] in the first place," says Sherbrook.

Residents explain that they are not unequivocally opposed to mining, but feel that in this case it would conflict with the area's scenic and scientific values. "I know the Forest Service has a multiple-use mandate, but when you bring a mine in here, that's the end of multiple use," says Topoff.

In a letter to the U.S. Forest Service, two scientists from California wrote that if a mine is allowed, "the area will no longer be a place to study life zones, but rather a place to study what man is capable of doing to ruin the environment."

Many people agree that mining is not compatible with the area's other resources. "Aesthetically," Sherbrook says, "the mine would destroy the entrance to the canyon." Others are concerned that a huge open-pit mine and cyanide heap-leach pad would have devastating effects on the area's water supply.

The rugged Chiricahuas, once the stronghold of the Apaches, are home to a rich collection of plants and animals. At the foot of the Chiricahuas, species from the Chihuahuan Desert, which lies to the east, coexist with species from the Sonoran Desert, which lies to the west. A similar pattern is noticeable at the higher elevations, where species from the Rocky Mountains to the north intermix with others from Mexico's Sierra Madre Occidental. The end result is a "virtually unparalleled diversity of species," according to Topoff.

Animal and plant species coexist in a pattern unmatched elsewhere. Apache pine, at its northern limit, grows beside Engelmann spruce, at its southern extreme. Seven different varieties of rattlesnakes, one of them endangered, and over 150 ant species inhabit the area. Other endangered species include Gila monsters, desert tortoises and Sanborn's long-nosed bats. A pack of javelinas is known to patrol the canyon at night. On occasion, jaguar and jaguarundi cats from Mexico's Sierra Madre mountains have been sighted.

Birds are the region's most spectacular inhabitants. Thirteen species of hummingbirds and 12 species of owls inhabit the area. Elegant trogons, cousins of the Central American quetzal, migrate to the canyon to breed. The 50 or so trogons that come to the canyon represent half of the entire population in the United States. Bird lovers also come to see painted redstarts and the delicate buff-

breasted nightjars.

A small population of thick-billed parrots, extirpated from the region in the 1930s, has been released in the Chiricahuas, and others are being bred in captivity. Noel Snyder, a biologist directing the privately funded project, says a few parrots are surviving in spite of a two-year drought. The parrots are not protected by the Endangered Species Act because, although they are still relatively plentiful in Mexico, they became extinct in the United States before the creation of the act.

When asked what species would be most impacted by a mine, many residents say instead that it is the area's integrity that's at stake. "We're not building our case [for preserving the area] on one species, like the red squirrel at Mount Graham," Snyder says. The Portal Mining Action Coalition, a group Snyder heads, is now working on a proposal to preserve the ecological integrity of the entire canyon area.

The coalition, which organized to oppose the drilling, is pursuing both legislative and administrative routes to protect the area. Its proposal calls for the withdrawal from mineral entry of the entire Cave Creek drainage, some 13,000 acres. Snyder says the administrative withdrawal is the more likely option.

Withdrawing an area from mineral entry is a complicated and lengthy process governed by the regulations of the 1976 Federal Land Policy Management Act. Although the process is used with relative ease for newly designated wilderness areas and national parks, isolated withdrawals are rare. They require almost as much information as a full Environmental Impact Statement.

## HOTLINE

### Disputed gold mine to begin operations

A bitterly disputed gold mine near an historic Colorado town has cleared its final legal hurdle and is gearing up for operation. Battle Mountain Resources, a Texas-based mining company, plans to extract 60,000 ounces per year for seven and a half years from a mine in the hills outside San Luis, near Colorado's southern border. "We'll work to be good neighbors," operations manager Gary Dodson told *The Denver Post*. "That's always been one of our intentions." Local residents aren't so sure. The Cos-

The proposal should be ready for presentation to the local district of the Forest Service in early March, after which it will travel an indirect route to Interior Secretary Manuel Lujan for the final decision.

Residents remain optimistic about getting the area protected, even though the Forest Service has neglected its own management directives and has at times been uncooperative.

But Snyder doesn't blame the Forest Service. He says its administrators have been "handcuffed by the 1872 Mining Law." Under the present system of laws, "the Forest Service can't even assess alternative values," he says. "As it is, we've got to use the political process to protect our area. It shouldn't be that way."

— John Horning, HCN intern



Charles S. Rau

Thick-billed parrot

tilla County Committee for Environmental Soundness has long opposed the project, saying the mine's cyanide-leach process will endanger the local water supply. San Luis, with a population of 948, is home to descendants of the Spanish and Indians. They depend primarily on ranching and subsistence farming. "It's an agro-pastoral culture that's five or six generations old," says sociologist Devon Peña. "[The mine] is not just a threat to their environment, but to their way of life." In recent years the town has embarked on a campaign to enter the tourist trade, emphasizing local artistic talents. "The mining boom-and-bust-type existence," noted movement leader Father Pat Valdez, "is not economic development" (HCN, 6/4/90).

## Utah's Dugway Proving Ground adds to legacy of distrust

Utah critics are still not satisfied with the Army's revised plans to upgrade its germ-warfare testing facilities at the Dugway Proving Ground 70 miles southwest of Salt Lake City. A major reason is the Army's continuing refusal to rule out the possibility of testing the most dangerous biological agents that have no antidotes.

Earlier criticism of the Army's first proposal in 1988 led to the current revision, which has abandoned plans to build the most secure type of testing facility, called Biosafety Level 4. This is a structure designed to test what the Army calls "dangerous and

exotic agents that pose a high individual risk of life-threatening disease." It is the Army's "highest level in a series of four increasingly stringent design guidelines."

Instead, the Army now proposes to build a Biosafety Level 3 facility. This is designed for "indigenous or exotic agents where the potential for infection is real and the disease may have serious or lethal consequences."

Nowhere in the Army's three-quarter-inch-thick Draft Environmental Impact Statement supplement of November 1990, however, is there a clear explanation of the basic difference between

the two biosafety levels: that a Level 4 facility is for testing deadly pathogens with no antidotes.

This lack of clarity has added substantially to the public distrust that has surrounded Dugway for years, and which cropped up again last month at a public hearing on the project.

Although Army spokesmen stressed that the new facility would only be used for testing "physical defense systems" such as gas masks, clothing and gloves against Level 3 pathogens, they did not rule out testing Level 4 biological agents. To do that, they said, they would bring in a retrofitted National Aeronautics and Space Administration trailer.

The new \$14.4 million facility, the Army explained, would only replace Dugway's Baker Lab with a more modern biological aerosol testing capability. But the audience of some 100 Utah residents and health officials were not mollified. Continued distrust of the Army polarized the hearing.

A reporter from the Salt Lake City radio station KRCL recalled how the Army had denied for a year that it was responsible for the 1968 accidental release of nerve gas that killed some 6,000 sheep. And Dr. Catherine Schumacher, associate professor of epidemiology at the University of Utah, pointed out that "court orders were needed to reveal the Army's 1988 Dugway proposal."

Dr. Schumacher charged that the Army had not fulfilled its past promise to share "training benefits in dealing with tested pathogens" with the Utah health community. She also criticized the Army's "obscure and vague language," and called on the military to "bring the real situation home to the common citizen."

Dr. William Mackie of the Utah Medical Association, an assistant clinical profes-

sor at the University of Utah, demanded that the Army notify Utah health organizations before conducting individual tests. He also asked that Dugway conduct emergency drills for accidental releases, and that the results be made public.

The Army intends to test four pathogens: three bacteria, *Bacillus anthracis*, *Francisella tularensis* and *Coxiella burnetii* and the virus Venezuelan equine encephalomyelitis (VEE). According to Renee Dawson of the Council for Responsible Genetics, these four test organisms cause the most infections in laboratory workers.

Of 4,000 cases studied, according to Dawson, 80 percent of the infections involving these four pathogens could not be traced. She believes it is not unrealistic to conclude that these diseases could have been carried away from Dugway by its workers. Only one laboratory in the United States — at the University of Michigan — makes an anthrax vaccine, and all its stores are shipped abroad, according to *Newsweek* magazine.

Cindi Greenwood of Tooele, 40 miles northeast of Dugway, scorned the Army's evacuation plan. "Remember the chlorine spill years ago?" she asked. "It was a joke. I'm going to get myself a four-wheel-drive vehicle and go cross-country to avoid using our two-lane highway out!"

Dugway's public affairs officer, Carol Fruik, seemed sympathetic. She said later that the exit road, state highway 199, had 105 curves. She knew, she said, because she counted them herself.

The public comment period for the draft EIS supplement ended Feb. 22.

— Lawrence Mosher, HCN editor

Bob Greger, of Ogden, Utah, helped report this story.



U.S. Army

A Dugway technician performs a decontamination test on a generator

## Federal study finds few illegal grazers fined by BLM

The Bureau of Land Management routinely fails to monitor unauthorized grazing on the public range. And when it does find infractions, it seldom penalizes the ranchers responsible, a federal study reports.

The General Accounting Office report says inconsistent BLM policy and a lack of range staff are allowing many ranchers to operate virtually unchecked on nearly 162 million acres of BLM land in the West. The GAO is Congress's investigating agency.

"BLM has no systematic method for detecting grazing trespass, such as visiting randomly selected allotments or targeting operators with a history of noncompliance," the report says. "Permittees and lessees operate essentially under an honor system with little threat of compliance checks."

Despite laws requiring ranchers to pay for forage eaten by trespassing livestock, BLM staff seldom require them to do so, the GAO reports. The BLM penalized 259 "non-willful" trespassers in 1989, while letting 1,300 to 1,900 other cases go unpunished. Instead, BLM range staff handled those situations with a phone call or visit. Ranchers who knew their livestock were trespassing, and are legally subject to harsher penalties, also received lax treatment.

While preventing unauthorized grazing is a stated priority of the BLM, "almost everything else gets done first" in the field, says Robert Higgins of the GAO.

The BLM and the GAO agree that additional staff would help alleviate the problem. BLM's range staff was cut from 551 to 413 between 1981 and 1990. The staff oversees an average of 392,000 acres apiece, while at least 26 administer more than a million acres each — an

area about the size of Delaware.

"They don't have enough time in the day or enough feet or hands to get everything done," notes Denver-based range conservationist John Reil, a 25-year veteran of the BLM.

But officials from both agencies say increasing staff isn't the only solution. Colorado BLM Director Robert Moore advocates a more logical allocation of tasks.

"The administrative aspects of grazing programs ought to be administered by clerks and technicians, not conservationists and scientists," he said. "That's almost heresy."

Furthermore, he favors a shift in focus from the uses of the land to the vegetation itself. "I think it's better to manage the livestock to maintain or enhance vegetative quality, rather than be using it for livestock forage and then reacting to the problems it causes," he says. "For example, often we've found in riparian management we can dramatically improve things by changing seasons of use rather than adjusting numbers [of cattle]."

This isn't the first time the GAO has found problems with BLM's range management. Previous reports have listed deficiencies in the trespass enforcement program as well as other operations, and have charged the BLM with excessive deference to the grazing and mining industries it is supposed to regulate.

The BLM has even been accused of bringing the range program's underfunding upon itself. Former agency biologist Richard Kroger reported that about five years ago, when livestock numbers needed to be cut in order to save the range, "the top range officials in Washington lobbied to reduce the agency's budget so that the land could not be monitored to determine

where to move cows" (HCN, 5/7/90). This year's range budget was increased nearly \$5 million to \$40.1 million — the largest jump in the last five years.

"The people who do the budget recognized that we needed some more funds," said BLM spokesman Joe Zilincar. He said the BLM agrees with the GAO's recommendations for strengthening enforcement of grazing rules: Making managers accountable for addressing the problem, visiting randomly selected allotments, and staging follow-up visits to ranchers with a history of violations. The GAO also suggests that BLM range staff should either consistently penalize violators or amend the rules to allow for the informal resolution of trespassing.

The report's findings were no surprise to Rep. Mike Synar, D-Okla., who considers current grazing conditions "deplorable." "It's very much in keeping with what we've found over the years," he said.

Synar reintroduced a bill this month that would more than quadruple grazing fees on federal lands over the next four years, generating more money for range protection.

The bill passed the House last session but died during the House-Senate conference (HCN, 11/5/90). Instead, grazing rates on BLM and U.S. Forest Service lands will rise 8.8 percent — from \$1.81 to \$1.97 per animal unit month — the amount of forage consumed in a month by one cow and one calf, a horse, or five sheep or goats. The increase, based on a formula established by Congress that computes the market value of forage and beef cattle prices, is due to take effect March 1.

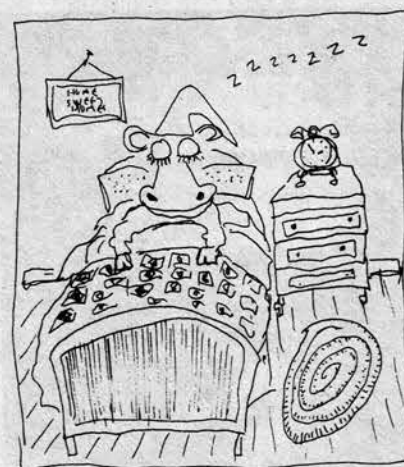
Pamela Neal of the National Cattle-

men's Association considers this fee hike and formula acceptable. "When the market is up, that supports higher grazing fees," she noted.

Synar, on the other hand, calls the planned hike "the most pathetic example of trying to kill momentum that I've ever seen. We're subsidizing a group of people at millions of dollars of taxpayer expense."

— Lisa Jones, HCN staff writer

### BARBS



Cowtowing to bovine biorhythms.

Montana Rep. Ervin Davis (D) introduced a bill to stop Montana from switching to Daylight Saving Time each spring "because it upsets elderly people and cows." He contends the practice of setting clocks ahead an hour confuses cows and upsets their daily milking and feeding routines. The House took no action on the measure.

## Oregon's Enola Hill: 'diseased forest' or sacred site?

For centuries, Oregon's Enola Hill — a steep, forested rise 15 miles west of Mount Hood — has been a special place for Native Americans. The nearby Warm Springs Indians have gathered huckleberries and medicinal herbs here. Members of the Umatilla tribe, based over 150 miles away, have come here to find cedar for weaving baskets, and even more distant tribes, such as the Nez Perce of Idaho, have traveled to Enola to conduct vision quests.

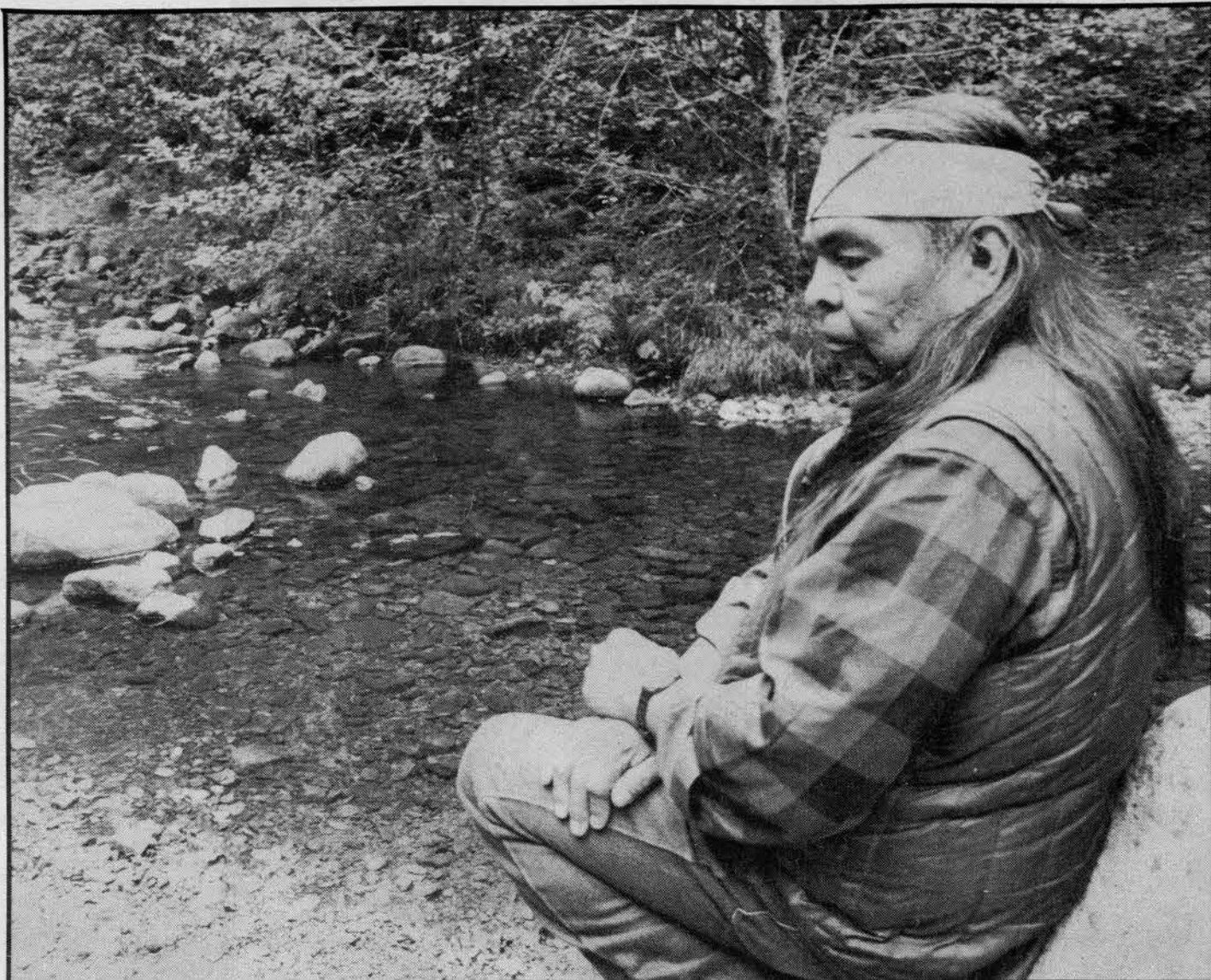
Enola, many feel, has been one of the most significant sacred sites in the Northwest. It has also been one of the region's contested patches of forest. Since 1980 the Forest Service has sought to log it and Indian activists have fought to save it.

The battle over Enola Hill is nearing a culmination. The Forest Service, which considers Enola a "diseased forest" because of root rot, recently announced plans to clearcut at least three acres on the 1,600-acre hill and to "selectively" remove about a third of the trees on an additional 244 acres. When it agreed to open the sales area to Hanel Lumber, a Hood River, Ore., logging outfit, Friends of Enola Hill — a coalition of Native American and environmental activists — filed suit in District Court.

The suit, which will be heard sometime this spring, is aimed at stopping logging forever on Enola Hill. The plaintiffs argue that Enola should be designated a national landmark, a monument to Indian history. The strategy they are employing is unusual. Typically, Native American advocates seeking to save sacred lands have invoked the First Amendment, which calls for freedom of religion.

The Enola case could have far-reaching implications. If the Friends of Enola Hill win, the National Historic Preservation Act, a 1966 measure aimed at saving cultural landmarks, will gain extra clout. Indians nationwide will be able to use it as a viable means of defending their land. They will have some real recourse against the Forest Service — something they haven't had since 1986, the year the Supreme Court ruled that the Forest Service could disturb sacred sites if it saw fit.

The Enola case has powerful local implications, too. According to Michael Jones, a Welches, Ore., activist who works nearly full time defending sacred sites, Enola Hill is "the most important sacred site still remaining in the Mount Hood area." Jones says many other sacred lands near Mount Hood have already been devel-



Bob Hawley Jr.

**Rip Lone Wolf, one of the plaintiffs in a lawsuit against the U.S. Forest Service, beside Spirit Horse Creek**

oped. Mulptop Mountain, an old Indian gravesite, has been turned into a ski slope. Mount Hood Meadows, which is dotted with sacred springs, will probably soon be full of condominiums. The overall character of the region, Jones says, is being seriously threatened as roads get widened and visitors flock to Mount Hood's three huge ski areas.

As well as ruining a cultural landmark, Jones says, the logging of Enola's slopes would create an "environmental nightmare," mainly because of erosion. Jones believes that logging Enola could also exacerbate the root rot infestation the Forest Service is worried about. He fears that the disease might contaminate the logging equipment and spread into other areas. A study conducted last year by Thomas Lawson, an independent forestry consultant, depicted root rot as a natural, not necessarily harmful pathogen, and suggested that it could not easily be eradicated from the forest.

The Forest Service disagrees with

just about everything that Enola advocates say. Kathleen Walker, a resource planner for the Mount Hood National Forest, says that during the three years the Forest Service studied Enola, "we found no evidence of prehistoric use." Walker adds, "None of the tribal representatives we contacted told us that there were any religious or ceremonial uses associated with Enola Hill."

Beth Walton, a Forest Service archaeologist who helped with the study, concurs. "We found traces of an old wagon road and some stumps with springboard holes in them," she says. "Neither of these items qualify Enola as a historic landmark site."

The Forest Service also disputes Jones's claims about the environmental effects of the proposed sale. Walker contends that the root rot infecting Enola's Douglas-firs will not spread if the trees are cut because the disease spreads only when an infected root touches another root. She says erosion will not be a prob-

lem, since the fallen trees will be hauled out by helicopter rather than by logging tractors or skyline cables, which tend to dig up steep hillsides.

Walker says the Forest Service arrived at its Enola forest plan after consulting with many environmental activists, and that "nearly all of them seem very pleased with it."

But the Oregon Natural Resources Council, the Portland chapter of the Sierra Club and Mount Hood Independent Steelheaders, a local group concerned with promoting the health of fisheries, have all voiced support for the Friends of Enola Hill.

For more information, contact the administrative office of the Mount Hood National Forest (503/666-0700) or the Friends of Enola Hill (503/622-4798).

— Bill Donahue

Bill Donahue is a free-lance writer in Portland, Oregon.

## HOTLINE

### New radiation-exposure limits

The Nuclear Regulatory Commission has reduced allowable radiation-exposure limits at commercial nuclear plants licensed by the NRC, facilities involved in uranium production, various laboratories and hospitals and for people living near these facilities. The new rules require that by January 1993, the maximum exposure to the general population from nuclear facilities be no more than 100 millirems a year, one-fifth of current limits. Workers can be exposed to no more than five rems per year, one-fourth of what some employees can now receive. (Exposure to an x-ray is equivalent to six to seven millirems.) The NRC says that while current standards do not put people at

risk, the revisions provide an extra safety margin. But the Nuclear Information and Resource Service, an anti-nuclear umbrella group, claims that the agency is adopting an obsolete standard based on recommendations made 13 years ago. The revisions do allow some methods for calculating exposure levels to be changed to permit release of higher concentrations of many radioisotopes, as long as total exposure doses remain within the limits. These regulations do not affect facilities such as Rocky Flats and Los Alamos, licensed by the Department of Energy.

### Housing project approved near Saguaro, N.M.

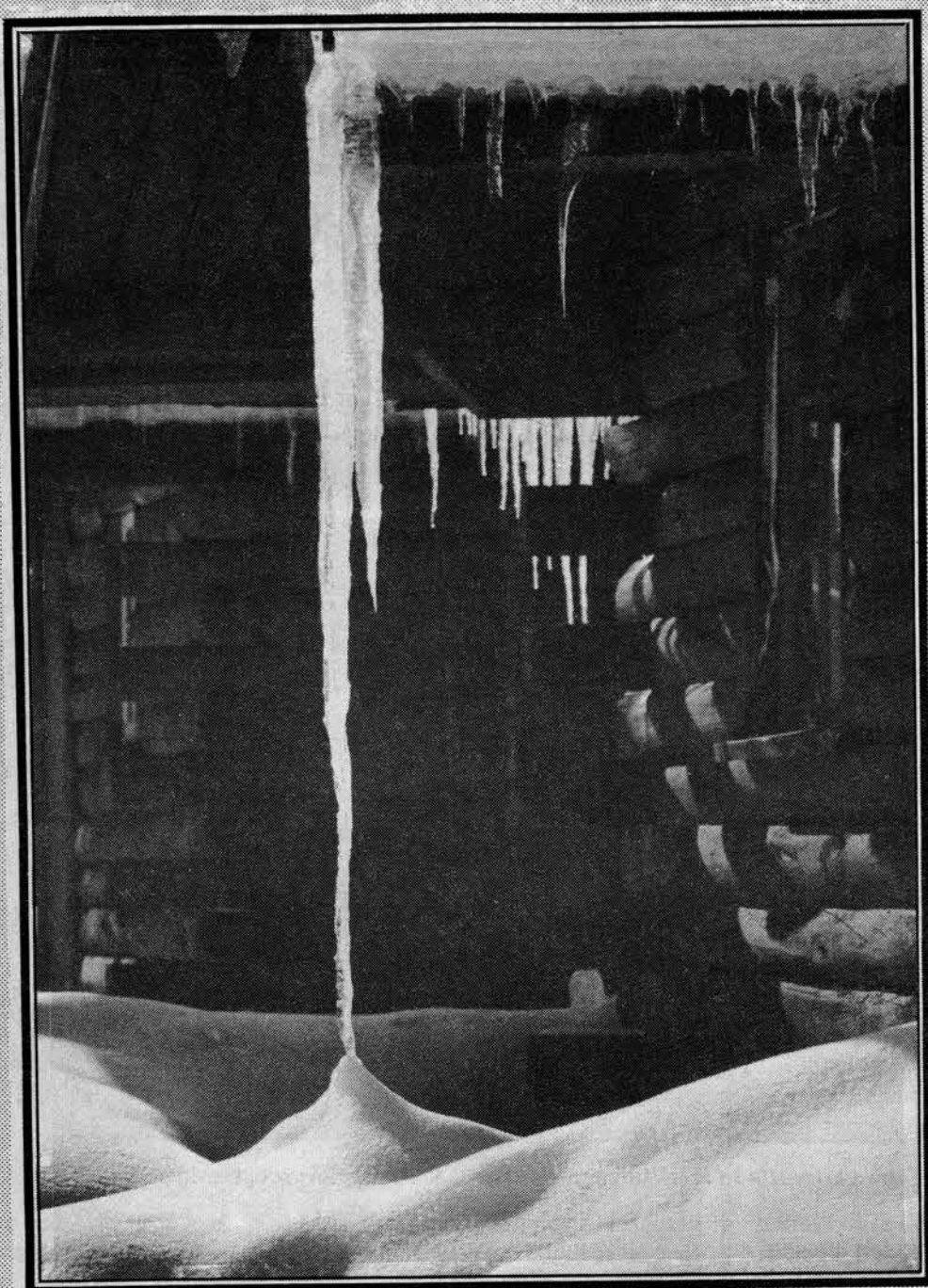
Pima County, Ariz., officials have approved plans for a 10,000-house project next to Saguaro National Monument's southwest border. If built, the

Rocking K Ranch will include four resorts, four golf courses, business and commercial developments, and 23,000 residents. Original plans called for 21,000 houses and 53,000 residents. Sensing defeat by the county Board of Supervisors last year, Rocking K developers reduced the project's size. Board member Greg Lunn, who formerly opposed the project, cast the deciding vote of approval. Lunn told the *Arizona Republic* he felt the area would be densely developed regardless of the board's actions.

### Yuma heart problems linked to pesticides

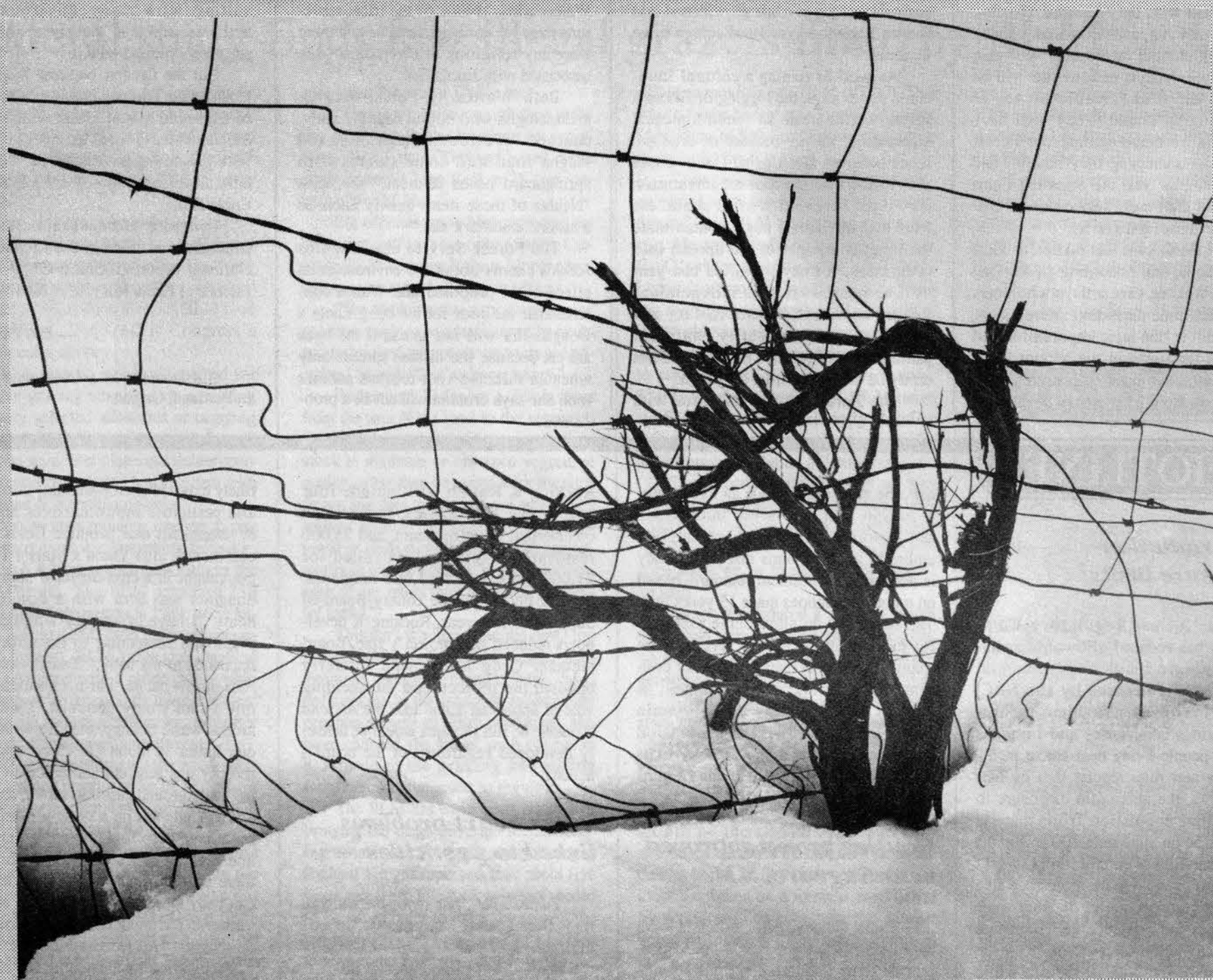
Yuma, Ariz., has twice the national rate of congenital heart disease, reports the *Journal of the American College of Cardiology*, and environmental ills may be responsible. Yuma residents are rou-

tinely exposed to crop-dusting chemicals and pesticides showered over housing developments near produce fields. Several months after Yuma's Mariel Tansey got caught in a crop-duster's spray, her daughter was born with a hole in her heart. "I have to wonder whether that plane had something to do with what happened to my baby," Tansey told *The Arizona Republic*. Farm chemicals are not Yuma's only concern. Two hazardous-waste cleanup sites lie within the city limits. A Mobil Oil Corp. site near the city has been contaminated by leaking underground gasoline tanks, and soil and groundwater on a nearby Marine air base have been fouled by the dumping and burning of jet fuel. "We can't say there is an environmental cause, and we can't say there isn't," one of the study's authors, Dr. Paul Goldberg, told the newspaper. "All we know is that Yuma has a significantly elevated rate [of birth defects]."



# *The shapes of winter*

*photographs by  
Dan Heidel*



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## New water era ...

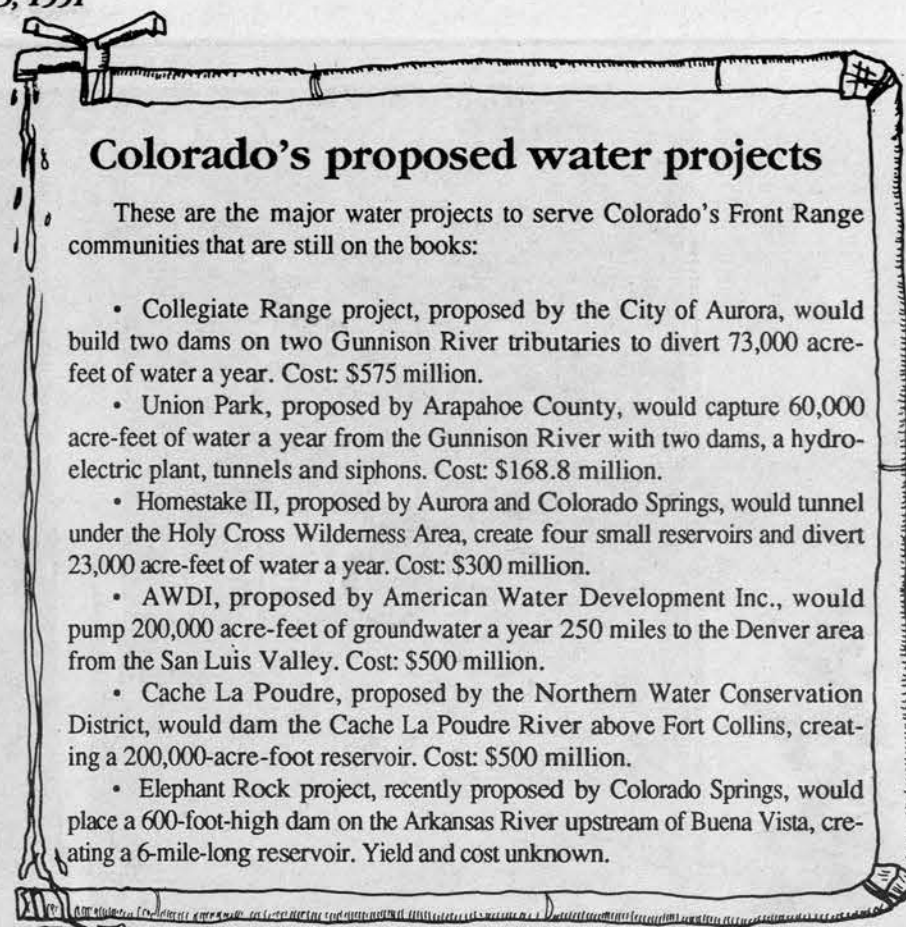
(Continued from page 1)

ive water supplies before resorting to traditional water projects; apply basin-of-origin protection to mitigate interbasin water transfers; provide farmers with incentives to conserve; and prevent farmers from losing their water without fair compensation.

Senator Pastore also has proposed a constitutional amendment that would require an election in a targeted basin before water could be diverted. Pastore acknowledges that his measure probably won't be adopted by the Legislature this year, but warns that it may resurface as a referendum on the 1992 ballot.

Water developers have introduced bills that would rescind recent environmental victories, and few of the major water reform measures are expected to pass this year. But the Legislature already has adopted a bill to create a standing legislative water committee, which indicates that the water reform battle has indeed begun.

Reformists still face a powerful and entrenched water-development establishment. But cracks are beginning to appear in its once monolithic front. In the Colorado Water Congress, long considered a mouthpiece for water developers, Western Slope



### Colorado's proposed water projects

These are the major water projects to serve Colorado's Front Range communities that are still on the books:

- Collegiate Range project, proposed by the City of Aurora, would build two dams on two Gunnison River tributaries to divert 73,000 acre-feet of water a year. Cost: \$575 million.
- Union Park, proposed by Arapahoe County, would capture 60,000 acre-feet of water a year from the Gunnison River with two dams, a hydroelectric plant, tunnels and siphons. Cost: \$168.8 million.
- Homestake II, proposed by Aurora and Colorado Springs, would tunnel under the Holy Cross Wilderness Area, create four small reservoirs and divert 23,000 acre-feet of water a year. Cost: \$300 million.
- AWDI, proposed by American Water Development Inc., would pump 200,000 acre-feet of groundwater a year 250 miles to the Denver area from the San Luis Valley. Cost: \$500 million.
- Cache La Poudre, proposed by the Northern Water Conservation District, would dam the Cache La Poudre River above Fort Collins, creating a 200,000-acre-foot reservoir. Cost: \$500 million.
- Elephant Rock project, recently proposed by Colorado Springs, would place a 600-foot-high dam on the Arkansas River upstream of Buena Vista, creating a 6-mile-long reservoir. Yield and cost unknown.

and rural representatives recently have split with Front Range municipal interests over bills before the Legislature.

"What's really interesting about the

post-Two Forks era is that traditional water interests are squaring off against each other," says Northern Colorado Water Conservation District's Hobbs.

Many water reformers believe that the ultimate solution will require changing the state's water laws. But that could take years to achieve, if it ever worked at all. In the meantime, the Two Forks veto has given environmentalists another legal tool that has been around for years — the 1972 Clean Water Act.

The EPA, as it demonstrated with Two Forks, is beginning to look harder at the environmental, economic and social issues that state water laws such as Colorado's ignore. And this may mean more federal vetoes. Armed with what environmental lawyer Chris Meyers calls "the new federal two-by-four," water reformers may yet crack the water developers' iron grip on Colorado water.

Two Forks dam was killed because it could have only been built at tremendous costs: the virtual devastation of the South Platte Canyon upstream from Denver, and substantial damage to the environment and economies of Colorado's Western Slope and the Platte River Valley in Nebraska. Denver and the other Front Range communities failed to prove a need that could justify such costs.

The problem with Colorado's water laws and institutions is that they have no mechanism for resolving these kinds of

## Gunnison fights off the Front Range

by Gary Sprung

In the suburbs east of Denver, the City of Aurora is banking on a new economic boom. The city has always pushed development. Now, with the new Denver International Airport about to be perched in its backyard, it has plans to capture the lion's share of the expected growth in the metro area.

So far the boom hasn't happened. Many homes built in expectation of the good times to come now stand vacant, with nobody to water the lawns, which are turning brown. So city leaders have adopted a PR campaign: "Water your neighbor's lawn."

This thirst for growth has led Aurora to develop one of the most aggressive water development programs in the West. Water is key to development in Colorado and the city will use any approach to get it, including water rights purchases from agricultural areas, tapping groundwater, transmountain diversions and conservation.

But the city has mainly focused on the big transmountain projects. Aurora was a \$6-million partner in Two Forks, and along with Colorado Springs has proposed the Homestake II project. However, with Two Forks dead and Homestake II temporarily derailed, Aurora's Utilities Department has pinned its hopes on its Collegiate Range project in the Gunnison River Basin. The Gunnison is the last major Western Slope river basin still untouched by

Front Range water developers and is considered a juicy prize.

Arapahoe County, which partially surrounds Aurora, also has filed on upper Gunnison water. But rather than fight over the right to tap into the Gunnison's clear mountain waters, Aurora and Arapahoe officials agreed in 1989 to drop opposition to each other and share whichever project gets approved.

However, neither may go anywhere. The Front Range diverters have run head-on into the Gunnison basin's angry natives, who consider the two projects a threat to their community, economy and way of life.

The suburban water raid has melded a unique and united opposition front in Gunnison County. Ranchers, environmentalists, the fishing and rafting industries, city and county officials and the local water conservancy district have temporarily dropped their differences and are working together to save their river basin.

Aurora's Collegiate Range project would dam two Gunnison tributaries and pipe 73,000 acre-feet of water a year to the Front Range. In the process the project would inundate a gold medal trout fishery and the Roaring Judy Fish Hatchery, disturb critical winter range for bighorn sheep, and take water now used by ranchers, boaters and anglers.

Arapahoe County's proposed Union Park reservoir would supply 60,000 acre-feet of water and cause many of the same problems. The reservoir would hold almost a million acre-feet of water, making it the second largest reservoir in the state.

Either project, the opponents say, would cripple their agricultural and recreational industries, trash pristine high country and river environments, and eliminate opportunities for further growth in Gunnison County. That threat has spawned a grassroots revolution in the basin, where the project's opponents have joined forces in a very informal alliance to challenge the suburbs in Colorado Water Court.

A Crested Butte-based environmental group, the High Country Citizen's Alliance, has led the grassroots movement in the upper basin. Meanwhile, in Gunnison, residents not wanting an association with environmentalists formed an ad-hoc group of their own called POWER, which stands for People Opposed to Water Export Raids. POWER has hosted numerous public education forums, and has helped convince the City of Gunnison and the Upper Gunnison Water Conservancy District to take a stronger stand against the diversions.

Their work has paid off. The case against Aurora and Arapahoe in state water court now includes over 40 parties. Last Dec. 4, Gunnison County voted by a margin of 86 percent to 14 percent to increase property taxes to help pay for the case.

So far they are winning — something that no Colorado headwaters community has ever done. One difference is that Gunnison County has a legal option that Summit and Grand counties in the upper Colorado River basin never had. The powerful Denver Water Board claimed most of Summit and Grand counties' water long before those Western Slope communities saw any water needs of their own. In contrast, neither Aurora nor Arapahoe County has any water rights in the Gunnison. In 1986 each applied to state water court for 100,000 acre-feet of water. The Gunnison alliance intervened, claiming that water is already owned and heavily used at home.

The court will take several years to decide who gets the water, but so far the case is moving in Gunnison's favor.

Last Sept. 18, Judge Robert Brown awarded the Gunnison natives their biggest victory by decreeing that the Upper Gunnison River Water Conservancy District is entitled to 106,000 acre-feet per year in the Taylor River basin, a tributary to the Gunnison. This covers all the remaining, previ-

ously unallocated water. Thus, it may block Aurora's and Arapahoe's application for water rights.

The ruling sets a precedent in Colorado water law because the district's new water right is for reservoir levels and instream flows for recreation purposes. Normally, only the state can own water rights for instream flows, and those are only allowed to "protect the environment to a reasonable degree." However, Brown awarded the Upper Gunnison District the rights because of a peculiar set of circumstances.

In this case, the water comes from storage behind Taylor Dam and is not part of the river's natural flow regime. Judge Brown said that means it is not technically an instream flow, and thus can be owned by the Upper Gunnison River District.

Secondly, lawyers for the district argued that over the last 10 years the district has put the water to beneficial use by improving the Taylor River's flow regime to increase trout production and spawn a small commercial rafting industry.

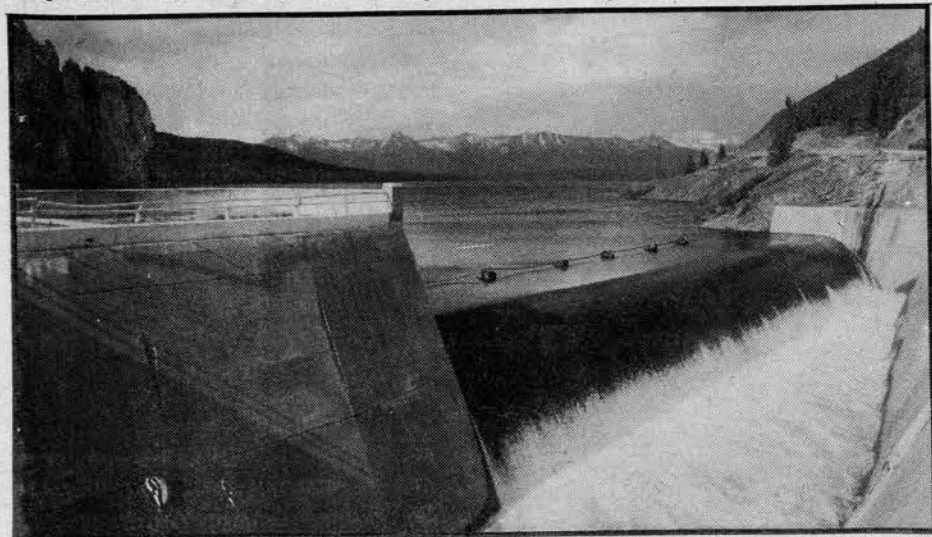
Judge Brown agreed, and in doing so "took a major step in recognizing the beneficial use of water for recreational purposes, which is a major industry in the state of Colorado," says district attorney Dick Bratton, who is also quick to point out that he comes to the case with a traditional, non-environmental background.

A second ruling from Brown refers to a Colorado law passed in the late 1970s to curtail speculation in water rights. The law says that water diverters must show they "can and will" develop a project within a reasonable time.

Both Aurora's and Arapahoe's projects require contracts with the Bureau of Reclamation and permits from county, state and federal agencies. Bruce Driver, a lawyer for the High Country Citizens Alliance, says the "can-and-will" determination means the developers must "show that they have permission and a contract with the bureau and are likely to receive other permits." The judge agreed to the permission issue, but has not yet addressed permits.

The ruling means the transmountain diverters must at least make a deal with the

Continued on page 12



Taylor Dam in the Upper Gunnison Basin

GNURPS

issues. The prior appropriations doctrine awards private property rights to free-flowing water on a first-come, first-served basis. The law is administered by a cumbersome water courts system that is unique in the West.

Water rights can only be awarded for "beneficial uses." Water must be diverted from a stream to be considered beneficial. Although water rights can be bought and sold, only holders of valid existing rights can protest the creation or transfer of another right, and then only if they are on the same stream. Water reformers are now beginning to demand a state water management system that goes beyond the strict concept of water rights to address environmental, economic and social issues too.

"We must shift the way we think about water from the traditional way — as an absolute property right — to a shared resource that certainly has property rights to it but also is subject to the concerns and needs of the people of the entire state," argues the National Wildlife Federation's Meyers.

Meyers warns that until this happens, other big water projects will fail as Two Forks did. "The federal government is going to continue to fill the void."

**T**he specter of further federal intervention may have already been seen — and appreciated — in the citadel of the state's water establishment itself: Denver. Some of the most significant changes are now taking place there.

Denver has long dominated Colorado's water politics. From the turn of the century, the quasi-public Denver Water Department has been the city's wealthiest governmental agency. Civic leaders were as likely to sit on the Denver Water Board as the city council. The department retained the best lawyers and water engineers in the state.

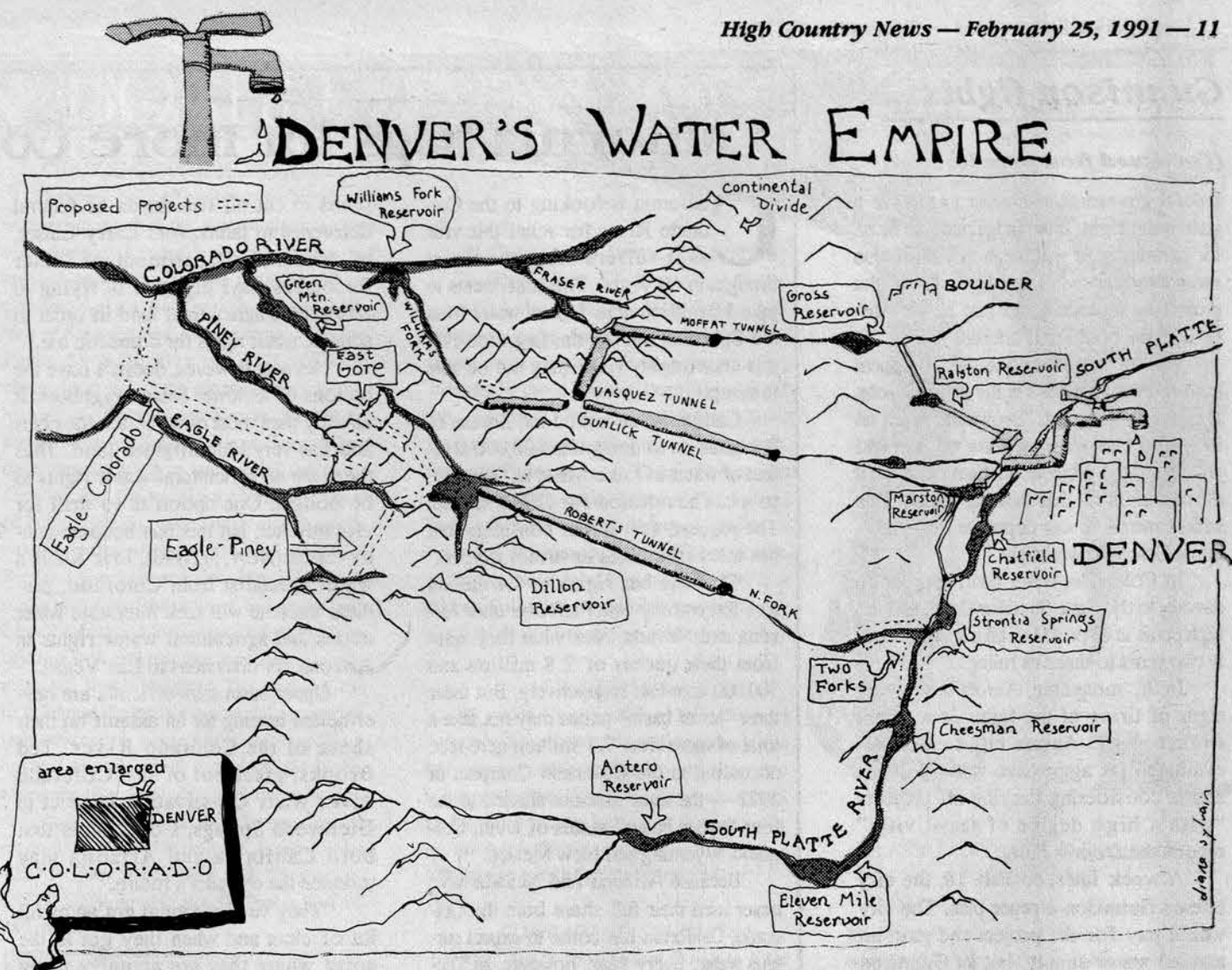
Their skillful manipulation of Colorado water law built the state's most extensive system of water rights and an unrivaled network of dams, reservoirs, canals, tunnels and water treatment plants. Denver became the most powerful and feared water district in the state. In the West its water empire is second in size only to the giant Metropolitan Water District of Southern California.

The Two Forks dam and reservoir were to become the centerpiece of Denver's modern empire. The 600-foot-high dam would have produced an initial yield of 98,000 acre-feet, enough water for 330,000 new metropolitan residents. The reservoir's strategic location on the South Platte River upstream from Denver would have given the metro area 1.1 million acre-feet of new storage capacity for its still undeveloped water rights on the Western Slope.

Construction of the dam, along with a new airport and highways, was supposed to revive the city's faltering economy. Plentiful water supplies would unite Denver's competing suburbs. And with cooperation ensured by the new water, the metro area governments would solve their air-quality and transportation problems and break their deadlocks over other urban issues like the costs of hospitals, libraries and housing for the poor.

As this great vision grew, the Denver Water Board began to prepare other major water projects. The Eagle-Piney, Eagle-Colorado and East Gore Canal projects would all have utilized the board's senior water rights to siphon off even more water from Colorado's wilderness headwaters. That water then would have been pumped under the Continental Divide and stored in the Two Forks reservoir.

The Environmental Caucus, an informal coalition of a dozen environmental groups formed to fight Two Forks, argued in vain that Denver and



most of the Front Range cities could meet their water needs by improving the efficiency of their existing system, instituting conservation and re-use, sharing water, and building alternative small-scale projects. The caucus envisioned slower growth, cooperation instead of conflict, and more public participation in the decision-making process.

In the past, Denver had the political muscle to do what it wanted. As late as 1979, during the permitting of the Foothills water treatment plant, Denver successfully pressured the EPA to grant a permit with minimal mitigation requirements. But this time Denver didn't have the clout. It not only lacked influence with the Bush administration, but also failed to deliver Gov. Roy Romer and the state's congressional delegation.

More importantly, Denver's leaders failed to convince their own citizens that

Two Forks was worth the cost and the environmental destruction. Many of the Water Department's customers sided with people from the Western Slope or downstream Nebraska in rowdy and irreverent displays of opposition.

"If you take a look at how the public behaved," comments Dan Luecke, head of the Environmental Defense Fund's Boulder office, "you can certainly see that the message is that you [the Denver Water Board] are no longer feared or revered the way you once were. It's a new game, a new day."

Luecke continues, "Our objective in taking on Two Forks was both because of Two Forks itself and because we saw it as the water developers' aircraft carrier. If we could take out their aircraft carrier — the centerpiece of their whole flotilla — then we could make them rethink how they pursue their water. We are after institutional changes."

Denver's changes so far may not be

institutional, but they are nevertheless significant. Since the EPA veto, the Denver Water Department has replaced its leadership. It has a new president, Hubert Farbes, a new acting general counsel, Michael Walker, and a new director, Chips Barry.

Barry, the former director of the Colorado Department of Natural Resources, is an outsider who comes with little ideological baggage. Most environmentalists consider him someone who can bridge the gap between the reformers and traditional water interests. One of his first acts was to let it be known that he did not favor suing EPA over Two Forks.

"As a matter of personal opinion," he said in a telephone interview, "I would just as soon not have the board appeal the Two Forks decision. It's not worth the brain damage, cost or loss of public credibility."

The Denver Water Board's first vice president, Malcolm Murray, concurs. "Whether we appeal the Two Forks veto or not, the likelihood of that project ever being built is very low," he said. "We have to think of other things."

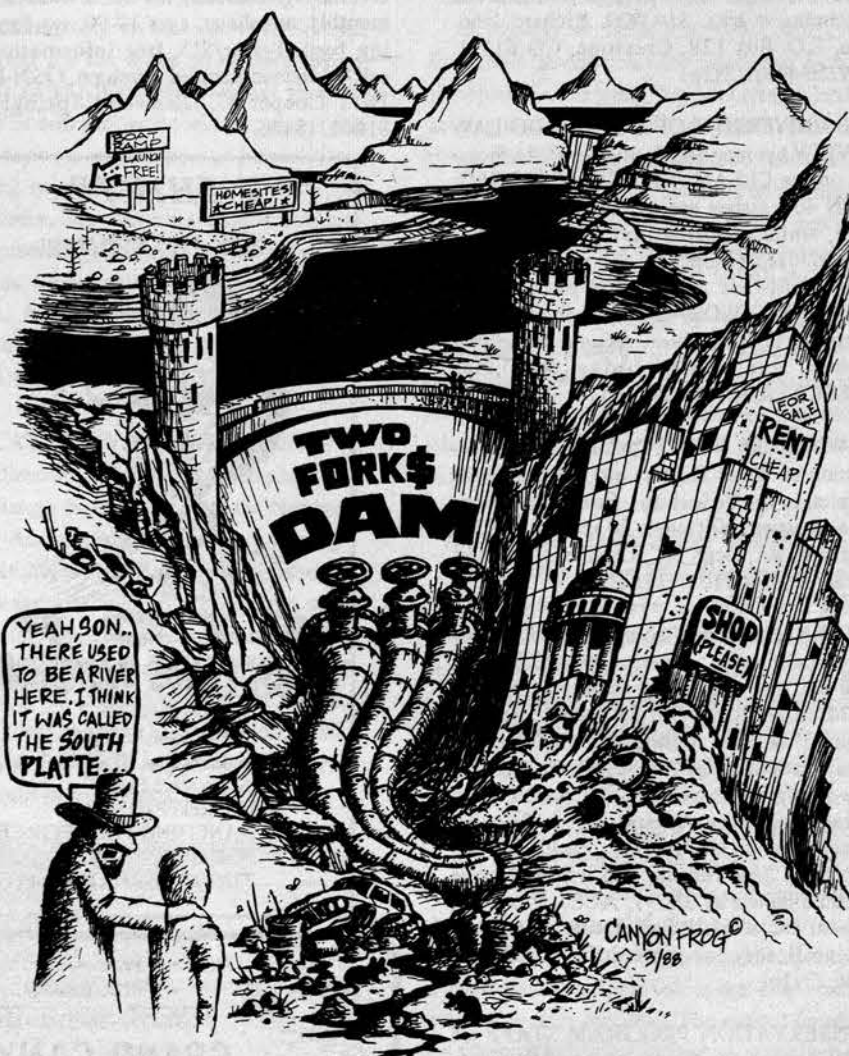
Murray noted that Denver last year changed its water pricing structure to encourage conservation, and made water meters mandatory. It also has initiated incentive programs for re-using water and installing ultra-low-flush toilets.

"By re-using water at the new Denver airport we are going to create an additional 10,000 acre-feet of supply," Murray said. "We're actively looking for new conservation programs to put in place."

Denver also is showing a new, more cooperative face to its former Two Forks adversaries. Earlier this month Murray and Barry attended a meeting of the Environmental Caucus.

"It remains to be seen whether there are fundamental changes in the way Denver does water planning," says Bob Weaver, a consultant to the caucus. "But I believe the Denver Water Board and Water Department has been forced to change and is changing, and will continue to be very, very influential."

The Denver Water Board's Murray puts it this way: "My overall perspective is one of optimism rather than disappointment over Two Forks. There's a lot of opportunity to do things differently.... It gives people time to think up imaginative and creative ways to make water available."



## DENVER'S WET DREAM - 2088

Roger Candee

Steve Hinchman is HCN's associate editor.

## Gunnison fights ...

(Continued from page 10)

federal government in order to receive a state water right. If the judge rules the same for permitting, it will mean they must also show they can win federal permits for the project — something that may be very difficult in the post-Two Forks era.

Aurora and Arapahoe plan to appeal both rulings. Aurora's water attorney John Dingess commented, "Brown has given an indication that we must show we 'can and will' build the projects, but hasn't said what the standards for that showing will be. This strikes me as a vast departure from traditional Colorado water law."

In Colorado, water court appeals go directly to the State Supreme Court, and the high court is expected to take approximately two years to make its ruling.

In the meantime, Aurora is showing signs of tiring of the fight. At a recent workshop the Aurora city council re-evaluated its aggressive water policies and is considering backing off projects "with a high degree of sensitivity," reports the *Denver Post*.

A week later, on Feb. 18, the city offered Gunnison a peace plan: The city would pay for the project and gain an assured water supply, but let Gunnison design and control it. The package would include money for economic development and mitigation in Gunnison County. So far, reaction in the basin has been chilly. ■

Gary Sprung is the Rocky Mountain editor for *U.S. Water News* and serves as president of the High Country Citizens Alliance. The story also includes reporting from Laura Anderson, associate editor of the *Crested Butte Chronicle and Pilot*.

## California begs for more Colorado water

California is looking to the Colorado River for relief this year as it suffers from the worst drought in 60 years. The state wants to take 5.2 million acre-feet of water from the Colorado, but for the first time ever this once mighty river may not be able to comply.

California has asked the Bureau of Reclamation to designate 400,000 acre-feet of water in Lake Mead as "surplus" so it can be released for California use. The request, still under consideration, has water specialists upstream worried.

The state has rights to 4.4 million acre-feet and any water left over once Arizona and Nevada take what they want from their quotas of 2.8 million and 300,000 acre-feet respectively. But these three "lower basin" states may not take a total of more than 7.5 million acre-feet, according to the Colorado Compact of 1922 — the same amount allotted to the four "upper basin" states of Utah, Colorado, Wyoming and New Mexico.

Because Arizona and Nevada have never used their full share from the Colorado, California has come to expect surplus water. Every year, however, as Tucson, Phoenix and Las Vegas grow, Arizona and Nevada use more of their entitlements. Although neither state plans to use its full share in 1991, their need to use a total of 2.6 million acre-feet still is squeezing parched California. For the first time, the water orders of the lower basin states are exceeding 7.5 million acre-feet.

Gov. Pete Wilson of California has already cut off all state deliveries of agricultural water and has announced

plans to cut off two-thirds of federal deliveries to farms. And Larry Linser, of Arizona's Department of Water Resources, says his state is trying to retire more agricultural land in order to acquire water rights for domestic use.

Nevada, however, doesn't have the options of its lower basin neighbors. It already uses most of its water for cities and has very little irrigated land. Thus there are no agricultural water rights to be bought. One option is to drill for groundwater, but this has become controversial (*HCN*, 5/21/90). Eric Kuhn, a water specialist from Colorado, predicts the state will seek interstate water trades and agricultural water rights in Arizona, for diversions to Las Vegas.

Upper basin state officials are nevertheless bracing for an assault on their share of the Colorado River. Ted Brooks, president of the Colorado River Water Conservation District in Glenwood Springs, Colo., says that both California and Arizona may threaten the compact's future.

"They've [California] got an awful lot of clout and when they get to the point where they are actually using upper basin water, it's going to be extremely difficult to put an end to it when we need it," he said in a telephone interview. "An effort will be made to overturn the compact," he continued, "and we have to be extremely vigilant to protect the compact as it is."

Ken Salazar, executive director of the Colorado Department of Natural Resources, also is concerned. He said Colorado must "preserve its right to

develop its share of the compact however and whenever it wants."

Despite these reservations, Interior Secretary Manuel Lujan asked the upper basin states earlier this month to consider "some kind of arrangement" if they have water surpluses. Lujan made the plea in a speech to the Colorado Legislature. California is exploring other ways to get more water, including desalination plants and even the shipping of water from Canada and Alaska. But David Walker, director of the Colorado Water Conservation Board, says California should follow Colorado's example by economizing. He says California conservation practices are "not up to speed."

Kuhn echoes this sentiment. "California has got to reduce its water consumption or it will hurt upper basin states," he said.

Arizona will be using all 2.8 million acre-feet of its share of the Colorado River by 1994, according to Arizona Department of Water Resources' Linser. With Las Vegas growing faster than any other city in the country, Nevada will probably be using its full quota of Colorado River water shortly too. This is why officials from the upper basin states are wary. As Walker put it, "We want a dialogue about the future of the river before we have three states in the position of California."

— Mark Harvey

Mark Harvey, a former *HCN* intern, resides in Aspen, Colorado.

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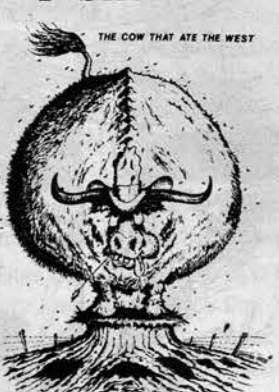
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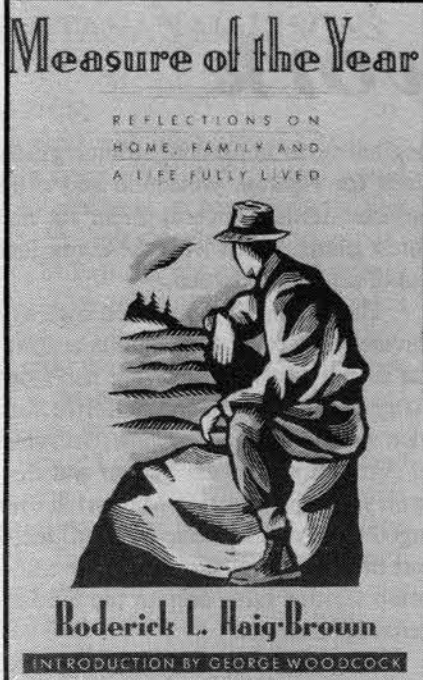
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# BULLETIN BOARD



## ONE YEAR IN B.C.

To the catch-phrase, "We can't stand in the way of progress," pioneer British Columbia conservationist Roderick Haig-Brown replied, "Why can't we?" From the early 1930s to his death in 1976, he watched his Vancouver Island home change from wild frontier settlement to industrial city. Available for the first time in 40 years, Haig-Brown's *Measure of the Year* poetically chronicles one year of his and his family's effort "to live out a sensible and positive life in the 20th century." Each chapter describes one month's experiences and reflections on their peaceful life in "Elkhorn," actually the then-rural community of Campbell River. But this book is more than an optimistic account of Pacific Coast history. Haig-Brown expresses his mounting concern with the growing destruction and invasion of the Northwest, culminating in December's essay, "Let Them Eat Sawdust." "Exhausting a continent and overpopulating it to the point at which its inhabitants must start eating trees," Haig-Brown wrote, "seems a strange way to a more abundant life."

Lyons and Burford, Publishers, 31 West 21st St., New York, NY 10010. Paper: \$12.95. 260 pages.

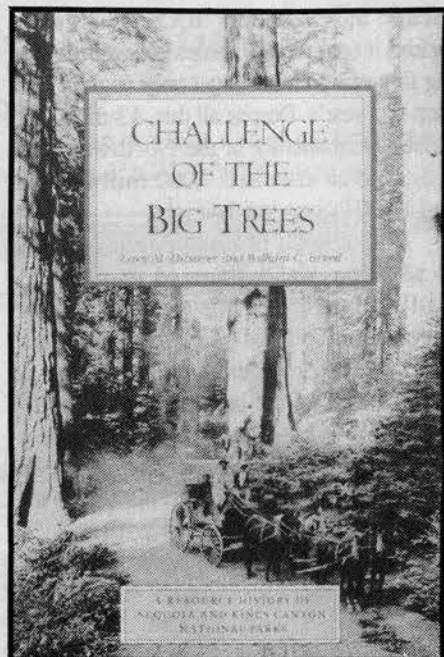
## GROUNDWATER PROTECTION

The Alternative Energy Resources Organization has published a booklet to help farmers and ranchers in the Northwest reduce groundwater contamination. *Protecting Groundwater from Agricultural Chemicals: Alternative Farming Strategies for Northwest Producers* describes how to minimize chemical use, prevent pests and keep soils healthy. Examples of cultivation and seeding practices, crop rotations, biological controls, harvesting techniques and intercropping are used to illustrate how common problems can be prevented. The book aims to "help prepare the Northwest's producers for changes we all can see coming in pesticide regulation, environmental protection and market preference." Copies of the 30-page booklet are \$4 each or \$3 for five or more.

To order, contact AERO, 44 N. Last Chance Gulch, Helena, MT 59601.

## CHALLENGE OF THE BIG TREES

That national parks not only are subject to management policy but also are placed where management philosophy and procedures are created and refined is the premise behind *Challenge of the Big Trees: A Resource History of Sequoia and Kings Canyon National Parks*. Lary Dilsaver and William Tweed chronicle in detail the geography and human history of the southern Sierras, battles for preservation of Sequoia-Kings Canyon, and development plans in and around the parks. Showing that the sustained efforts of dedicated individuals do make a difference, they discuss the roles of such influential people as Bertrand Gearhart and Col. John White. The important contributions of biologists like Lowell Sumner and George Wright to scientific research and resource management in the parks are also highlighted. The book, written to celebrate Sequoia's centennial, is particularly interesting when read as counterpoint to current management controversies in the national parks. Published by Sequoia National History Association Inc., the book can be ordered from the University of Arizona Press, 1230 N. Park Ave., Suite 102, Tucson, AZ 85719. Clothbound: \$24.95. Paper: \$14.95. 380 pages.



## TARGHEE CAMPGROUND OPERATION

The Forest Service's Ashton Ranger District is advertising an administrative Special Use Permit for the operation of three campgrounds in the Targhee National Forest, Idaho. The concessionaire will be responsible for all aspects of campground operation, including management, visitor contact and maintenance. The permittee collects fees and pays a percentage to the U.S. Forest Service. Standards to be met are outlined in the bid package. Application deadline is March 6. For more information call Lisa Klinger at the Ashton District office, 208/652-7442.

## ROCKY MOUNTAIN INTERNSHIPS

A directory of summer internships for social change is available from the Northern Rockies Action Group. "Making a Change" lists positions with environmental, conservation, low-income, women's, peace, and other public-policy organizations in Idaho, Montana and Wyoming. To receive a copy of the 46-page guide, send \$2.75 to Northern Rockies Action Group, 9 Placer St., HCN, Helena, MT 59601; 406/442-6615. Applications for internships should be postmarked by March 15.

## PUBLIC INTEREST LAW CONFERENCE

The 9th annual Public Interest Law Conference will be held March 7-10 in Eugene, Ore. Workshops, panel discussions and seminars will feature more than 40 presentations, including addresses by David Brower, Penny Newman and John Echolaw. This year's theme is "Global Environmental Responsibility — Sharing Practices and Philosophies." The conference will include the third annual "That Ain't a Swamp, That's a Wetland" photo contest and exhibition. Additional activities, such as a 5K benefit race, an auction and special film showings, are also planned. Call Anne-Marie Ulrich or Karl Taneler at 503/346-3828 for more information.

## SOLID WASTE

Montrose, Colo., will host an all-day solid waste education forum March 9 featuring topics that include recycling, landfills and alternative building materials. For more information contact the Montrose County League of Women Voters by March 1 at SWEP, c/o Region 10, P.O. Box 849, Montrose, CO 81402; 303/249-2436.

## CLIMB IDAHO'S SUMMITS

From 12,622-foot Mount Borah to little 3,330-foot Three Tree Butte, mountaineers will find new heights to scale in Tom Lopez's guidebook, *Exploring Idaho's Mountains: A Guide for Climbers, Scramblers and Hikers*. Over 700 approaches to Idaho summits are described in the book, as well as information on the area's history, geology and weather. Each entry includes summit height, elevation gain, and a 1-6 difficulty level rating. Photographs and maps of the routes accompany the text.

The Mountaineers Books, 306 2nd Ave. W., Seattle, WA 98119. Paper: \$16.95. 300 pages. Illustrated with photographs and maps.



## XERISCAPE WEST '91

A two-day conference in Grand Junction, Colo., will provide practical information on the principles of xeriscaping, a type of creative landscaping that emphasizes more effective use of plants and groupings of plants to reduce the amount of water needed. Seminars on planning, design and maintenance, along with a garden show, will be valuable for the general public as well as landscape professionals. The March 9-10 program is co-sponsored by the Associated Landscape Contractors of Colorado and Colorado State University Cooperative Extension services. For further information on fees and schedules for Xeriscape West '91 call 303/244-1834 or 303/241-6003.

## RESOLVING COMMUNITY CONFLICT

Many towns in the West face community-splitting controversy over environmental and development issues. The Zion Arts and Humanities Council will address the pressures dividing such communities with "Embracing Opposites: In Search of the Public Good," a five-week lecture series beginning March 15 in Springdale and Zion National Park, Utah. Five speakers from various backgrounds — Daniel Kemmis, Jordan Paul, Thomas Lyon, Terry Tempest Williams and William Kittredge — will talk about the environmental history of the West, models for partnership in communities, philosophical issues, and the forces that shape our relationship with the land. The council hopes that the series will bring individuals with opposing philosophies together. All lectures are free to the public. For more information contact Lynn Berryhill at 801/772-3343 or Louise Excell at 801/772-3206.

## A NEW PROPOSAL FOR COLORADO WILDERNESS

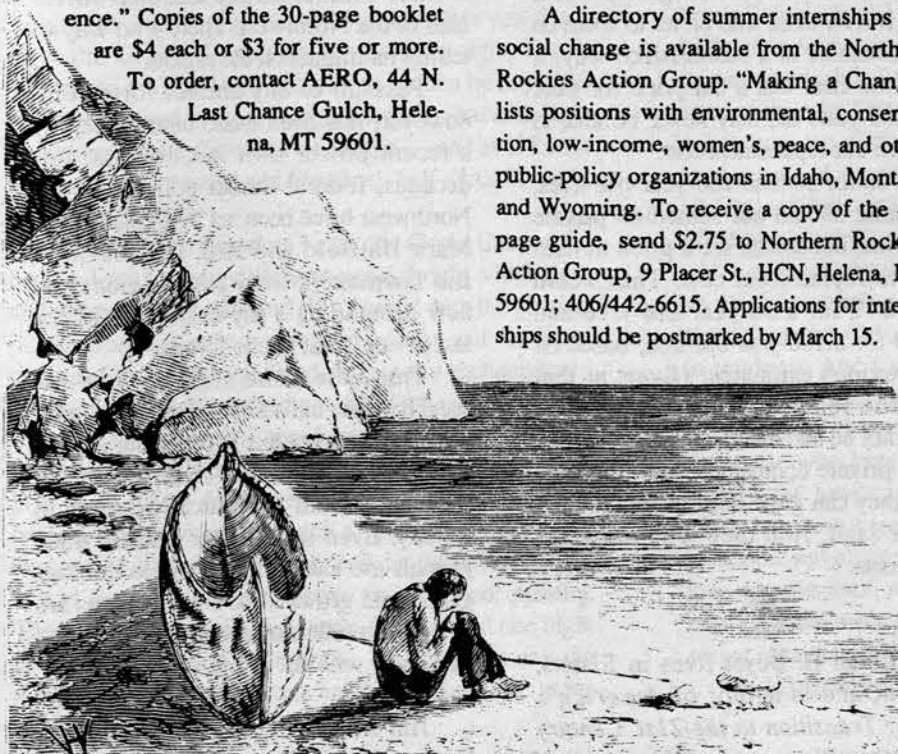
It has been 11 years since Colorado's congressional delegation has successfully addressed the issue of wilderness on national forest lands in Colorado. But with the retirement of staunch anti-wilderness Sen. Bill Armstrong, R, Colorado conservationists are optimistic that his replacement, Hank Brown, R, will help solve the impasse over new wilderness designation. The new *Conservationists' Wilderness Proposal for Colorado National Forest Lands*, prepared by the Colorado Environmental Coalition on behalf of 52 endorsing organizations, will play a significant role in the upcoming wilderness debate. The proposal calls for the protection of 1.6 million pristine acres of public lands which would more than double the 1.4 million acres protected by the 1980 Colorado National Forest Wilderness Act. Although the proposal concentrates on Forest Service lands, some adjacent Bureau of Land Management lands are included. Fourteen additions and 24 new wilderness areas are proposed, the largest of which encompasses 256,000 acres and six 14,000-foot peaks along the crest of the Sangre de Cristo Range. Other areas are important for their uniqueness and the diversity they preserve. The Cannibal Plateau represents the largest continuous expanse of alpine tundra in the lower 48; the South San Juan addition preserves habitat vital for the possible reintroduction of the grizzly bear; the Bowen Gulch/Neve Summer addition protects a spectacular stand of old-growth spruce and fir. The proposal is significant for protecting numerous low-level forested areas not included in Forest Service wilderness studies.

The 89-page document, which includes directions, maps and descriptions of each area's wilderness characteristics, is an indispensable tool for getting to know and defend Colorado's remaining wild areas. Copies of the proposal are available for \$5 from the Colorado Environmental Coalition at 777 Grant St., Suite 606, Denver, CO 80203, or call 303/837-8701.

## ORGANIC ORCHARD WORKSHOP

A two-day intensive workshop on orchard management, covering methods for managing fruit trees, nut trees, grapes and berries, will be held in Silt, Colo., on March 16 and 17. The workshop will cover grafting, pruning, planting, mulching, fertilizer teas, natural weed control and animal control. The workshop's four instructors have over 35 years of combined experience managing high-altitude orchards. People are encouraged to share information, experience, and food for the potluck dinner.

The cost of the workshop is \$50 a day. For more information contact instructors Jerome Osentowski at 303/927-4158, or Ken Kuhns at 303/876-2850.



## REPORTER'S NOTEBOOK

## Old-growth policy is still a patchwork

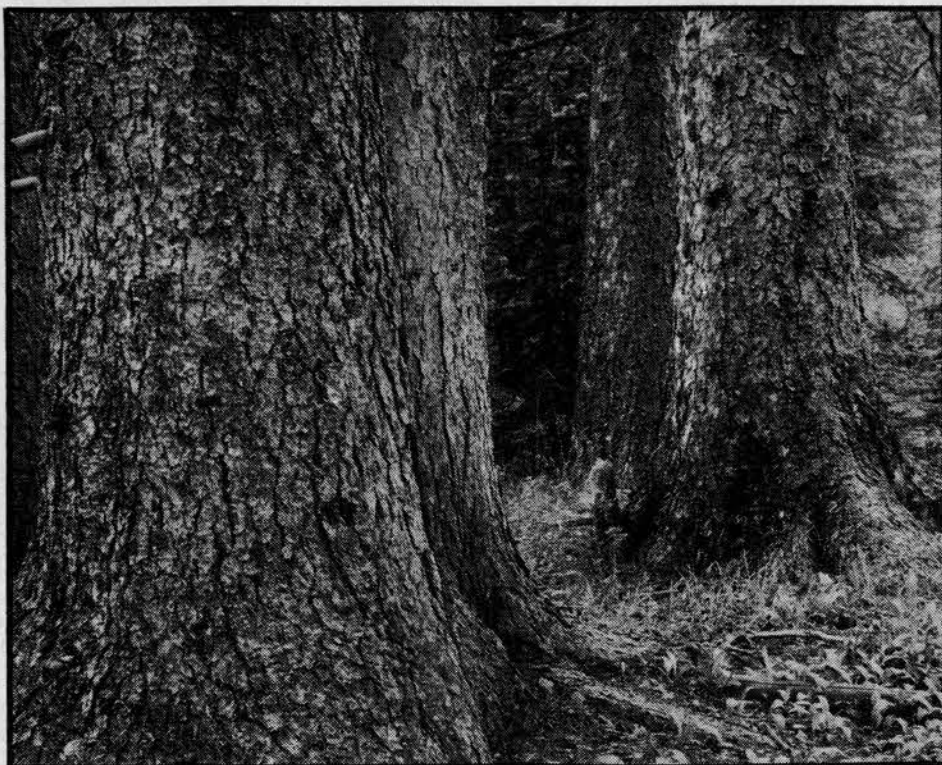
For the old-growth forests of the Pacific Northwest, 1990 was a year that Dickens could have written about: It was the best of times and the worst of times. Federal agencies sold more trees than ever, but Congress for the first time considered protecting what remains. Never before have the forests been so close to protection — and to extinction.

The Ancient Forest Protection Act was introduced — and reintroduced this year — by Rep. Jim Jontz, D-Ind. It calls for immediate protection of old growth from northern California through Washington, on both sides of the Cascades and Sierras. It would create a panel of experts to recommend areas for inclusion in an ancient forest reserve system. Despite the support of most national conservation groups and more than 130 sponsors in the House last year, it died in two committees.

The Ancient Forest Act, introduced by Rep. Bruce Vento, D-Minn., would have preserved about half the forests. It had powerful sponsors on the House Interior and Insular Affairs Committee, but little support from either conservationists or the timber industry; it, too, never made it out of committee.

Sen. Bob Packwood, R-Ore., and others offered the National Forest Plan Implementation Act, a logger's wish list that opponents dubbed the "Timber Tantrum Act." It was softened by Missouri Rep. Harold Volkmer before being introduced, but still suffered a swift demise. Rep. Bob Smith, R-Ore., introduced the Community Stability Act, which would require continued logging of old growth. Although it also died quietly, Smith has promised to revive it this session.

Congress's inability to act, combined with the lack of a clear plan to protect the spotted owl, has left a void that is being filled by the courts. Last September the federal appeals court in San Francisco overturned a 1989 law barring judges from issuing temporary injunctions to halt timber



Dale Schicketanz

sales. Ten weeks later a federal judge in Seattle made use of that ruling to issue temporary injunctions against 12 Forest Service timber sales in Oregon.

For all its reluctance to grab the owl by the talons, Congress did pass a money bill concerning old growth. In the Interior Appropriations Act for 1991, the Forest Service was given enough money to prepare for sale 3.2 billion board feet of timber, which is about 65,000 acres of old growth. On paper, that's a decrease from the average of 3.85 billion board feet over the last two years. But the cut will still be about the same as last year.

The reason is that because 1989's timber program had been delayed by the courts, the Forest Service in 1990 tried to sell off two years' worth of timber — a record 7.7 billion board feet. But the agency didn't have enough planners, biologists and hydrologists to get the cut out, and fell short about 4 billion board feet. This shortfall didn't

escape the eagle-eyes in Congress who tacked it onto the 1991 sales program, making this year's timber target only slightly less than last year's. Despite all this, 43 mills still closed permanently in the Northwest last year, and an estimated 7,000 millworkers and 1,500 loggers lost their jobs.

The Bureau of Land Management, in addition, was authorized to sell 750 million board feet this year, which is down from 950 last year. Although this will throttle down the chainsaws, it's a case of inching the barn door shut while the horses are still escaping. This year's total target for the two agencies — 3.95 billion board feet — represents about all the trees they could come up with.

"My guess is that the agencies won't be able to meet the targets for 1991," says Rick Brown of the National Wildlife Federation. "There's just not enough timber left in the pipeline."

What's more, the Forest Service is

beginning to implement stricter guidelines for riparian protection and other environmental concerns under its new forest plans, which will take some land out of timber production.

The listing of the spotted owl as a threatened species set in motion a political drama that is still playing itself out. After the U.S. Fish and Wildlife Service's official listing last June, Secretary of Agriculture Clayton Yeutter and Secretary of the Interior Manuel Lujan urged Congress to create a committee, a sort of permanent "god squad," to allow some timber sales despite the Endangered Species Act.

Congress has yet to follow their counsel. Its guiding light for the federal timber program should be the Jack Ward Thomas report, which it commissioned but has ignored. The Thomas report's blue-ribbon scientific panel concluded that the only way to ensure the owl's survival was to stop logging on 3 million acres of Northwest forest.

The BLM also has ignored the Thomas report. It issued the "Jamison Plan" (named after BLM Director Cy Jamison), a work of unusual biology that called for a 69 percent higher timber cut than the Thomas plan.

The Forest Service's response has been more diplomatic — a vague promise that it would act "in a manner not inconsistent" with the Thomas report. This, the agency estimates, would put this year's timber program at 2.6 billion board feet — a 20-percent drop from last year. Whether the agency will actually follow through on this plan is questionable. The plan's wording, complained one conservationist, left a loophole "big enough to drive a fleet of log trucks through."

This patchwork of old-growth policy will constitute business as usual, at least until the Bush administration releases its region-wide interagency recovery plan for the spotted owl, as mandated by the Endangered Species Act. Since that plan won't be ready until late this year, Congress might not consider the issue until 1992 or later. This scenario means old growth will have to wait several years for congressional protection, giving loggers a chance to eliminate a big slice of what remains.

Nonetheless, Rep. Jontz's reintroduced Ancient Forest Protection Act now has the support of congressional members from every region of the nation — except the Northwest. "It's so vague and open-ended," complains Bob Warren, an aide to Oregon Rep. Peter DeFazio, "that it could be interpreted to include almost all the national forest land in the Northwest. There's no way of telling its impact on the region."

Passage of any ancient forest bill, however, has been made more likely by a recent power shift in Congress. For decades, federal timber policies in the Northwest have been set by Oregon Sen. Mark Hatfield and Rep. Les AuCoin. But lawmakers from other regions are now demanding a say in the fate of the last of our great public forests.

That these forests might be better left standing than milled into plywood or pulp chips is a concept that is beginning to gain acceptance. The National Academy of Science has called for radical changes in forestry. Even some timber industry trade journals are calling for an end to the logging of old growth. The only questions are how long it will take to save these trees and how many will still be left.

— Jim Stiak

Jim Stiak is a free-lance writer in Eugene, Oregon.

## Why an old-growth tree is worth millions

by William H. Boyer

What would you think if the Forest Service sold trees from our public forests for 1 percent of their value? In many cases they are sold for less than that. Here is how it works:

Lumber companies bid for the trees. Their bids are based on their estimate of what the trees can be sold for, as logs or

## OPINION

as processed lumber. Then the public is left with a logged-over area, and the Forest Service pays for replanting.

If each tree sold for, say, \$100 and it cost only 10 cents to plant a tree, then the Forest Service engages in good business, right? Wrong.

Let us first recognize that many of the young seedlings planted will not mature. If one out of 10 seedlings grows to maturity, that tree costs \$1 to plant. All we need to do is wait until the new tree is as old as the one it replaced — which means waiting from 50 to 100 years.

But if the \$1 does not produce anything for many years, the loss of interest must be taken into account. All business investments are calculated on this basis; the investment cost plus the time it takes to get a return provides the real cost. When a tree (capital) is cut down, the cost of getting another one is the replacement cost.

Replacement cost equals the \$1 plus the interest lost because there is no

return by the end of the year. So if we have to pay 8 percent interest on the \$1, we begin the second year with an investment cost of \$1.08. At the end of the second year we add another 8 percent to \$1.08, and on it goes.

Costs obviously rise exponentially, which is tolerable if you get another tree in a few years. But trees like some of those cut down in Oregon can take generations to replace. If you cut down a relatively small tree, 50 years old, and use the above figures, the replacement cost is \$47. However, a 100-year-old tree has a replacement cost of \$2,200, because of the compound interest.

What happens when you figure costs for old growth? We often hear people say they will eventually grow back, but at what replacement cost?

A one-dollar tree, at 8 percent, will have a replacement-cost value in 200 years of over \$4.8 million.

In 300 years, its value would be over \$10.6 billion.

In 400 years, it would be \$23 trillion (for one tree).

And for a 500-year-old tree: \$51,500 trillion — more than the annual Gross Product of the world!

It may be economical, using these figures, to log trees up to 100 years old. But trees 200 to 500 years old are literally priceless because of their enormous replacement cost. From an economic standpoint, they can only be sold by

massively subsidizing the buyer, for the trees are selling at far less than 1 percent of their replacement cost.

We are currently doing just that. As old-growth trees worth their weight in gold are virtually given away, the wealth of the public sector is being transferred into the private sector in the world's most massive subsidy.

Added to the economic irrereplaceability, of course, is the irreplaceability of the ecosystem of which each old-growth tree is a part. But for those who prefer to focus on the economics in a businesslike way, it should be clear that a bid price for trees over 100 years old may never be able to equal the true replacement cost.

Even for 50- and 100-year-old trees, the public should not subsidize private industries, but should set a price at least equal to replacement cost. This would mean \$47 for a 50-year-old tree and \$2,200 for a 100-year-old tree, based on the previous estimates. (Even at that price the rental costs of public land would not be taken into account.)

If private companies don't like the price, they can grow trees themselves on private land. And they will incur the same costs.



William H. Boyer lives in Sisters, Oregon, and is author of *America's Future: Transition to the 21st Century and Oregon Plan*.

## LETTERS

### GRIZZLIES THRIVE IN MONTANA'S MADISONS

Dear HCN,

I read with interest your article on grizzly bears (HCN, 12/2/90) and would like to comment on one statement you made on their distribution and expansion. On Page 10, you stated that grizzly bears seem to be avoiding the fringes outside Yellowstone's western border, including the heavily logged Island Park area in Idaho, and Montana's Madison Range on the north.

While I cannot speak for the Island Park area, I can state that grizzly bears are not avoiding Montana's Madison Range. Indeed, we have seen an increase in confirmed sightings the past few years in this area and farther west. In 1990, for example, there were 10 confirmed sightings in the Lee Metcalf Wilderness (the Madisons) and four confirmed sightings further west in the Gravelly Mountains, which are outside the recovery areas. We also have a report of a grizzly denning this winter in the Snowcrest Mountains — the next mountain range to the west of the Gravellys — and a report of a grizzly in the Italian Peaks even further west. By studying the dates and locations of the sightings, it is apparent that they represent the movements of at least 12 bears.

Over the past several decades, there

has been only one confrontation which ultimately resulted in the death of a grizzly. Apparently, the bears have been able to coexist with the present level of human use without coming into conflict.

In an effort to reduce the possibility of conflicts, the Forest Service has put into place special regulations for those who wish to hike and camp within the grizzly bear recovery areas. In addition, we have made an effort to reach forest users by setting up information posters, patrolling the back country, and publishing brochures and news stories. As the bears expand their range outside of the recovery area, we have also expanded our efforts to reach the public in these adjacent mountain ranges.

Yes, as the bears start using new areas where development or other uses exist, there is a higher likelihood of conflict. Hopefully, however, we can keep these to a minimum by having everyone keep a clean camp and store food and garbage out of reach of bears. Man and grizzlies can coexist if we make the effort to understand and take care in grizzly country.

Mark A. Petroni, District Ranger  
Beaverhead National Forest  
Ennis, Montana

### NATURAL GAS

Dear HCN,

In the article about natural gas pipelines (HCN, 10/8/90) you quote a

Denver investment banker as saying that there will be "good, strong, sustainable growth." I presume he means "...of gas production in the West."

Natural gas, like oil, coal and uranium, is a finite natural resource. As a consequence of its finiteness, steady growth of its rate of consumption cannot be sustained for long. Indeed, the term "sustainable growth" is an oxymoron.

Prof. Albert A. Bartlett  
Boulder, Colorado

### AUTHOR GETS THE LAST WORD

Dear HCN,

I must respond briefly to the people who wrote about my Dec. 31 article on gun ownership. A mode of self-defense is a personal choice that should be made *before* it's needed. Space limitations prevented including details of my 15-year debate with myself, during which I struggled with every objection raised by the letter writers.

Today's women are more likely to drive, work and live alone; they need to weigh their options. The article mentioned only the times I couldn't avoid trouble.

No one should carry a gun without regard for the possibility of killing another human being. You can also kill with rocks, meat cleavers or hat pins; not having a gun doesn't mean you are safe from a killing rage, or from danger.

To Valerie P. Cohen: You say a gun will "forever alter" one's life, as if that is a conclusive argument. Being raped alters life forever, too; I could tell you about the psychological effects in detail if I had space. But we can make some choices about *how* our lives are altered. I can understand disagreement, but why do you attempt ridicule by saying I'm scared? Anyone who carries a gun without fear is a dangerous fool; anyone who has been raped is never without fear.

To Barbara Evans: I have a small protective dog who goes with me into crowds I address; I know he won't hurt an innocent stranger, and he's usually allowed in motel rooms. And guns don't have to be walked late at night in motel parking lots. I respect your choice as fitting your needs.

To Charles: I didn't mention all my weapons. I can now hold the .357 very steady.

To Lawrence: My best friends have always been men; and self-defense, unfortunately, is a relevant issue anywhere. Many of us in the West have fondly believed violence exists only in big cities; guns are so much a part of our history that some take them for granted, while newer residents want to ban them. Just as we must debate to make wise choices about the use or abuse of the land, we must each decide how to protect ourselves, and hope we never have to.

Linda Hasselstrom  
Hermosa, South Dakota

## afield

### Night visions of a wild and strange place

by Diane Sylvain

The first time I saw the Grand Canyon, I didn't see it. It was nighttime and I was tired. We had spent hours driving across the flat dull plateau, through miles and miles of piñon and juniper, shapes blurred in the gathering darkness, until I began to doubt that there was a canyon at the end of it all. And then at last we were there, the car parked, the tent set up. I took the flashlight and followed the trail to the rim, disappointed because the sun was down and there was nothing to see, but drawn to look despite myself.

At the rim I stopped, switching off the useless light. There were stars making holes in the violet sky, and the shadow shapes of pine trees. I took a slow step forward and looked out at nothing. And then I caught my breath — or my breath caught me.

For the canyon was there, even though it was the middle of the night. I have never felt a thing invisible that large and live and looming. It hummed before me, a great humped and folded darkness. I put out a hand and felt the weight of the blue air filling the vastness. The silence of it thundered in my ears.

I was shaken, stunned. There was no one at the lookout to share it with me; everyone knows you don't view the Grand Canyon on a moonless night. But it seemed to me that I saw something hidden by daylight, as if a god lived in those indigo depths — some ancient Earth deity from the center of things — and as if I kept watch while It moved and breathed, half afraid It might turn and see me.

That was the first time I saw the Grand Canyon. In the daylight it was a different world, bright with colors and shapes that shifted and shimmered with the passing of the hours. It was larger and wilder and far more beautiful than I had imagined, and in my enchantment I almost forgot the strange disquiet of the night before.

Then one spring I spent two weeks backpacking there with a friend. On that trip I realized, suddenly, that there was a dark face to all this beauty, and that behind the glowing vistas was a pure and perfect indifference. I knew that if we died in that place, there would be nothing in it to notice or mourn our passing. There is no pity in sun and stone. We camped one night in a canyon called Cremation. The legends say the Anasazi burned their dead here, and flung the ashes

Diane Sylvain



over the cliff to the river rumbling far below. I don't know if that's true; I know there are ruins tucked in the high rocks with windows like enigmatic eyes. I know that it rained while I was there, and that in the gray sadness of the rain I could feel my own ghosts flung like ashes from the cliff. And in all this I remembered the strange awe of my first night visions of the canyon, and understood how much more there was to see in this place than mere picture-post-card prettiness.

I no longer backpack, not because I don't wish to: an injury has left me unable to. But I keep a small stone from the Colorado River, and a fierce love held in my heart. And I still see the canyon — maybe now more clearly than before.

There are those who claim that wilderness is useless, that those who love it are elitist. They argue that the elderly, the handicapped, the very young and the just plain lazy can't get into nature without roads and restrooms and all the paraphernalia of development. But they miss the point; a point I can see better now than ever now that I am somewhat limited, and far away. It is like seeing something more vividly in the dark.

Wild places do not exist to be convenient, or enter-

prising, or safe, or useful, or even what we choose to call beautiful. They do not exist to be admired or visited or photographed. They are there for themselves alone, and that is enough.

There is a great deal to be said for the pure knowledge that things exist, bigger and wilder and stranger than you can know — that the Grand Canyon is there even at night, when you can't see it. Because you can't see it, but if you listen, standing at the edge, you might hear it breathe and wake and go about its age-old business, ignoring you entirely. It is good to know that the wild places are there without us — when our backs are turned, when our eyes are closed, when we're out of film. If nothing else, it puts us in our place. To the Grand Canyon, we are nothing more than trilobites, buried in time.

As I write this, miles away, the river gnaws at the black stone; ravens hang in the empty air; the god of the canyon shifts and sighs. I do not have to see it to know it. I rejoice, far away, in the wild places, the hidden worlds — the places you don't have to see, in order to see.

Diane Sylvain is an artist who works for HCN.

## ESSAY

*The perils of illegal action*

by Dave Foreman

*Certainly one of the highest duties of the citizen is a scrupulous obedience to the laws of the nation. But it is not the highest duty.*

— Thomas Jefferson

Some of the perils of conscientiously disobeying the law quickly become apparent to anyone who chooses to do so. The indignity and boredom of arrest, booking, incarceration, and court proceedings can be nearly insufferable. Sparring with the legal system costs money, time, and energy. Finally comes the penalty, with further loss of money (fines) or freedom (jail sentences). Other hazards may arise as well. The Sapphire Six, who occupied a logging site in Oregon, have been sued by the contractor for downtime. Texas Earth First!er James Jackson injured his leg when a Forest Service officer chopped down the tree in which he was sitting. Peace activist Brian Wilson lost his legs to a train. Students who campaigned against tyranny in Beijing have been lined up against the wall. When one engages in deliberate civil disobedience, one quickly begins to understand Mao's maxim, "Political power grows from the barrel of a gun."

Having just been arrested while asleep in my bed by a posse of gun-wielding FBI agents playing Dirty Harry, and now facing a possible five-year sentence in a federal pen on a set-up charge, I have no desire to downplay these dangers. Anyone who chooses to stand against a corrupt and brutal establishment (and, to varying degrees, all political states are such) must accept that he or she may eventually face that ultimately lonely moment shared by Joan of Arc, Nathan Hale, and the French revolutionary Georges-Jacques Danton.

But there are other kinds of pitfalls in choosing to break the law, more subtle than those above, but no less dangerous.

One danger is that by conscientiously breaking unjust laws or by carefully targeting wilderness-destroying property for destruction, one places oneself in opposition to the creators, beneficiaries, and enforcers of those laws, or to the owners and users of that property. It is an easy step from that to creating a dualistic world of *Us* versus *Them*. When we create such a world, our opponents become the enemy, become the *other*, become *evil men and women* instead of men and women *who commit evil*. In such a dichotomy,

they lose their humanness and we lose any compulsion to behave ethically or with consideration toward them. In this psychological state, we become "true believers," and any action against the enemy seems justified. One needs only to look at Adolf Hitler or the Ayatollah Khomeini to see the damage to one's psyche that results from holding such attitudes.

Another peril of the lawbreaking process is a loss of focus. For practitioners of civil disobedience or ecotage in defense of natural diversity, the fundamental issues are wilderness and wildlife. Our opponents are federal land-managing agencies and resource-extraction industries. After arrest, incarceration, and court sentencing, however, it is easy to become confused and begin to see the injustice of the legal system as a fundamental issue with which we must deal, and to begin to regard the deputies, jailers, and judges whom we encounter as our primary opponents. When this occurs, our focus on wilderness is diluted. It is important to preserve that focus.

The adrenaline rush of a well-planned action may seem an effective counter to the dull security and safety provided by modern society. Some turn to thrill sports like rock climbing, skydiving, or dirt-bike racing for the same rush. The monkeywrencher may become captivated by the intoxication of destroying machines and getting away with it. The tingle of action may be a justifiable part of the reward for courageous defense of wilderness; it becomes a danger when it turns into a delirium or is the primary reason for breaking the law.

Often a key element in civil disobedience or monkeywrenching is gaining public acceptance or understanding of the injustice of certain laws. If our ethical disobedience becomes unfocused, untargeted, and ethically ambiguous, then we appear to the public as hooligans and common criminals. If lawbreakers for a good cause do not act deliberately, then the ethical statement they make is demeaned, and it is easier for those in power to turn the public against just causes.

The greatest hidden peril of illegal action is simply that when one breaks the law, even an unjust law, with regularity, breaking the law can become seductively easy. It becomes common, even normal, to break the law.

Although the laws of a modern state are created by and for an economic elite, to maintain their financial position and to defend the philosophical orthodoxy to which they subscribe, many laws are nonetheless necessary when millions of people live in close proximity. All human societies have customs and rules governing interactions between and among individuals. They are natural; they should be obeyed. I believe in laws against rape, assault, and invading Wilderness Areas with vehicles or chain saws.

The more one becomes involved in conscious law-breaking, whether nonviolent civil disobedience or monkeywrenching,\* the more one needs to be scrupulously deliberate about doing so. Without such fastidiousness, one risks damaging one's own psyche and one's cause. When we break unjust political laws to obey higher ethical laws, we must guard against developing a laxity toward standards in general. Indeed, when one deliberately engages in civil disobedience from time to time, one needs to attend to *just* laws with an even greater sense of responsibility.

Some who are deeply committed to the defense of Earth and to opposing tyranny would undoubtedly dis-

\* I should acknowledge here that public civil disobedience and covert monkeywrenching are generally considered entirely separate strategies, and that very different people engage in them. Although both involve consciously breaking the law, for many monkeywrenchers, breaking the law is incidental. Their aim is to thwart destructive machinery threatening natural diversity. Such tampering with machinery, however, happens to be illegal. As such, monkeywrenching shares the perils of civil disobedience discussed here.



agree with the above. Some people who have engaged in ecodefense actions may argue that they have no obligation to honor any of the rules or customs of this society, that they are free agents, or that they are in the process of creating a new society with a new morality.

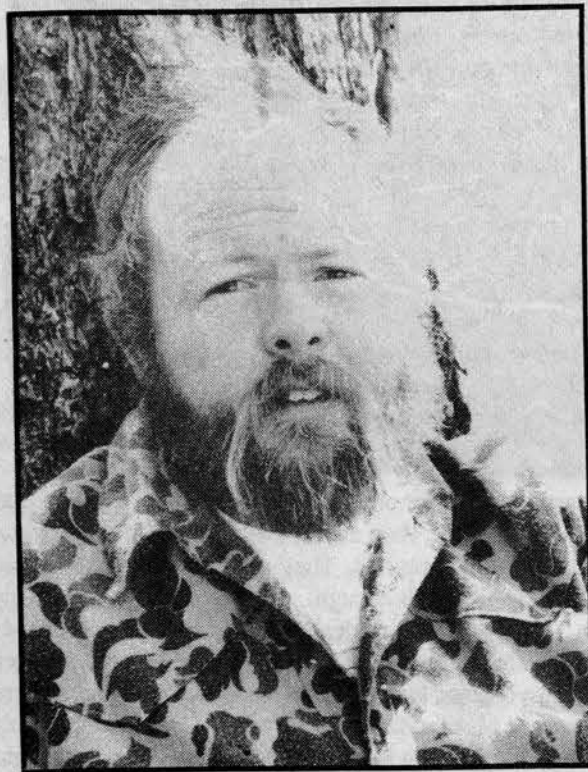
I wish I were so sure of myself. It would be an easier, simpler world. It was so, for the heroes of matinee Westerns when I was growing up in the fifties. I wanted to be like them — strong, silent, secure, and whole in myself.

But I find that I cannot stand apart from or above society in that way. How do you change society when you are apart from it? How do you understand yourself when you deny the social environment that produced you? How can you gain support for your goals and actions when your behavior alienates potential supporters?

Wise guerrillas know that they are part of society and need support from the population base. The isolated, alienated guerrilla is just as lost and vulnerable as the isolated, alienated gorilla. We primates are social animals. We have a long, deep heritage of being part of a tribe, of defining ourselves by the cultural context in which we were born.

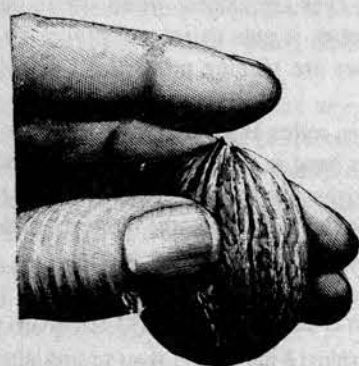
We deny human ecology when we argue that we can operate totally apart from the mores of society, when we define ourselves as ethical islands, beholden to no one, without responsibility to others for our own actions. There we enter uncharted waters, beyond anthropology, beyond biology, into modernist alienation and nihilism, into Hobbes' nightmare of all against all, a dark and fearful place as far from the wilderness as we can imagine.

Since leaving Earth First!, which he co-founded, Dave Foreman has been working to form a new wilderness group, Eco-Wild. This essay is taken from *Confessions of an Eco-Warrior*, to be published in March by Harmony Books.



Dave Foreman

Ray Wheeler

For the West in a nutshell, read *High Country News*

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