

The Outdoor and Environmental Bi- Weekly

Friday, April 27, 1973



This is the South Fork of Fish Creek on the Teton National Forest. The site is along the Continental Divide in the Wind River Mountains of Wyoming. Emphasis on timber management with no thought for aesthetics or other values brought criticism of this area as early as 1968. By then U.S. Plywood-Champion Papers had a lumber mill at Dubois with an annual milling capacity of 50 million board feet per year. Political pressures on the U.S. Forest Service by the huge timber company had resulted in contracts and timbering operations which far exceeded the sustained-yield capacity of the forests. As a result, both the Shoshone and Teton National Forests were already overcut. But U.S. Plywood timbering operations still continue, and the loss of elk habitat, fisheries, and other values also continues. A call for an environmental impact statement on timbering resulted in a suit by the Wyoming Outdoor Council and others. A hearing on a permanent injunction against U.S. Plywood and the Forest Service was heard April 24 in Cheyenne.

"Landmark" Case Heard

by Tom Bell

Calling a hearing on timbering contracts on Wyoming's Teton National Forest a "landmark" case, Attorney Jack Speight of Cheyenne opened arguments on a three-day session in Federal District Court. The hearing was on a motion for a preliminary injunction. The injunction asks for an environmental impact statement on two timber contracts awarded to U.S. Plywood-Champion Papers.

Speight said the U.S. Forest Service had not complied with the National Environmental Policy Act or its own regulations in awarding the timbering contracts. He said there would be "significant" environmental impact on the area. He cited the area as being in the nationally known Jackson Hole and the impact further timbering would have on the equally well-known Jackson Hole elk herd.

In rebuttal opening arguments, U.S. Attorney Richard C. Thomas alleged that a minority group was trying to prevent the orderly harvesting of timber. He referred back to the Forest Service Organic Act which said the Forest Service was mandated to maintain

forests for wood products and to protect the watersheds. He also referred to the Multiple-

Use and Sustained Yield Act of 1960.

Thomas said the two small timber contracts (totalling some 15 million board feet) would not constitute an environmental impact having a "significant" effect. An attorney for U.S. Plywood, Richard Leedy, similarly argued against any environmental damage. And he claimed that the outcome of the case could have an effect on the entire Rocky Mountain logging industry.

Thomas also referred to the Wyoming Legislature's Joint Resolution to Congress requesting there be no more designated wilderness in either the national parks or national forests of Wyoming. He said this was the will of the people as expressed by elected representatives, opposed to those "self-appointed" representatives who wanted to impose their will on Wyoming. He said the Forest Service had received public comments on their recommendations for timber contracts and various views had been considered.

The motion for a preliminary injunction to

hold up the contracts was filed in Cheyenne on March 22, The motion was filed by the Wyoming Outdoor Coordinating Council and two Wyoming big game guides and outfitters, David Addy and D'Orr Merrit. Since then two other groups, the Wyoming Wildlife Federation and the Wyoming Division of the Izaak Walton League, have entered the case as plaintiffs. At the same time the motion was filed, a restraining order was also obtained. The restraining order was to prevent further cutting of trees along a road right-of-way into the area of the contracts.

Hearing on the motion had originally been set for April 2. However, U.S. Plywood asked for a delay until April 20. That date was further set back by a Wyoming snowstorm which closed roads throughout the state on the day of the hearing. It was finally rescheduled and held in Cheyenne April 24-26.

Forest Service testimony by Teton Forest Supervisor Tom Coston related the steps in the decision to award the contracts. He also said a decision was made not to do an envir-

(Continued on name 5)

One of the distressing elements of the environmental movement is the lack of knowledge and understanding on the part of the general public. Such lack is fed upon and exploited by the special interests. And sometimes special interests themselves lack the basic understanding.

Take the current price and shortage of lumber. Harry Bridges' Longshoremans Union vehemently protested any cut-back in log exports to Japan because it would put men out of work on the docks. The volume of logs being shipped to Japan of course has grown to such proportions that a great work force has been

Men who work on the docks have little knowledge or understanding of what is happening back on the land in Oregon, Washington, Idaho, Montana, or Wyoming. If they have ever heard of multiple-use or sustained yield, they have little concern. And if they have heard the terms, it was probably from an employer who has prostituted the meanings to suit his own purposes.

One of the failings of our society, especially our urban-oriented society, is the basic lack of understanding of the vital elements of our environment. People even confusingly use the terms environment and ecology interchangeably. So it is no wonder the public is confused over complex issues in which environmental matters are set against jobs, taxes, and the growth ethic.

Somehow the public has to be made aware that the basic concern of knowledgeable environmentalists is for the life-support system itself. Destroy the land-base, or the envelope of air, or the quality of the water supply for the human race and you have destroyed society. Jobs or taxes will then be irrelevant matters.

The cry is heard that there must be a balance between the environment and economics. But so far the imbalance has not been righted. If the choice is between clean air and jobs, the jobs still have it, hands down. No matter that the life of the worker, or even the lives of his children living nearby, are foreshortened by emphysema or lung cancer. (And now, it seems, we are also going to be given the choice between clean air and the lights in our own homes. Question: "Do you want to go back to candles?")

Clever advertising and the oracles of big business have even led the public to equate a "quality" environment with a man-made environment. As a result, the public is led to believe that science and technology in the hands of big business can create an even better world than that placed here by the hand of God Himself. Show them enough profit and THEY can do anything!

Man has come to believe that he can act with impunity in matters relating to the total environment. The problem is that few men have yet acquired the simple wisdom propounded by Barry Commoner, among others, that "everything is tied to everything else."

Log handlers on the docks at Seattle are not supposed to know that a timber resource is being destroyed by over-exploitation because Japan will pay any price for the logs. The loggers on the ground are not supposed to know that part of the earth's landbase may be destroyed by the clearcutting for timber. After all, the small part of the vast forest they are working in is only a small part of the world's vast reserves. (Little do they know that the world's vast reserves have all but disappeared.)

The merchant in the grocery store, who depends upon the logger's wives for purchase of his groceries, is not supposed to know that both a land base and a timber base is being destroyed. It is of little concern to him that Japan needs logs or a home-builder in Indiana needs 2x4 studs. The banker in the small western town is not supposed to know that the money reserves he worries about are there at steep cost to the environment. If he thinks of his grandchildren at all, he thinks in terms of how much money he can leave them. The banker and all the others must ultimately learn that you can make more paper money at the stroke of a pen. But you can't make trees short of 50 to 100 years, or make a new soil profile in less than 1,000 years, or make a new species of animal in all eternity.

Environmentalists are damned for putting men out of work, or putting roadblocks in the way of "progress" and a broadened tax base. It is too bad for that is not their intent. The roadblocks often have to be put in the way to make the public sit up and take notice, and to bring out the facts which are often obscured.

If I may speak as an environmentalist, I would have to say that I am saddened by the lack of knowledge and understanding by those who criticize loudest. If they could but inform themselves, there would be far fewer conflicts between environmental and economic concerns. A good case in point is that concerning the suit between the Wyoming Outdoor Council (of which I am a director) and the U.S. Forest Service. An environmental impact statement would bring out many of the facts. which the general public does not now know. If they did know, the decisions might be different.



As snows melt away in the mountain fastnesses of Montana and Wyoming, the grizzly bears emerge from their long winter sleep. Controversy still surrounds the protection and management of the big bears. Both Montana and Wyoming allow limited hunting. Others are killed illegally or accidentally. Yellowstone National Park has changed management policy to phase out any artificial feeding. All these factors lead some to believe the bears are truly endangered. Now, the Department of the Interior has asked for a review of the whole situation by the National Academy of Sciences.

Letters To The Editor



Dear Mr. Bell,

I am a student at Hamilton Jr. High School in Denver. Our environment club's sponsor receives your newspaper, High Country News. He shares the paper with the club members. I enjoy reading your paper very much. It is good to see that someone is finally trying to do something about the current environmental problems. Your newspaper, High Country News, brings out your own opinions about these problems which shows that you are not afraid to say what you believe is good.

I would like to congratulate you on the fine job that you have been doing and I hope that you will continue to keep up the good work. Enclosed is a check for ten dollars for a subscription to High Country News for the entire environment club.

Sincerely, Mike Rifkin, President of the Environment Club Hamilton Junior High School Denver, Colorado

Dear Mr. Bell,

We can ill-afford to lose the benefits of your expertise in representing those of us who are concerned about the ravages being made to our land, air and water. Now, more than ever, we need a strong voice, such as yours, to tell it like it is.

Enclosed is a check for \$30 which I hope will help to assure the continuance of your very vital publication.

Sincerely, Lawrence R. Troyer Cheyenne, Wyoming

Dear Tom Bell,

Silver lining to my cloud too! Because of illness in family, my March 2 issue of HCN was laid aside without reading your "farewell" editorial. Not until the arrival of the March 16th issue did I become aware of the neartragedy of suspension that had been imminent. So I received the good news first, and want to OFFICE MANAGER add the enclosed to the "rescue" fund and add CIRCULATION MANAGER Marjorie Higley the new subscribers listed.

Although we are fighting the battle to save the land on so many fronts, it is unthinkable that so vital and valuable a scrapper as High Country News should falter for lack of su

Every good wish! Mrs. Dorothy Durham Carmel Valley, California

Dear Tom,

Enclosed is a check for \$50 - apply \$10 to renew my subscription and the balance to help the cause.

I spend half my time in Wyoming and have property and family there.

You do a fine job, a little radical at times but all for the good and what we both believe in.

Sincerely, Harry W. Whyel Whyel Coal Co. Uniontown, Pennsylvania

Dear Tom Bell and Staff:

We have just received the latest copy of High Country News and we rejoice that this are looking better and that you will be able to carry on. You must carry on - for who else

(Please turn to page 15.)

HIGH COUNTRY NEWS

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How About Limiting

Japan's purchases of logs from the United States are now reported running at the rate of 4.5 billion board feet per year. That's a tremendous drain on Northwestlumber supplies.

Harry Bridges of the Longshoremen's and Warehousemen's Union testified Friday against legislation that would phase out the log flow to Japan. The exports provide jobs for longshoremen.

But the absence of those logs in Northwest timber supplies takes away jobs, too. There would be more total jobs if those logs were converted to finished lumber in the Northwest. And lumber prices should be lower.

t Japan has its own building boom and is

willing to pay high prices for logs.

Yet if the United States does not have enough timber in its forests to meet its own needs on a sensible "sustained yield" basis, it's ridiculous to send billions of board feet to Japan.

The Forest Service is hamstrung by budget cuts, restricting its ability to make timber available. Also in recent years allowable cuts on many public forests have been reduced -

in recognition of past overcutting.

In Southern Idaho the past rate of cut was too high. It was more than the annual replacement growth of wood that will be available for cutting. The Forest Service was counting in the total inventory, timber on steep, highly erodible slopes that can't be logged without filling stream beds with silt. The greatest problem is roads. Much of Southern Idaho's forests are on the highly erodible soils of the Idaho batholith.

The inventory also included timber in slow-growth areas and timber that is inaccessible.

Cutting large amounts of additional timber on Northwest public forests in the near future can be done at the cost of unacceptable watershed damage, erosion and damage to streams.

Rather than doing that, it makes a lot more sense to limit exports to Japan. Why should we sacrifice our forest watersheds to keep up with Japan's appetite for logs?

The rate of log exports to Japan exceeds the amount of timber cut annually in the entire state of Idaho. We are exporting our forests - in the face of warnings that more timber will have to be cut in the future to meet our needs at home.

A few timber companies are making big money selling logs to Japan. They naturally oppose curbs on exports. But the exports reduce our ability to meet our own lumber needs, while adding to pressures to return to the overcutting of our forests and the destruction of our watersheds.

Allowing that tide of exports is unsound, economically and environmentally. It is shortsighted. It sacrifices long-term public interests to the short-term profits of the exporters. Since the timber industry is concerned about lumber supplies, it ought to be working hard to curb those exports.

Reprinted from THE DENVER POST, April 4, 1973.

Price Controls Needed

If meat prices are of sufficient concern to bring about a federal freeze - as happened sast week — the question of lumber prices as they relate to housing costs certainly cannot be far behind.

In defending President Nixon's freeze on meat, proponents of controls pointed out that meat prices have risen more than 20 per

cent since late 1971.

If housing is a vital necessity then a similar case can be made for controls on lumber. Business Week Magazine said last week that lumber prices "took off with the speed of a forest fire early this year." This is true, as the following graph, using federal figures, makes evident. The Business Week graph shows that of the major items used to build a house wood has gone up fastest of all.

	1972	JanFeb.
	rise	rise
Lumber and wood	12.9%	7.5%
Paint	2.0%	1.0%
Plastics	2.3%	1.1%
Plumbing fixtures	2.0%	.7%
Heating equipment	2.5%	unchanged
Concrete products	3.7%	1.1%
Clay products	3.5%	2.2%
Land	10.0%	not avlbl.

As the chart shows, lumber prices since the end of 1971 went up by 12.9 per cent in 1972 and another 7.5 per cent (which could reach an astronomical 45 per cent if permitted to continue at the same rate during the rest of 1973) during January and February of

The Nixon administration in the last few days has put into effect a package of remedies to try to accomplish something in the area of lumber prices.

It increased the amount of logs to be sold from national forests by 1.8 billion board feet in 1973, an increase of 18 per cent over 1972.

It announced it would try to persuade the Japanese to decrease their heavy buying of logs. Japan's buying of U.S. logs has helped create a shortage in the Pacific Northwest and has practically made Alaska a Japanese colony, according to some observers.

Mandatory price controls on lumber were dropped Jan. 11 as the President ended his Phase 2 program. But the question of whether that decontrol was wise has not yet been settled; the Cost of Living Council will soon hold hearings on whether to reimpose those

In the light of the President's freeze order on meat the question is a lively one.

We suspect the industry will suggest a waiting period to determine if the greater cutting on national forests - plus persuasion will help. That may be the course of wisdom for the present but the situation very obviously is in flux.

Reprinted from THE IDAHO STATESMAN, March 28, 1973.

Way Out? Gas-burners

The possibility of a gasoline shortage and a price increase for the product is frightening for this nation of two and more cars per family.

Unfortunately, in most of this country the automobile is an absolute necessity in getting to and from our jobs. Motoring is a way of life. It is a part and parcel of our recreational

Worse, as was pointed out in this space in comment on the automobile industry's difficulties in meeting emission standards, we are addicted to bigness in our passenger cars.

In Europe and elsewhere in the world where the price of motor fuel has long been double or more than in the United States, the small automobile not only is a necessity, but is welcomed. The average European simply

cannot afford to drive an American automobile.

With the energy crisis - at least in the oil business - apparently already upon us, pure economics will force Americans to demand smaller automobiles from the American manufacturers. The smaller automobiles use about half the gasoline needed to operate the big

Of course the shift from bigness to smallness could not be achieved overnight.

But the economic and ecological facts of life will ultimately lead to a change of life style around the world - mass transportation, smaller automobiles and more efficient engines designed to spew out a minimum of pollution into the air.



Reprinted from THE DENVER POST, March 27, 1973.

Tough Rules

Since the Clean Air Act of 1970 was voted into law by Congress, administration officials have viewed it basically as a land-use

But the thrust of enforcement until now has been directed at specific sources of air pollution, such as automobiles, factories, power plants and the like.

Now the Environmental Protection Agency, prompted by a recent federal court decision in a suit brought by the Natural Resources Defense Council, is preparing regulations for new construction complexes that could affect

In the long run, the EPA guidelines could have far-reaching impact on suburban as well as urban development throughout the nation. As such, the rules will have to be carefully thought out and judiciously administered by the federal and state agencies involved.

The preliminary list of the complexes included as sources of pollution subject to regulation emphasizes the scope of the undertaking. Among the projects open to review are: shopping centers; sports arenas; drive-in theatres; parking lots and garages; residential, commercial, industrial and institutional complexes; highways; and sewer, water, power and gas lines.

Under the EPA rules, it will be the responsibility of the states to review the locations of these complexes, before construction takes place, to determine if air quality would be seriously affected by the projects.

In cases where such complexes might adversely raise air pollution levels, a state would be expected to halt construction.

If this forces the states and local communities to do a better job of planning for growth - taking into consideration auto traffic patterns, mass transit, population dispersal, and the like, in weighing the location of complexes - that will be all to the good.

The task of achieving "healthful" air quality standards established by the 1970 law was expected to be difficult. The newly-proposed EPA rules suggest indeed just how formidable the clean air goal may prove to be.

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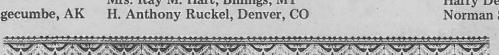


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A Close Look At The Snake River

by Bill C. Catlin

(Hell's Canyon) — In the very heart of Chief Joseph's awesome country, 60-plus scientists, technicians and others put the Hell's Canyon reach of the middle Snake River under scrutiny in late March, searching for answers on how much water is needed in a river to meet all the demands placed upon it.

Obviously this is an oversimplification and hardly does justice to those professionals who worked hard in this massive outdoor laboratory. But then, technical jargon does not make good reading.

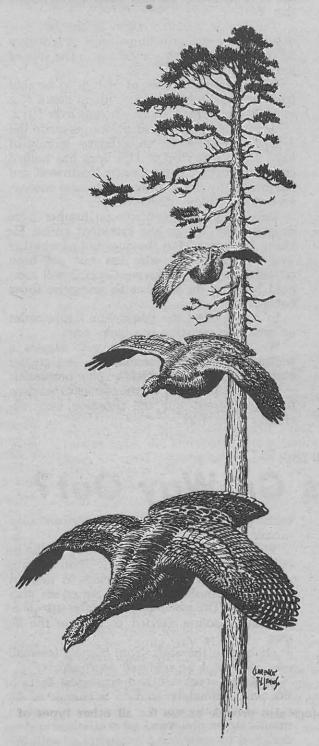
What they hope to learn when all the nuts and bolts are sorted out is how much water should be left in the Snake River to make it both productive and recreationally palatable.

Changing values placed on water in recent years brought the whole investigation about, to determine desirable water levels for fish and wildlife habitat, recreation, water quality and esthetics. Actually, the project was conceived as a part of the Pacific Northwest River Basins Commission's joint comprehensive plan for the water and related land resources of the region. The commission is a five-state/federal water planning agency headquartered in Vancouver, Washington.

Chief ramrod and logistics expert for this indepth examination was Keith Bayha, a wild-life biologist with the Bureau of Sports Fisheries & Wildlife at Boise, Idaho. Assisting in putting the package together were Dick Nadeau of Bayha's office and Charles Koski, National Marine Fisheries Service, Department of Commerce in Portland, Oregon.

Bayha, tireless and unperturbable, did his homework well. Throwing 60 civilians and 16 military people together for a week to 10 days without incident was a feat in itself.

If nothing else would have been gained from the time spent in Hell's Canyon, the study was a glowing example of interagency cooperation. Some 24 state groups from Idaho, Oregon and Washington and five federal departments all worked shoulder to shoulder toward a common goal — more knowledge. The findings of the investigation are to be published by the



Pacific Northwest River Basins Commission.

While dollar figures are not yet available, the Snake investigation was also unique in that each participating agency footed its own bill. It was necessary for the Pacific Northwest River Basins Commission, the Corps of Engineers and the Bureau of Sports Fisheries & Wildlife to wangle some additional funds to reimburse the Defense Department for the use of four helicopters. Without the choppers, the whole study would have been slowed to a walk.

And a doff of the derby should go to those helicopter pilots who flew the treacherous terrain with aplomb.

Eight camps were scattered along a 90-mile stretch of the Snake from the base of Hell's Canyon Dam to the mouth of the Grand Ronde River. Each camp was assigned a different investigation to be conducted daily as the river was systematically lowered from a stable flow of 27,000 cubic feet per second to a summertime low of 5,000 cfs.

The Snake was lowered each 24 hour period for five days. As it went down, the croft is checked such things as white water boating fishability, what happens to the fish and what they eat and how many get stranded as the water goes down, what happens to recreational power boating, what occurs in the way of temperature changes, time of water travel, the aquatic animal life, the spawning beds and so

Two large sturgeon — one 8 ft 2 in and the other 7 ft 11 in — were tagged and released. Other species caught included rainbow trout, steelhead, Dolly Vardens, small mouth bass, channel cat, bullheads, squawfish, suckers and carp.

With helicopters darting up and downstream like dragonflies and jet boats chipping in some white water of their own, one could almost feel Chief Joseph looking down from a rocky bluff and wondering what the hell the White man was doing to his river.

The wise old Nez Perce could rest easy, the scientists left it just as they found it.

There is no guarantee it will always be thus.

Landmark"

onmental impact statement because he thought an environmental analysis was sufficient.

The timber contracts are in areas of the 1.7 million acre Teton Forest which have not previously had timbering done in them. They lie just west of the Continental Divide and about 10 to 15 miles south of U.S. Highway 287 near Togwotee Pass.

The largest timber operator in the area is U.S. Plywood-Champion Papers. The company bought an existing sawmill and planing unit at Dubois, Wyoming, in Fremont County in 1966. Timbering operations had already been scaled up to proportions far in excess of the sustained-yield capacity of the surrounding forests. In 1963, the plant had a milling capacity of 20 million board feet per year. By 1966, the capacity had been increased to about 40 million board feet per year, and by

8 unofficial estimates placed milling capacity at 50 million board feet per year. The increase in size of the mill obviously increased not only the economic and tax base in the little town of Dubois, but also the population (1960 census - 574, 1974 census - 898).

U.S. Plywood depends mainly upon the Teton Forest for its remaining timber supplies. A 20-million board ft. contract on the Bridger National Forest has been cut out. And the timber base on the Shoshone National Forest has been so drastically overcut that little remains.

The story of what happened on both the Teton and Shoshone National Forests is almost an instant replay of what happened earlier in the century. The "cut-and-run" philosophy seemed to have been the guiding principle of U.S. Plywood management, as it was of the timber barons of old. Had U.S. Plywood scaled down its operations when it took over the Dubois mill, it would have had sufficient sustained-yield capacity to run over an unknown period of time.

What happened on the Shoshone Forest, in the Dubois area is indicative. Termed the Wind River Working Circle, the Forest Service's timber management plan (1960) said, 1957, an allowable cut of. . . 9.4 million feet for the Wind River Working Circle was established temporarily to serve until completion of management plans. . .

The timber management plan in 1963 said, "Timber harvesting for the past 10 years averaged 8 million board feet per year. This amounted to 85 percent of the annual allowable cut of 9.4 million board feet. The heaviest cut was during the past five years, with annual cuts better than 12 million board feet or an average of 12 percent above the allowable cut. This increase of cut was due to the establishment of new industry that would utilize the

allowable cut. The current industry is capable of meeting the allowable cut objectives.'

And in the same 1963 management plan for the Dubois area, it said, "At present there is more than adequate milling capacity at Dubois to use the allowable cut for sawtimber size material. One mill at Dubois has been cutting approximately 20 million per year and three other mills cut one million or less. A mill at Riverton has cut approximately 5 million per year. Timber to supply these mills has come from the Wind River Working Circle, the Teton National Forest, and to a small extent from Indian tribal lands in the Fort Washakie area."

But U.S. Plywood did not read the management plans. And the U.S. Forest Service men on the ground at the time acquiesced in pressures to cut more timber. From about 1964 to 1970, cutting on the Shoshone in the Dubois area averaged about 17 million board feet per year. One year, it went as high as 22 million board feet. That may have been the year U.S. Plywood made one big clearcut of some 2,500 acres on the mountainside above Sheridan Creek. (As a matter of interest, there is very little regrowth of timber on that whole big area. It will remain for the U.S. taxpayers to pay for replanting the area at some \$100-\$200 per acre.)

The situation had become so critical and public outcry at the devastation occurring from clearcutting had become so loud that a new ranger was sent to Dubois in 1969. An individual above reproach and an outstanding public servant in every way, Harold Wadley attempted to right the many wrongs on the Wind River District.

By 1970, Wadley had reviewed the situation and revised the timber management plan. The new plan said, "This amendment reduces by 92 percent the area programmed for cut annually. . ." The allowable cut was reduced from the 9.4 million board feet per year to 1.767 million. The plan said, "The area considered operable for timber harvest is reduced because of unstable lands, steep slopes, rocky areas, protection of critical watershed, scenic and recreational values, and requirements for wildlife cover." And the plan justified the cut by saying, "There is only sufficient old growth to maintain a cutting budget of 217 acres annually for the next 40 years; but by the year 2010, pole-sized stands will have grown to sawtimber size and will be ready for logging. Such interim reduction in harvest must be implemented because the remaining operable logging area with sawtimber-sized stands is too small to support continued cutting at the 1963-70 rate."

The same thing was happening on the

Teton Forest. The 1963 management plan stated an allowable cut of 54 million board feet per year. The present plan has been scaled down to 18 million annually.

Meanwhile, two Forest Service reports were finished in 1971. Both carried serious implications for the Teton National Forest. Landslide Hazards Related to Land Use Planning in Teton National Forest (Robert G. Bailey, March, 1971) made the statement, "In few parts of the United States is landsliding so prominent a geomorphic process as in Teton National Forest. . . Experience in other regions has shown that slopes with landslides are particularly sensitive to land disturbance and, in areas where forest resources are being exploited, often respond catastrophically to logging operations."

The report also points out that landslides in California were found to account "for as much as 70 percent of the sediment reaching major streams." And that landslides from roads in Oregon "produced average sediment concentrations of about 16 times expected

from the pre-road relationship."

And finally the report says, "A review of the literature. . . reveals the overwhelming concensus which maintains that forests do in fact play an important soil protective role and that clearcutting can promote not only erosion, but also landsliding. Literally hundreds of commercial logging operations indicate that this conclusion is well founded. Too often, however, failure to recognize the limits of disturbance allowable beforehand in areas of inherent stability has led to seriously deteriorated water quality. These findings highlight certain hydrologic principles and slope stability considerations that should be applicable in northwestern Wyoming."

The Wyoming Outdoor Council says these considerations have not been adequately taken into account. In their opinion, an environmental impact statement could reveal if experts in soils and hydrology would agree to any more timbering on the Teton Forest. If serious water quality deterioration does occur, it could affect not only the important fisheries of the Snake River but also accelerated sedimentation of Palisades Reservoir.

Wyoming Game and Fish Department fishery biologists are already concerned with deteriorating conditions in some streams in areas already logged. Erosion from logging roads and clearcuts may already have seriously affected some streams. A study by the Forest Service is only now underway to determine water quality.

Forest Management in Wyoming (1971), another Forest Service study, points to a number of factors which have been overlooked in the past. Among these are public concerns for aesthetics, long-term productivity of the forest, and wildlife. The areas in which U.S. Plywood has been timbering and in which the contracts are let are the summer homes of some of the world famous Jackson Hole elk herd.

A recent report (March, 1973) by the General Accounting Office said logging and road construction in national forests are causing unnecessary damage to the environment. The report says, "The effects, if not controlled, can be serious including soil erosion, landslides, damage to fish and wildlife habitat, pollution of water, and marring of natural beauty."

The concerns which many people have expressed for these natural resources are still valid today. And yet timbering is allowed to continue without a real assessment of damage to the total environment.

U.S. Plywood has raised the spectre of being forced out of business if the Forest Service is required to do the environmental impact statement. That may be entirely correct, because of past abuses to the forest resources and because of what continued timbering could do the total environment. Thousands of acres have already been stripped of timber.

The question is, how much remains?
Plywood manager Robert Lindgren says the Dubois mill is now operating at 28 million board feet per year. But where is the Forest Service going to come up with enough timber to feed even that size of mill? The Shoshone Forest has limited its cut to about 2 million board feet and the Teton Forest has had to cut to about 18 million board feet. Most of that 18 million board feet is located in areas

(Continued on page 6)



Roads to gain access to timber and remove logs also provide access for all other types of vehicles. So timbering operations such as these on Wyoming's Teton National Forest not only have an impact on the timber base but also on such animals as the elk. These timbering operations were carried out only a few miles from the areas where U.S. Plywood now has contracts which are the subject of a restraining order by the Wyoming Outdoor Council. The Council is asking for an environmental impact statement before any further logging is done.

"Landmark"...

which have not yet been cut, and therefore the last remaining areas where Jackson Hole elk have any refuge.

It seems only a matter of time before U.S. Plywood pulls up stakes and goes to greener woods. And this will happen with or without environmental impact statements.

U.S. District Judge Ewing T. Kerr has given both sides 15 days to submit findings of fact and conclusions in the matter.

More On Refuges

High Country News reported on March 30 that evidence indicated a give-away of several of the nation's wildlife refuges. New information now reveals that the Bureau of Sport Fisheries and Wildlife is indeed considering an assignment of responsibility to the states, but only for the animals involved. The federal government would retain ownership of the lands and would continue to manage them. Management of the game animals would be given to the states in which the refuge lands are located. No waterfowl refuges or management activities would be involved. These would remain with the federal government.

There is also involved a consideration to transfer facilities such as fish hatcheries to the states in which they are located.





The destruction of whole mountainsides by logging operations on Wyoming's Shoshone National Forest brought nation-wide criticism. It also brought an "in-house" Forest Service study which was also wholesomely critical. Since the report (Forest Management in Wyoming, 1971), the Forest Service has moved to correct many of the errors of the past. However, politically influential timber companies such as U.S. Plywood-Champion Papers still force the sale of timber in critical areas.

National Forests Undergo Reorganization

G. M. Brandborg is a former Supervisor of the Bitterroot National Forest in Montana. He began his career under Gifford Pinchot, first Chief Forester of the U.S. Forest Service. Since his retirement, he has been outspokenly critical of the slow turn of the Forest Service away from general public service to a special interest-oriented service.

Now, under the Nixon Administration, the orientation is even more toward the politically powerful, special interests of the timber industry. Nixon recently ordered a crash program of sales and cutting from the national forests in an effort to bring down lumber

In another move Secretary of Agriculture Earl Butz announced early this week that regional offices of the Forest Service were to be consolidated. Butz said that a change in organization required phasing out regional offices in Missoula, Montana; Albuquerque, New Mexico, and Ogden, Utah. Also closed was an experiment station headquarters at Ogden.

The reorganization affects nine regional offices in the country and reduces them to six. The northern Rocky Mountain regional office will now be in Denver. New Mexico is put into a region that includes the entire South with headquarters in Atlanta, Georgia. Arizona, Nevada and California are in a region with headquarters in San Francisco, and Idaho, Oregon and Washington have headquarters in Portland.

Montana's Senators Mike Mansfield and Lee Metcalf have been particularly critical of the consolidation. They feel, as do many others, that such a consolidation defeats the purpose of decentralization of natural resource agencies. Decisions affecting critical local problems are too far removed from the people concerned.

In connection with the consolidation, regional foresters were told in a recent memorandum from the Chief of the Forest Service, John R. McGuire, that they must "cooperate" or "heads would roll." The memorandum originated after Secretary Butz told a staff meeting that there was a need for "teamplayers" in the current "budget-manpower crunch."

After an article publicizing the memorandum by staff writer Dale Burk of The Missoulian, Regional Forester Steve Yurich defended the intent of the memorandum in a subsequent article in the Missoula paper. Yurich said the memorandum was intended to strengthen rather than weaken stated

objectives and programs aimed at improving the quality of management on the national forests.

Brandborg's letter, which follows, comments on Yurich's remarks and elaborates on forest management issues.

COMMENT

I commend Regional Forester Yurich for standing pat in his April 19 interview with The Missoulian when he reaffirmed that there would be no diminishing in the Northern Region to achieve quality in all phases of management. On the other hand, he disappointed many concerned lay citizens in the Region by stating "but the decision is somebody else's. It's the Congress. It's the President's, who we really work for."

We disagree with Mr. Yurich. It is going to be the PEOPLE, with the assistance of more supporters in the Congress, who must free the Forest Service to make it possible for Steve Yurich's aims to become on-the-ground realities. In fact, for many years there have been members in the Congress who have attempted, with the assistance of the Forest Service, to enact appropriate legislation to place the management of public and private forest lands on a scientific basis.

Such legislation has been introduced by Senator Metcalf in the Senate and Congressman Saylor in the House. Previous legislation with the same regulatory objectives have heretofore been defeated by the same self-interests that have influenced and controlled Nixon, Butz and other policy makers in the Nixon Administration. No matter how hard Forest Service employees may try, they cannot explain away to the owners of the National Forests the threat credited to Butz. The official communication exists. Aside from throttling professional freedom to make decisions, it smacks of the same tactics that permeate the Watergate incident.

The Forest Service has nothing to fear. It could render no greater public service than to have faith in PEOPLE and "coming clean" with the public as to what caused the wide-spread overcutting, clearcutting and other abuses inflicted on National Forest lands and resources. It's the PEOPLE by their votes who determine who occupies the White House as well as who serves in the Congress. What is needed to prevent and repair damages inflicted on public land resources is another Teddy Roosevelt in the White House and a Gifford Pinchot as Chief of the Forest Service.

The public cannot permit the Butz threat to be swept under the rug because its implication is national in scope. This is illustrated by the following excerpt from a statement presented on April 18, 1973 by Gordon Robinson, staff forester for the Sierra Club to the Senate Subcommittee on International Finance on Log Restrictions. This committee was conducting hearings on Senate Bill S-1033.

(Robinson quoted) "I was shocked a day or two ago to receive a copy of the instructions sent to the Forest Supervisors in California by our Regional Forester (Douglas R. Leisz) on measures they should consider as means of meeting the Administration's order to increase sales this year. They include:

7) Do more clearcutting, because it produces the maximum volume per acre. "Don't enlarge cut units but make more clearcut sales to get volume."

8) Increase the volume in sales currently under preparation by adding additional clear-cut blocks.

8) Make intermediate sanitation cuts and sell timber in large blocks or partially cutover areas already roaded. (In other words, go back to areas previously logged selectively and sell the rest of the timber.)

20) Delay engineering until after the sale is made. (Thus dispensing with environmental concerns, in road locations until after timbered has been committed, when it may be too late.)

25) Defer long range planning if it is not compatible with timber selling goals."

The public should be grateful that there are dedicated and courageous employees in the ranks of the Forest Service in California as well as in this Region. It is regrettable that for job security reasons these dedicated employees cannot be identified and praised for rendering such meritorious public service.

If it possesses all the facts, the public, with supportive members of the Congress and the news media, can quickly free the Forest Service to practice its professionalism. The public should assist concerned citizens and the members of the many conservation organizations to determine what caused the management of the National Forest System to become a national scandal.

It is PEOPLE power, through dedicated representatives in Congress, that will determine the quality of service required to manage the National Forest System.

G. M. Brandborg Hamilton, Montana April 20, 1973

Restoring A Dam Disaster

by Dale A. Burk

From the top of the hill one's eyes could follow any one of dozens of the serpentine-like rills, their deeply cut sides sharply articulated in the rocky soil, a half-mile or more down the bare hillside to the railroad tracks and then on to the creek bottom.

It was a steep hillside here, adjacent to the relocated Burlington Northern railway line in northwestern Montana. And where once a mixed ponderosa pine-Douglas fir forest had carpeted the foothills, we now saw along this portion of the tracks only exposed and grotesquely eroded hillsides where construction crews had ripped borrow material from the steep bank.

A feeling of disgust ran through me as I stepped down into a thigh-deep rill to take a photograph of the eroded hillside. It must have shown on my face for the Corps of Engineers man with me advised that the area, some 100 yards below us and perhaps a half a mile wide, was not his concern — that would be the railroad's responsibility to revegetate and restore because it was within the railroad right of way.

Nathan R. "Nate" Hale, acting chief of the Corps of Engineers Environmental Resource Section in Seattle, told me that "our concern" is for the area uphill from where we stood on the cut—a dividing line between the right of way and the surrounding forest land marked by a barbed wire fence.

Above us for a couple of hundred more yards was the same sight — though less steep and with the rills less deep at their origin. But as I looked into the deep cuts that had carried the washed soil and rock into nearby Brimstone Creek, I thought of another statement Hale had made to me that day. We were on a field trip to look at the restoration program he had devised for areas adjacent to the railroad line relocation brought about by the construction of Libby Dam on the Kootenai River — an environmental monstrosity in its own right, but that's a different story.

"You and Jim Posewitz have one thing in common — you both hate the Corps of Engineers," Hale had told me. My answer had been that we didn't hate the Corps, we just hated some of the things it did.

And as I stood on that bank, I thought of what Posewitz' reaction would have been had I asked him, at that point on that hillside, what he was going to do to stop the erosion and restore the ecological integrity of the hillside. (Posewitz, incidentally, is chief of the Montana Fish and Game Department's Environmental Section and has been critical of the Corps for some of its work associated with Libby Dam.) Certainly, it would not have been that he "wasn't concerned" about the area below the fence, merely because it was outside his area of responsibility to restore. He would have contained and expressed concern and sensitivity for the entire hillside and control of the entire ecological problem rather than just the uphill area that he was assigned to revegetate assuming it had been his charge to do so.

That, then, was the thing Jim Posewitz and I had in common, and not a shared hatred for the Corps. We would react similarly to the environmental degradation present because we shared the same concern for the total environment, and not just a portion of it that had been assigned for us to restore. That hillside, and any other portion of the environment, was important to us — not because we were told we should be concerned with it, but because it was and is part of the total environment and thereby cannot be separated into neat packages of concern.

For two years now, following completion of construction of the railroad line from the town of Stryker in northwestern Montana westward through the Trego Tunnel and on to Libby, these exposed hillsides had lain bare and they showed it. Some of them had partially healed naturally, where vegetation could take hold. But for the most part, they were simply bare rock and soil scarred by the thousands of erosive rills runoff water had created.

And Nate Hale, a personable landscape architect who holds a degree from the University of Michigan, explained the frustration of living within funding priorities of such monoliths (my word) as the Corps of Engineers. The restoration project along the new railroad line was originally scheduled for the

spring of 1970, right after construction on the line was completed. But a shortage of federal funds developed and a moratorium on such expenditures was declared, though construction of Libby Dam continued unabated.

"If we had started in 1970, things would look a lot different now. It's a real problem doing restoration work with these steep slopes and sterile soils," Hale said. He went on to say that the Corps was concerned with doing the restoration work at the time the funds were curtailed and that they did as much as they could at the time.

The restoration project was outlined by Hale; Ed Derrick, chief of the Corps' Design Branch in Seattle, and Ray Fauss, chief of the Relocations Branch at the Corps' office at Libby Dam. It involves some 16.5 miles of railroad line between Stryker and the north portal of the Trego Tunnel where the railroad goes some seven miles through Elk Mountain.

According to Hale, the restoration project does not involve any land within the right of way. That work would have to be done by Burlington Northern, or possibly, in cases of "substantial erosion," by the Corps upon request from BN under a five-year deferred maintenance agreement between the two parties.

One earlier contract for seeding critical areas within the right of way was done in the

spring of 1970 by Nelson Landscape Services, Inc., of Spokane, Wash. That restoration contract was for \$90,000.

The present 16.5-mile project involved 81 acres of reforestation — 18,500 Douglas fir and 18,500 larch seedlings — and 55 acres of grass seeding. It was contracted at \$44,850 to Nelson Landscape Services.

Hale said another contract will be let to restore land adjacent to, but outside, the right of way on the portion of the line west from the Trego Tunnel to Jennings on the Kootenai River.

Hopefully, the grass reseeding will be successful this year, but Derrick said he anticipates that it will take two or three years for the trees to show.

And if the restoration program isn't successful? Hale said the Corps would have to come back later and try again.

"On jobs this big with no irrigation it is too difficult to expect a contractor to come back later," Hale said. "He'd have to bid too much on the possibility he'd have to come back later. We think it's better for the government like this."

Both Hale and Derrick said they anticipate no problems with the restoration work "taking." They said the earlier restoration project involving critical areas within the right of way had been largely successful.

Photo by Dale A. Burk



Area to be planted with trees at Butcher Creek along the Burlington Northern line. The vast, open scarring of the forest occurred when the railroad had to be re-routed because of construction of Libby Dam on the Kootenai River in Montana.

Committee To Study Mining

A committee of the National Academy of Sciences and the National Academy of Engineering has been appointed to study the continuing feasibility of strip mining and electric power generation in the western U.S., and the possible ecological impact of such developments. The committee of 12 natural scientists is headed by Dr. Thadis W. Box, Dean of the College of Natural Resources at Utah State University.

In commenting on the study, Dr. Box said, "In the West, we are dealing not only with the actual mining impact, but with critical water rights and usage. Our committee is trying to review thoroughly the environmental consequences." Box said that mining half of the nation's current coal production from the western area would entail the annual use of nearly one-half million acre-feet of water for cleaning operations alone. An even greater use of water would be associated with electrical generating facilities.

Other members of the committee are Dr. Luna Leopold, Department of Geology and Geophysics, Berkeley; Dr. Richard A. Schmidt, senior geologist, Stanford Research Institute; Dr. Arthur D. Hasler, Laboratory of Limnology, University of Wisconsin; Dr. C. Wayne

Cook, chairman of the Department of Range Science, Colorado State University; Dr. Richard L. Hodder, Agricultural Experiment Station, Montana State University; Richard S. Davidson, director of bio-environmental programs, Batelle Memorial Institute; Edward A. Johnson, forester, U. S. Forest Service; Dr. Walter B. Langbein, U. S. Geological Survey; Dr. Eric G. Walther, executive director. Colorado Plateau Environmental Advisory Council, and Dr. M. Gordon Wolman, Department of Geography and Environmental Engineering, Johns Hopkins University.

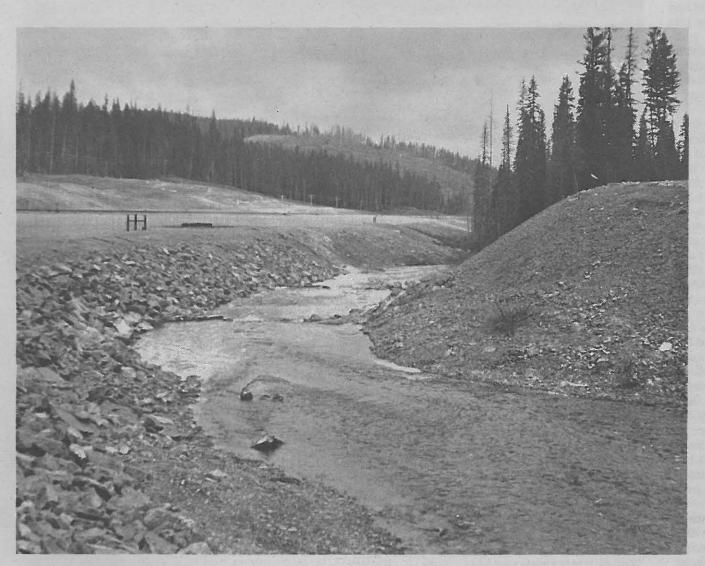
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"There are no technical barriers to wide application of solar energy to meet U.S. needs... For most applications, the cost of converting solar energy to useful forms of energy is now higher than conventional sources, but (with) increasing constraints on their use, it will become competitive in the near future."

Solar Energy Panel of National Science Foundation and National Aeronautics and Space Administration.



A vast area of gully erosion brought about by the relocation of the Burlington Northern Railroad. The fence halfway up the slope denotes the division of responsibility between the Corps of Engineers and the Burlington Northern. The Corps will contract restoration work on top of the hill (out of sight) for about a quarter of a mile. BN is responsible for stopping erosion in the foreground, which has gone unchecked for two years.



Channelized Fortine Creek, looking north, from the north portal of the Trego Tunnel on the Burlington Northern Railroad. Relocation was necessary because of the construction of Libby Dam. (Yes, that's a clearcut in the background.)



Photos

In the relocation Railroad, work crev side of a hill and in Army Corps of Engi would be pulled bac would be revegetated





Mulching and seeding of a road grade at the Cripple Creek crossing of the newly relocated railroad line.



. Burk

Burlington Northern ed material over the Creek (below). U.S. ials said this material stream and the area

This scene is typical of many of the deep cuts made along the relocated Burlington Northern line. The material from this cut was stacked in a pile a half-mile long and several hundred yards wide. The pile is to be revegetated under restoration plans.

Big Bang Set For Colorado

Project Rio Blanco in northwestern Colorado is set to go sometime in May or early June. The controversial gas stimulation project has seemingly cleared most hurdles. The Atomic Energy Commission announced on April 12 that it had signed a contract with CER Geonuclear Corporation of Las Vegas, Nevada, to conduct the test. The AEC also recently published an announcement in the Federal Register of a supplement to the original environmental impact statement. At the same time, the Department of the Interior published notice of intent to withdraw and transfer to the AEC a parcel of 360 acres of public land for the test.

Project Rio Blanco is a joint venture between the Atomic Energy Commission and the Las Vegas corporation. CER will pay for 85 percent of the \$7.5 million project with the rest of the tab being picked up by Uncle Sam.

The project entails the detonation of three 30-kiloton nuclear devices with an aggregate blasting equivalent of 90,000 tons of TNT. The explosion is expected to create a chimney and a mass of rubble some 1300 feet high and some 75 feet in radius. Theoretically, the natural gas locked in the Fort Union and Mesaverde formations will seep out of surrounding fractured zones and be trapped in the rubble and cavity. From there the natural gas can be recovered by conventional means. The three simultaneous explosions will take place at depths from 5,530 feet to 6,830 feet below the surface.

The test site is located on Fawn Creek, a tributary to Piceance Creek which is tributary to the Colorado River. It is about 52 miles from Grand Junction, 30 miles from Meeker and Rangely, and 37 miles from Rifle.

An elaborate system of protective measures has been devised. All buildings within 30 miles will be inventoried and inspected. Any buildings found subject to the man-made earthquake will be braced or repaired. Even so, the predicted damage to homes and other buildings is estimated to be between \$38,000 and \$64,000. Such features as wells and springs, and mines within 55 miles will be inspected and monitored. Some 60 people who live within 7.5 miles of the site will be taken to "assembly centers." Another group of about 60 people who live from 7.5 to 14.5 miles from the site will be asked to leave their homes and remain in the open at a safe distance from the homes or other structures. If the weather is bad, they can go to the assembly centers.

Traffic on roads and railroads in western Colorado will be stopped for an hour before the blast. Nothing will move until each highway or railroad has been inspected following the blast. Before the first nuclear device is brought into the area, an "entry control center" will be established near the confluence of Fawn Creek and Black Sulphur Creek. The area will be continuously monitored for radioactivity both before and after the blast.

In spite of all the precaution and assurances, the project has continued to draw protests and criticisms. Foremost among the critics is freshman Colorado Senator Floyd Haskell. Haskell has set a public hearing for May 11. He says he will request more information which has not been forthcoming from either

the AEC or Interior Department. He asked for a halt of the project on March 2.

Haskell bases his outspoken opposition to unanswered questions about contamination of underground water and to questions about full-field development. He points to estimates that as many as 280 detonations would be required to fully develop the assumed gaseous deposits in the 94,000-acre Rio Blanco Unit. A report by the Lawrence Livermore Laboratories says that as many as 2,400 nuclear stimulated gas wells could be developed in the Piceance Creek Basin in the next 44 years.

Haskell says ". . . it is absolutely unthinkable to continue with full field development using nuclear bombs to stimulate the natural gas. The people of Colorado simply won't stand for it. We must find another way to tap this valuable natural gas resource that will be within acceptable environmental and safety

Haskell says he has asked the Interior Department "why conventional drilling practices have not been tried prior to endangering our welfare with radioactive tests." He maintains that if full field development of nuclear devices is unacceptable, then Project Rio Blanco is a waste of money and energy.

Similarly, Wyoming Rep. Teno Roncalio, who is now a member of the Joint Atomic Energy Committee, has been seriously questioning the AEC nuclear-stimulation projects. He says "the public deserves far greater candor" from the AEC in regard to such projects. He also said the Joint Committee "has a responsibility to review the justification for the entire Plowshare program," which includes the Rio Blanco Project and the similar Wagon Wheel Project near Pinedale, Wyoming.

Haskell says that since the AEC environmental impact statement on the project did not cover full field development, the federal agency did not comply with the National Environmental Policy Act. A statement issued by the AEC and CER says, "Neither. . . is committed to planning or conducting any nuclear natural gas stimulation tests beyond this scheduled Rio Blanco test."

Other questions concerning the controversial project and its sponsors have been raised. The Denver Post (Dick Prouty, March 11, 1973) revealed that the test site is within a few yards of Fawn Creek and is subject to flooding. The Post said a report to BLM State Director for Colorado, Dale Andrus, revealed excessive damage by bulldozers to an area upstream of the site. The report then said, "All water runoff from the disturbed area will go through a wash that passes through the emplacement well pad. Water management around the emplacement well pad is inadequate to prevent on-site, off-site damage even under normal spring weather conditions. Unseasonable warm weather or rains would cause massive sedimentation on adjacent private land and far down the Fawn Creek Valley." Fawn Creek is tributary to Piceance Creek.

The Post further revealed that BLM had halted construction of a power line going across public lands to the test site because no permit had been issued for it. A number of other similar irregularities were reported.

Opposition to the project has come from a number of sources. Nine Colorado legislators have asked the Bureau of Land Management for a public hearing on use of the public land for the test. The AEC has asked the Department of the Interior for a transfer of 360 acres of land for a ten-year period.

Joining in the request for a hearing on the land is the 30,000 member Colorado Open Space Council. COSC President, Mrs. V. Crane Wright, said the Council objected to the transfer of the land. She said it was an issue having substantial impact and should be subject to public hearings. She also said the AEC had no plans for adequate management of the lands. She cited earlier withdrawals of public lands by the AEC in which public lands had suffered considerable damage.

Last July CER polled the residents of three counties closely affected by the project. According to an article in The Denver Post (Steve Wynkoop, March 22, 1973), the company found 53 percent of the persons polled hadn't even heard of the project. Of those who had, 46 percent approved, 37 percent disapproved, and 17 percent had no opinion.

As the time draws near for the test, it would be interesting to conduct a similar

(Continued on page 11)





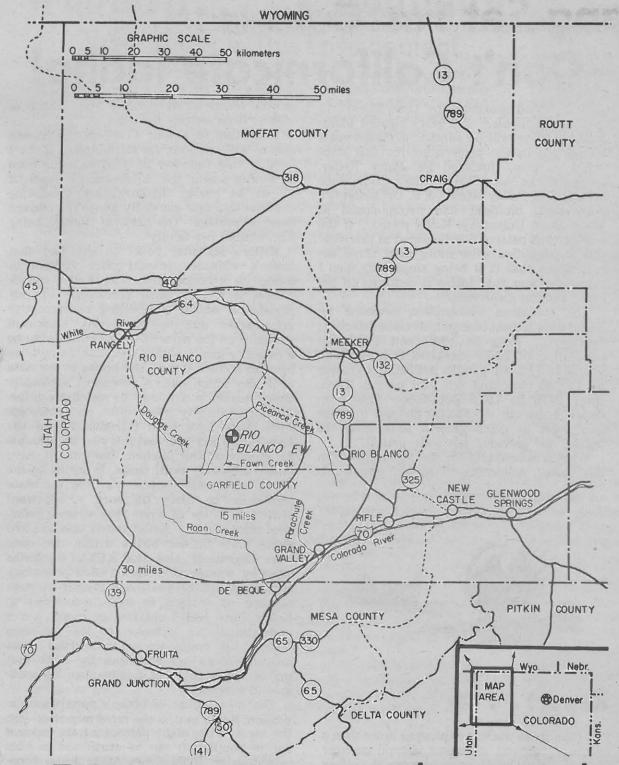
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Emission Taxes Advocated

Speaking before a hearing of the House Ways and Means Committee, Laurence I. Moss sharply criticized federal tax policies as encouraging environmental deterioration. Moss, Vice President of the Sierra Club, was speaking for the Coalition to Tax Pollution. The coalition is an alliance representing over eighty state and local environmental groups and eight national organizations including: Environmental Action, the Environmental Policy Center, the Federation of American Scientists, the Federation of Western Outdoor Clubs, Friends of the Earth, Sierra Club, The Wilderness Society, and Zero Population Growth.

The Coalition's goal is to make federal tax policy more responsive to the exigencies of environmental quality.

Moss charged that, "Special tax benefits to resource extraction industries encourage the wasteful exploitation and use of non-renewable natural resources." He further stated that because of these loopholes, federal tax policy discourages those measures needed to conserve and recycle resources. Moss said, "These special tax benefits, including depletion allowances, the write-off of 'intangible drilling costs,' and the favorable tax treatment of what are, in effect, royalties paid to foreign governments for their oil, should be eliminated."

Moss also expressed skepticism about the policy of tax breaks to industries which invest in pollution control equipment. He pointed out that such tax write-offs, "are based on the amount invested, and not on the extent to which the problem is solved." Pointing out that in most cases such investments for pollution control technology still implied a net loss for industry, he concluded that such tax breaks, "do not correct the basic problem of a lack of an economic incentive to do the job demanded by society. . ."

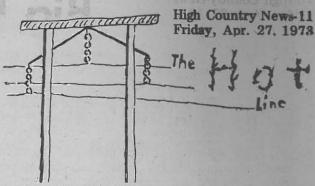
Big Bang...

poll. There are probably far more informed people. And there would also probably be far more people who felt uneasy about the merits of the big bang slated to go off under their feet.

To replace present policies the Coalition advocates using taxes to internalize the full social and environmental costs of producing goods. It believes that pollution caused by production of goods and services does measurable damage to health and property and that such damage is part of the actual cost of providing those products to society. But, at present, these costs, though real, are not included in the costs incurred by the polluter, or in the market price of the goods produced. Moss argued that, where feasible, federal taxes should be imposed on the emissions of pollutants, thus building into the market price the full social cost of production and strongly encouraging industries to take action to abate pollution. He stated that this policy "will mobilize the profit motive in the defense of environmental quality." As a first step in this direction, the Coalition is advocating "a uniform national tax of 20 cents per pound of sulfur on the emission of sulfur oxides into the environment."

Moss observed that most economists support the concept of pollution taxes. He pointed out that economists of widely differing persuasions ranging, for example, from Milton Friedman to John Kenneth Galbraith, and including Paul Samuelson, Kenneth Arrow, Walter Heller, and Hendrick Houthakker, have endorsed the sulfur tax. He argued that the program which the Coalition proposed would cause the nation to "shift from the current pattern of waste of natural resources and destruction of environmental quality to one of conservation, thrift, and improvement of environmental quality." Far from having an economically negative effect, Moss believes that "the economy will benefit from a more rational allocation of resources, including social and environmental resources, into more productive and valuable enterprises. The dichotomy between a healthy economy and environmental quality is a false one.'





Dr. Edward Teller, so-called father of the hydrogen bomb, says the United States will experience an energy crisis "shock" before 1980. Teller told an audience at New Mexico State University that environmentalists are holding back peaceful uses of nuclear energy because of unwarranted fears.

Two 350-megawatt steam generating plants to be built near Craig, Colorado, will be fired by some 2.6 million tons of strip-mined coal. A contract calling for some 78 million tons of coal and necessary water for the plants has been made with Utah International. The plants will be built by four utilities — Colorado-Ute Electric Assn.; Platte River Municipal Power Assn., Tri-State Generation and Transmission Assn., and Salt River Project Agricultural and Power District.

The Oil and Gas Journal, trade magazine for the oil industry, has sounded new warnings on gasoline shortages. It says shortages will become more frequent and severe as vacation travel picks up. The Journal says gasoline stocks are already 24 million barrels below last year. It says peak demand could be 7.5 million barrels per day.

The Organization of the Oil Producing Countries (OPEC) recently held an extraordinary conference in Vienna to discuss the energy crisis. OPEC is made up of Middle East countries, Indonesia and Venezuela. In a recent statement, the chief executive of the organization was quoted as saying "we have only enough oil for about three or four decades" and demanded steps to "avoid a catastrophic energy starvation in the world."

The threat of world-wide oil supplies being cut off and staggering financial power in world money markets was held up by a top international oil expert at a meeting in Amsterdam recently. Walter, Levy, speaking at a Europe-America conference, said Arab states could "blackmail" the world because of dependence on Middle East oil. He warned that industrial nations must move quickly to establish a joint oil policy or face "blackmail" and "explosive balance-of-power shifts."

The U.S. is asking for a co-ordinating policy between oil-importing countries to deal with oil-producing countries. But Saudi Arabia has warned that this could trigger an economic war.

Oklahoma Gas and Electric Co. has contracted for Wyoming coal to fire two, new 550-megawatt electric plants at Muskogee. The company has contracted with Atlantic Richfield Co. which has holdings in Wyoming's Powder River Basin. The plants will require 10,000 tons of coal per day. ARCO has announced that it will do a detailed environmental study of the area in which its strip mine will be located. The study will be directed through the Wyoming Environmental Institute. Dr. Oscar Paris, head of the Zoology Department at the University of Wyoming, has been named coordinator.

An ad placed in the Wall Street Journal (Jan. 9, 1973) by the Director, Industrial Development Department, Office of the Governor, Oklahoma City, Oklahoma, says "Oklahoma HAS Plenty of Energy." The ad goes on to say, "While many states find themselves in the midst of serious energy shortages, Oklahoma abounds in energy reserves (natural gas and electricity) to meet even the most demanding industrial needs, now and in the future. We have plenty of low cost power to meet your needs today and tomorrow . ."

Rocky Mountain Report

Behind every successful environmental effort, there is a dedicated group of citizens. Drawn together by common concerns for the environment, they volunteer time, money and physical effort. Leadership for such groups gravitates from all walks of life and from many areas of expertise. Such leaders inspire the work of others and bring them into the cause. These smaller working groups are supported philosophically and financially by hundreds of citizens who have become alarmed by deterioration of the world around them. As a consequence, environmental groups have been able to force changes in government and industry to bring about more attention to environmental matters.

Up and down the Rocky Mountain chain there are citizen environmental groups. They have many common concerns with the land, clean air, scarce water, and a host of other natural resource and social problems. In an effort to tie these groups together, High Country News has initiated "Rocky Mountain Report." This will be a regular feature column by which our readers will get to know about the environmental groups, the work they do, their problems, and how they might be helped.

The column is introduced in this issue by a report from the Colorado Open Space Council. Reports will be rotated from state to state with each issue. We hope it will be of value not only to our readers but also to these groups who do so much and receive so little credit.

The editor.

by Rosemary Strong Colorado Open Space Council

"Colorado Open Space Council — isn't that the group that wants to put a belt around Denver?"

It was at the Denver University Ski Lodge, Arapahoe Basin, and the puzzled lady was trying to sort out in her mind just what she had heard about the Colorado Open Space Council and just what it was doing.

I was attending an environmental coordinating councils meeting there and the woman, a guest at the lodge who was not part of the conference, had stopped me to find out "just what it was all about."

When I mentioned COSC, the question about the belt around Denver came. I had to hold back a chuckle, not wishing to insult her, but attempts to explain COSC to anyone in a sentence is a monumental challenge.

The woman had obviously remembered something about greenbelt areas and was perhaps confusing it with the spoken wishes of some to put a fence around Colorado to stem growth. But greenbelt areas and answers to the problems of growth could at best be described as only a part of COSC's activities.

COSC came into being at a Colorado Mountain Club open space conference at Breckenridge, Colo. in 1964. At that time the organization put its emphasis on wilderness — open space. The Open Space in Colorado Open Space Council is still an important piece of the puzzle, but there are other pieces needed to make the total picture.

Today the organization involves itself in nearly every environmental question that presents itself to the people of Colorado. It has workshops on mining, water, wilderness, energy and transportation, and will take on problems not under workshop classification.

From the small group of people in Breckenridge, it has become a coordinating council with forty member organizations and some 500 individual members. Environmental groups with goals obviously parallel to those of COSC are members, such as Colorado Mountain Club, Sierra Club, Audubon Society and Zero Population Growth. And some not so obvious organizations also ally with COSC — Colorado Medical Society, League of Women Voters, and Colorado Federation of Women's Clubs.

COSC has become a blend of teachers, librarians, lawyers, doctors, plant ecologists, economists, bankers, housewives, field ornithologists, minerologists and others—a citizen volunteer organization of both ecological experts and "plain ordinary citizens." Now employing a full time administrative secretary and a lobbyist during the legislative session, COSC has grown and benefited from the advent of environmental awareness in Colorado. In turn it has, in part, brought about that awareness.

The major issues COSC is facing today reflects the double-barreled shotgun pointed at Colorado. From one barrel comes the nation's need for energy. COSC, along with other Rocky Mountain environmental groups, is embroiled in the sticky, complicated problems of energy development and especially oil shale.

Colorado's Piceance Basin contains extremely rich deposits of oil shale. It also contains gas deposits which the energy industry is anxious to free and use of media to

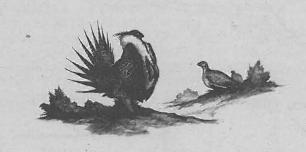
Last week COSC became a plaintiff in a court action to try to block Project Rio Blanco, a nuclear gas stimulation project scheduled for May. The project would

Don't Californicate Idaho!

If the trend continues, by 1984 Idaho will be "seeing double." For every present Idaho resident, there will be another in eleven years if the population projections for this state come to pass, disclosed Dr. Barry Keller, speaker at the Nature Conservancy Conference held at Sun Valley April 7 & 8. Dr. Keller is a population biologist and mammalogist at Idaho State University. Keller stated, "If the new growth pattern is maintained in this state and is amplified even more (and there are indications that it is being amplified) then I submit to you that Idaho is destined to become another California."

The statistical information revealed by Keller does indeed bear out his rather startling assumption. Between 1960 and 1970 the population of Idaho increased from 667,000 people to 712,000 people, indicating a growth of 45,000 over that ten year period. Then, from 1970 to 1972 population figures indicate a growth of 43,000 people. In these two years as much growth took place as during the previous ten year period.

What is accounting for the rapid growth in this state? According to Keller, population



Report . . .

detonate three nuclear explosives more than a mile underground to release natural gas near Meeker, Colo. Questions concerning the safety of such a project, including possible water radiation, prompted the action.

From the other barrel of that shotgun comes the fact that, despite optimism in reaching zero population growth in the United States, Colorado is currently the fastest growing state in the country. That influx of people to the already overburdened Front Range urban areas mushrooms already existing problems.

COSC's increasing emphasis on legislation as a means of change is reflected in the current all-out effort to get a land use law passed during the current session of the state legislature. A forty-six page bill was introduced this month and every effort is now being made to see meaningful legislation passed.

Water use is another arena for COSC action. Colorado is one of the only states in the continental United States whose water supply comes entirely from within its own borders. Most of this finite resource drains to the West Slope, but the bulk of the population lives along the eastern Front Range.

The COSC water workshop is attempting to solve problems of outdated water laws from Colorado's mining days, further diversion of West Slope water to feed the growth of the Front Range metropolis, and construction of dams to store diverted water — all of which would provide Denver with the dubious capability to support more industry and Front Range growth.

Wilderness problems still play a major role in COSC. Wilderness workshop members formed a coalition in March with the Colorado University Wilderness Group, Wilderness Society, Sierra Club, Colorado Mountain Club, and Audubon Society to make a joint response to the U.S. Forest Service's Phase Two List of New Study Areas for wilderness selected from its Roadless Area Inventory conducted last year.

The coalition takes issue with the procedures used by the Forest Service to determine which roadless areas be studied for possible inclusion in the wilderness system, and has recommended additional areas to those daready named by the Service.

These are but a few of the major issues with which COSC is deeply involved. There are many others — even about greenbelts. And so, dear lady, since you asked, care to come to a meeting?

growth seems to be working from within as well as from outside the state.

According to Keller, 41.6% of the growth during these periods was attributed to Idaho's fertility rate (number of children being born to women within the childbearing years of 17 to 44 years). Idahoans are producing

children at a rate markedly above the current

national average: The national average being 3.5 children per family!

Keller's statistics point to the fact that Idaho's attitudes toward birth control in general is a major factor. As Keller stated, "There is a very small percentage of our population which is receiving contraceptive information due to some very backward attitudes on the parts of what I consider to be a minority group within the state. In fact, we have an archaic law on the books in the state of Idaho which has no precedent nationally which makes it a felony to distribute information or display information on contraceptives. Bills have been introduced into the state house last year and this year in attempts to eliminate this archaic law which have failed miserably both times. It seems to me to be somewhat inconsistent for the state legislature to carry on such a backward attitude in view of some very striking statistical inforantion." Keller stated that in 1970 alone 7.5% of the births within this state were illegitimate, also, that 8.5% of the births were by women who started their pregnancy at the age of 17 years or younger. A large number of women in Idaho according to Keller, have had 7 children or more! Keller understated his solution to the problem tersely, "It seems to me that Idaho must institute some policy within the state that makes information on family planning available to everyone."

The other cause of Idaho's population explosion, Keller said, is the rapid migration into the state. Fifty-eight percent of the current rise in population can be attributed to mass migration to Idaho from other areas. From the charts presented by Keller outlining population growth it was obvious that currently there are mass migrations from California (with a population of 20 million) into Idaho, Oregon and Nevada. As Keller states, "The main area from which Idaho is presently taking increase - is California." At present the area absorbing most of the influx is the southwestern portion of Idaho with spillover into the Twin Falls area. But Keller projected that very soon many other portions of the state would be feeling the effects of this inpouring.

As Keller emphasized, it becomes obvious to anyone living in this part of the country, that if the present quality of life is to be maintained, Idahoans will have to get busy and put their house in order. Keller eliminates the possibility of passing laws restricting the number of new people allowed into the state. "We cannot legally restrict movement since we would be violating a right guaranteed by the U.S. Constitution. One of the positive things Idaho should have done long ago, is to restrict development in areas where there is a definitive fragile ecology."

Some other solutions presented by Keller: are—Formulate programs to inform the public to on methods of preventing environmental

degradation;

 Make it necessary, through legislation, to require a high school course in environmental science;

Institute immediately programs on recycling directed and controlled by the state;
 Establish strict waste control programs

including the control of air and water pollution;
— Initiate a state-wide land use planning system. Any organization which attempts to develop any area where the cost of development exceeds \$1,000,000 should be required by state law to file an environmental impact statement. "California has already instituted such a law, and I see no reason why Idaho

His closing statement revealed some further startling facts: "If we accept some new information which I have obtained from Boise in the last 72 hours it implies that the population of Idaho will double in 11.6 years. One thing which we need to institute immediately in the state is to change the sign that reads as one enters Idaho. Instead of saying 'Idaho is too great to litter,' it should say 'Idaho is too great to Californicate'."

should not do the same,"

Western.... Roundup

Their Thing Is The Environment

The Environmental Defense Fund, a national organization originally formed to fight the use of DDT, is going to open an office in Denver. EDF already has offices in Washington, D.C., Long Island, NY, and San Francisco. The organization is staffed by both attorneys and scientists. It enters into lawsuits primarily concerned with pesticides, water, and energy. Legal action is taken by attorneys after a thorough review by scientists that a problem is worthy and may be solved by legal means.

EDF has been involved in a number of environmental cases — among them the Hoerner-Waldorf paper mill in Missoula, Montana, which agreed to install \$15 million in air pollution equipment. It has also been involved in the Alaska pipeline case, and was instrumental in stopping the Cross-Florida Barge Canal. Now, EDF is interested in what is happening in relation to development of coal, oil shale, and natural gas by use of atomic bombs.

EDF is only one of several nationally funded groups which are interested in environmental litigation. The Natural Resources Defense Council has offices in Washington, D.C., New York, and Palo Alto, Calif. NRDC provides legal assistance to citizen groups and municipalities. It is interested in air pollution, water resources, energy, and land use problems. It is now providing legal counsel to the Wyoming Outdoor Council in a lawsuit against the U.S. Forest Service concerning timber contracts on the Teton National Forest.

Both EDF and NRDC depend upon donations, grants, and memberships for funding, with additional support from the Ford Foundation and others. Both are staffed with outstanding attorneys, while EDF

also has a highly qualified scientific staff.

The Sierra Club and Sierra Club Legal Defense is supported by memberships and contributions. The latter exists for use in lawsuits concerning air and water pollution, wilderness and timber cutting, energy, and public lands. The Wyoming Outdoor Council has joined with the Sierra Club in a lawsuit concerning air pollution from a large powerplant now under construction near Rock Springs. Sierra Club Legal Defense has attorneys in Denver as well as in California.

Briefly Noted.

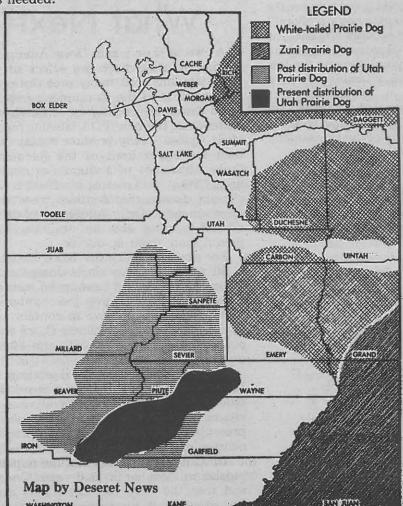
The decision on Wyoming's Jackson Hole Airport is still up in the air and it may stay there for some months yet. The National Park Service says the environmental impact statement will go to the Department of Interior for probable approval around May 1. But then it must go to the Council on Environmental Quality for final approval.

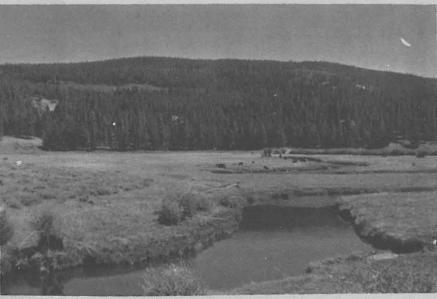
The Jackson Hole Airport is the only one in the nation situated inside of a national park. A proposal has been made to extend the existing 6,300 ft. runway an additional 1,700 feet into Grand Teton National Park. The runway could then accommodate medium sized jets.

* * *

The giant, and environmentally destructive Libby Dam in Montana is beginning to fill. Lake Koocanusa behind the dam is rising at the rate of one to two feet per day.

The Environmental Protection Agency has refused to allow the use of DDT against the tussock moth in Oregon and Washington. EPA Administrator William Ruckelshaus told the U.S. Forest Service the cure was worse than the aliment. EPA said damage to the ecology of watersheds would be far worse than that which the moth has already done to Douglas fir trees in the Northwest. Forest Service representatives agreed that a national virus was already scaling down the attack of the moths. In a separate action, it was announced that a more selective chemical, zectran, may receive approval for use on the forests if it is decided it is needed.





Cattle will continue to graze peacefully in this mountain meadow in northern Utah (above). The environmentally destructive China Meadows Dam and Reservoir on the East Fork of Smiths Fork has been indefinitely delayed. (For full story, see High Country News, May 12, 1972.) The reservoir was a Bureau of Reclamation irrigation project located on the Wasatch National Forest of Utah. It would have supplied water to highly alkaline soils in southwestern Wyoming. The area is tributary to the Upper Colorado River, already suffering from too much salt in the water. A combination of low economics and high environmental costs brought a decision from the Department of the Interior to forego the project.

At the same time, the much more environmentally costly Lower Teton Dam on the Teton River in eastern Idaho proceeds on schedule. Construction for the dam began a year ago (below). A suit to require a better environmental impact statement has been stalled in Federal District Court. Meanwhile, a productive stream is being sacrificed for a

marginal irrigation project.



Werner Trial Finally Set

Jury trial for Wyoming rancher Herman Werner has been set for Oct. 29 in Casper. His Bolton Ranch trial will follow on Oct. 30. Werner and his ranch corporation are identically charged in the shooting of 363 golden eagles, three bald eagles and seven Canadian geese. The killing of the federally protected birds is alleged to have taken place between Nov., 1970 and Jan., 1971. Werner will appear before U.S. District Judge Ewing T. Kerr. He has pleaded innocent to all charges. Maximum penalty for killing the birds is a \$500 fine and six month prison sentence on each count.

Utah Prairie Dog Endangered

Prairie dogs are rather innocuous little creatures whose only fault seems to lie in digging burrows and eating weeds and grass. But the latter trait has not endeared the ground-dwelling members of the squirrel family to farmers and ranchers. Livestock step in the burrows and sometimes break a leg. And the gregarious rodents have a habit of creating numerous mounds of dirt around the burrows in their "towns." This takes land out of production for livestock. Besides, the little beasts eat food better intended for sheep or cows.

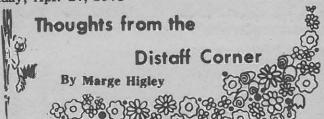
Because they are considered pests, prairie dogs have been poisoned literally by the millions. Oats treated with strychnine or 1080 are favored baits. The poison is put at the burrow entrance.

As a result of all the poisoning, some species of prairie dogs may be headed for extinction. One of them is the Utah Prairie Dog. It was declared an endangered species by the Department of Interior in 1968 but for unexplained reasons was taken off the list in 1970. By 1972, it was estimated only about 3,300 still existed.

Intensive poisoning campaigns have continued to reduce their numbers. Studies showed that more than two thirds of the prairie dogs in Iron County were poisoned in the summer of 1972. It was estimated that more than one-third of all existing members of the species were located in that county.

Studies of the animals are continuing and efforts are being made to transplant some of them to state lands. A few are in the National Zoological Gardens in Washington and the municipal zoo in Salt Lake

14-High Country News Friday, Apr. 27, 1973



It's a beautiful little book, and I'd like to share parts of it with you. Originally a loving gift to my Mother, it now belongs to a far-away sister, who sent it to me to "read and enjoy and keep for a little while, but don't forget to send it back!"

A slender volume, by Gwen Frostic, it is named "A Place on Earth." There is no indication of when it was published, nor by whom. It is illustrated by charming drawings in soft colors; several of them enhanced by transparent overlays. I can't share the drawings with you, but I can quote some of the words. There are no titles, and the words flow from poetry into poetic prose from beginning to end.

One of my favorites is at the end of the book:

Under the leaves of spring on the damp and sheltered earth a little brown nut cracks open . . .

Into the soft earth a fine thread fastens itself - - - while a stem with leaves tucked inside a little shell rises toward the sun . . .

Swiftly the single root reaches to greater depths as two rust leaves open from the center of the first seed-leaves - - two leaves quite different from the nourishing mbryo ones - - tiny miniatures of all of the leaves this tree will grow and drop in all its years to come - - - - -

- - - and the wondrous growth of a great tree has begun. . . .

Each year at the end of all the twigs - a new bud will form - - - that the limbs may grow a little longer - - and the tips of the branches may be forever young - - - and in the earth the roots will spread far out for the salts and water that will add another ring of growth to the trunk and every branch - twig and root . . .

Bright warblers will come and sing their songs - - and turn to inconspicuous bits of feathers - - - and slip

Higher and higher the young tree will reach - - stretching its horizontal limbs far out among the branch-less trunks of older trees . . .

It will take air and water and the energy of the sun and build these things into life - - - the essence of its being will be growth - - - self-motivated and self-sustaining - - - with no limit to the number of twigs or leaves it may produce - - - its trunk is so constructed that growth may go on indefinitely - - - a limb may drop in a storm - - - and it can grow another - - as it lives in freedom to grow - - - ever to grow - - and because it grows luxuriously - - - other life with the same staunch purpose will flourish around it . . .

Silently and unseen it will draw water from the earth and return it to the air - - where clouds will form and rains will refresh the land . . .

The winds and storms will trim its branches and shape its character - - earthworms will plow and fertilize the land - - boring holes for drainage and keeping fine granular soil about its root tips . . .

Birds will hang their nests on its branches - - - and in turn will feed on the insects that live in its foliage. . Beechdrops will find nourishment on its roots - - - and Indian pipes will rise from the damp leaves at its base . .

All through its life there will be drama - - the drama of life and its beauty . . .

It will witness little comedies - - as young things grow to make their place on earth - - watching them frolic in the misty rain - - - knowing them all so intimately

It will witness the great changing of the seasons - - -

- - - and the loveliness of each . . .

It will witness real tragedies - - - as an insect loses its battle for life to a toad - - - or a little bird's nest is robbed - - - and it will live long enough to bear witness that these things are what makes life go on forever . . .

Each year it will rest - - - and each year its sap will rise again - - - - Its crown will be a misty gleaming web of twigs

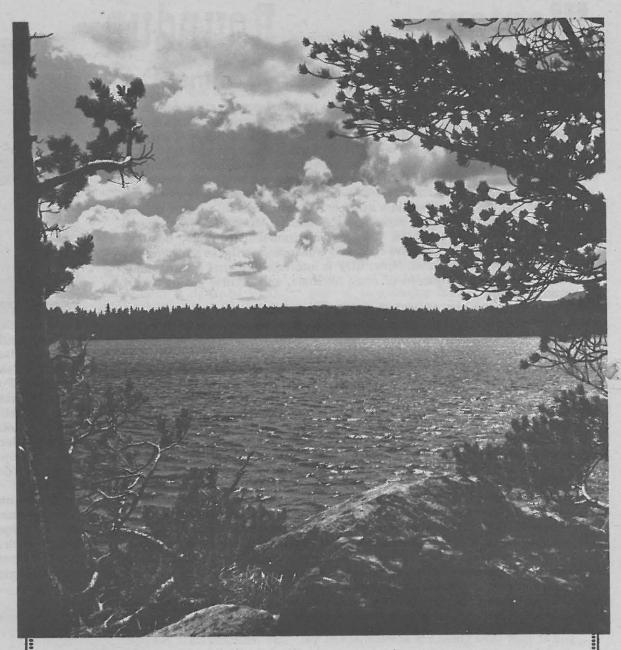
as it stands majestic in its naked beauty - - - Its buds will swell - - -

and it will grow anew

The seasons and the years will pass - - - - until at last - - -

and it will return to earth - - - where
. another nut will open
and another tree will grow .





"This world, after all our science and sciences, is still a miracle; wonderful, inscrutable, magical and more, to whosoever will think of it.

THOMAS CARLYLE: Heroes and Hero-Worship

Mark-up on Wheaties

The General Mills Corporation — which brings you both "Wheaties" and "Total" cereals — is making a more-than-healthy profit by adding nine vitamins and one mineral to "Total" cereal. The only difference between "Wheaties" and "Total" is that "Total" contains 100 percent of the Minimum Daily Requirement of nine vitamins and one mineral — and "Wheaties" doesn't. Other than for that the two cereals are identical

that, the two cereals are identical.

Naturally, "Total" cereal is the more nutritious of the two — since it contains the vitamins — but it's also the most expensive. In fact, industry price lists show that the wholesale cost of the nine vitamins in a 12-ounce box of "Total" cereal is only six-tenths of one cent. But the 12-ounce box of "Total" costs 58-cents, compared to only 40-cents for the same size box of "Wheaties." Thus, the consumer is actually paying 18-cents for less than one-cent worth of vitamins — or a 3000% overcharge.

These facts were revealed recently by Michael Jacobson in a forthcoming issue of "Eatright"—the publication of the Consumer's Institute for Food Research.



Each frog - - - and insect
bird - - - and tree
and everything that lives and breathes
somehow creates its place on earth . . .
The plants need water to survive
in turn give water to the sky - - a blue jay feeds upon the nuts
of trees that jays have planted - - the moth that pollinates the flowers
once ate the leaves - - - before it flew
As each thing ever fosters
the thing that fosters it
- - and in return must ever give
as much as it receives - - that all things shall keep a perfect balance

and earn a place on earth . . .

GWEN FROSTIC: A Place on Earth

Jacobson says that (quote) "by pricing "Total" 18-cents rather than a more honest 1-or 2-cents above "Wheaties," General Mills has bilked the public out of approximately \$7.3 million a year."

Jacobson called upon the Justice Department or the Federal Trade Commission to (quote) "stop the fraud and punish the perpetrators of it.": EARTH NEWS



What Next?

A recent Food and Drug Administration regulation could have the effect of making most vitamins sold today prescription drugs.

According to the Consumer's Institute for Food Research — publishers of Eatright — one sentence in the new FDA labeling regulations reads (quote) "Any product containing month than the upper limit of the Recommended Daily Allowance of a vitamin or mineral is a drug." What that means, in effect, is that any vitamin dosage that contains more than the Recommended Daily Allowance must be considered a drug and be available only by prescription from a doctor.

For example, since the RDA for vitamin C is 60 milligrams, any single dosage exceeding 60 milligrams would have to be considered a prescription drug. All over-the-counter dosages of vitamin C would have to contain no more than 60 milligrams. Vitamin C, of course, is commonly sold in 100, 500, and 1000 milligram pills.

The net effect of the regulation is that anyone who believes he needs more than the federally recommended daily allowance of a vitamin will have to either pay a doctor for a prescription or else swallow dozens of expensive, low-milligram pills.

The Consumer's Institute notes that the new regulation does not require public approval, and that the only way consumers can fight the situation is by writing protests to congressmen and the FDA. : : EARTH NEWS

Environmental Eavesdropper

LOONEY LIMERICKS

by Zane E. Cology

Sell the timber for a fee---Or holler "Woodsman, save that tree!"
If it's cut low
The elk will go --Question is, which shall it be?

* * *

Ministers of 17 European countries have agreed that the only way to combat pollution was through cooperation. The Council of Europe at a recent meeting in Vienna said their actions must be coordinated if the continent was to be kept clean.

Mercury poisoning in Japan's Minamata Bay has resulted in an award of \$3.6 million. The award was made to 138 persons. Some 68 persons have died and many are termed "living vegetables." A huge chemical firm dumped mercury into the bay for some 20 years. It must pay the damages.

The New York Legislature has before it a bill to bar any landings by the Anglo-French Concorde supersonic aircraft.



Letters..

can do the work you are doing for us all? There surely must be many of us around to help with the cause, and we were gladdened to hear of the response so far. My wife has already written to you at greater length. This is just to send you our check for \$50 and our best wishes. Please keep us all informed as to how and when we can do more. The Pledge idea sounds good to me. Send us a pledge card when you have some available. Our prayers will be with you that the work can continue.

Sincerely, The Rev. William R. Harvey Manitowoc, Wisconsin

Dear Tom,

Don't ever discontinue your High Country News. It's a great conservation paper. I'm happy that your friends are coming through. Good luck and God bless your efforts.

Sincerely, R. H. Hultman Seeley Lake, Montana

Dear Mr. Bell,

Enclosed find a check for \$15 (\$10 for a year of High Country News and \$5 for whatever). I received two complimentary issues and like what you are working for. I am a truck driver and don't have a lot of time to read magazines and newspapers, but I read your paper from front page to last. I hunt in Wyoming every fall and it is the highlight of my year; just seeing that beautiful country.

Keep up the good work and good luck and God Bless you.

ind God Bless you

George R. Gjesvold Friendship, Wisconsin

Canada Goose Branta canadensis

High Country News-15 Friday, Apr. 27, 1973

dozen honkers, on set wings, lower majestically for a landing on calm waters of a hatter as marsh.

The Canada is the best known of all our geese and easily

More than a Sozen sub-species are recognized today which range in size from the mallard-sized cackling goose to the nearly swan-sized Giant long believed to be extinct. All, however, have the black head and neck and white cheek patch. Body coloration varies somewhat in the various sub-species but generally is grey-brown.

Canada geese always have had the reputation for wariness. This is indeed true in the case of the larger races where they are heavily hunted honkers have set patterns of feeding and resting Careful study of

honkers have set patterns of feeding and resting. Careful study of these patterns is necessary for the goose hunter to have consistent success in bagging these birds.

success in bagging these birds.

They are field feeders and will travel long distances to reach a favorite field of stubble or graze. Many goose hunters prefer to seek these geese there, hunting from pit blinds.

Some of the larger wintering concentrations of Canada goese are on the Eastern Seaboard; floricon Marsh National Wildlife Refuge, in Wisconsin; Crab Orchard National Wildlife Refuge, Illinois and the Lacramento Dalley in California.

Tanada geese are more successfully managed than most waterfowl. Consequently these geese are now observed in places never seen before and in areas from which they had formerly been driven.

plate 8

Beautiful calligraphy - decorative writing - is used throughout Caxton's SELECTED AMERICAN GAME BIRDS. The penmanship was done by Sam Lehman and the watercolor paintings are by David Hagerbaumer.

Book Review

Selected American Game Birds

Lehman and Hagerbaumer

(Caxton Printers, Ltd., Caldwell, Idaho, \$30.00)

Reviewed by Pat Hall

Art books are a paradox. They are always expensive, yet they're really "a dime a dozen." Usually issued before Christmas, they may make impressive gifts, but the publishing world is flooded with them.

Selected American Game Birds, recently published by The Caxton Printers of Caldwell, Idaho, is one volume that doesn't fall into the usual "art book" genre. It is a book of surpassing beauty, but more important, it is a

book of unusual taste.

David Hagerbaumer is an artist who has hunted, photographed and painted upland game birds and waterfowl most of his life. Sam Lehman is a retired Oregonian who mastered the art of calligraphy and whose talents with the pen make this book even more worthwhile.

Calligraphy could be called a lost art. The dictionary calls it "decorative writing as an art," but some calligraphy is almost unreadable, thereby defeating its very purpose for being.

Not so the calligraphy executed by Lehman for this book. Every word in the book was hand-drawn by Lehman and the spacing and colored initials make the text quite easy to read. The rather unusual lettering reminds the reader of Middle English books or manuscripts; particularly the excellent typeface created by William Morris in the 1880's to print the books issued by his Kelmscott Press which gave a rebirth to beautiful printing.

Every game bird—and there are 26 of them represented—is illustrated by the watercolors of David Hagerbaumer. If you remember as I do, the rather garish, splashily colorful paintings of Lynn Bogue Hunt in the sporting magazines of yesteryear, you'll appreciate even more these delicate executions of game birds and their habitat.

Hagerbaumer shys away from close-up views of the game birds. He prefers to show them in flocks or coveys at some distance, yet as an integral part of their environment. The Bobwhite Quail, for instance, erupt from the brown, autumn floor of a forest clearing; the Common Goldeneye streak like feathered projectiles through a winter day spotted with snowflakes.

Every one of the paintings has its own appeal: I love the flock of Scaup whistling

over the fog-shrouded swamp; the painting of a pair of Wood Ducks seems to radiate a brownish-yellow light that is peculiar to a morning in the marshes.

Yet, there is one painting in the book that absolutely entrances me. It is a solitary Snipe winging across a bog and into the leaden clouds of mid-afternoon.

To the hunter—or the outdoorsman—this painting seems to exemplify the feeling the viewer gets from all of Hagerbaumer's paintings. A lonely bird caught for a moment in the great expanse of sky and land. A creature that is one with Nature.

And isn't that the feeling we have all tried to capture in our own individual ways?

Selected American Game Birds is heartly recommended to anyone who appreciates a truly beautiful book. The co-creators, Hagerbaumer and Lehman, are to be congratulated. And Caxton Printers, the publisher whose very name implies quality, has continued to live up to that reputation.

ANY old Holiday is a great day to give a gift subscription!

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Enclosed is \$10.00. Please send

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Visitors may travel by boat or by ship to the edge of tidewater glaciers on Glacier Bay National Monument, Alaska.

Glaciers Are Fascinating

Glacier Bay's ponderously advancing and retreating glaciers record a history of rhythmic changes in the climate of the planet. Over and over, centuries of mild climate in the far north have alternated with the long, cold periods of successive ice ages.

Since life everywhere presses against its frontiers, here too is recorded an extension of moss-carpeted primeval forests and the inhabitants in the wake of retreating ice. . . then extinction or withdrawal when overwhelmed by advancing glaciers. . . and again the forests' recovery, as in our time.

When Capt. George Vancouver sailed through the ice-choked waters of Icy Strait in 1794, Glacier Bay was little more than a dent in the shoreline. Across the head of this apparently minor inlet stood a towering wall of ice — a wall that marked the seaward outlet of an immense glacier that completely filled the broad, deep basin of what is now Glacier Bay. To the north, ice extended more than 100 miles to the St. Elias Range, covering the basin to widths of 20 miles and more. In many places the mantle of ice was more than 4,000 feet deep.

During the following century the ice front retreated 40 miles and a tall spruce-hemlock forest took its place. Tidewaters invaded the basin and filled the deep, narrow fiords. Still the glaciers receded. By 1916, Tarr Inlet was free of ice and the terminus of Grand Pacific Glacier stood 65 miles from the mouth of Glacier Bay. Nowhere else have glaciers receded at such a rapid pace.

Today, few of the many tributary glaciers that once supplied the huge ice sheet extend to the sea. The 4,400 square miles of Glacier Bay National Monument enclose 16 active tidewater glaciers. Icebergs, cracked off from near-vertical ice cliffs, dot the waters of the bay. Glaciers, deep fiords, and snow-capped mountains combine with lush forests and abundant wildlife to create a unique wilderness.

GLACIERS

The snow that falls each year in the high

mountains around Glacier Bay does not all melt, but accumulates and is transformed into ice. New-fallen snow changes first into granular snow consisting of round grains of ice. As the depth increases, these ice grains become more closely packed and in time fuse into solid ice (zone of fracture). When such ice is of sufficient thickness, volume, and weight, it flows downslope into lower regions to a point where the rate of melting of the ice equals the rate of accumulation. That point is the terminus, or snout, of the glacier.

The advance or retreat of a glacier terminus is a reflection of many things: rate of snowfall, topography, and trends in climate. Scientists are seeking means to accurately correlate glacial movements with changes in climate.

The glaciers seen in the monument today are remnants of a general ice advance which began about 4,000 years ago. This period, sometimes called the "little ice age," in no way approached in extent the continental glaciation of earlier Pleistocene time. Ice fronts reached their maximum limits about 1750, after which the slowly warming climate brought about general melting. The speed at which Glacier Bay's ice sheet shrank has created much scientific interest; consequently, the history of the recession is well documented. The retreat continues today on the bay's east and southwest sides; Muir Glacier receded about 5 miles in 7 years. In contrast, glacier termini on the west side were stabilized by 1929. Most have slowly fluctuated ever since, but several, including the snouts of Grand Pacific and Johns Hopkins, have moved gradually forward. Glaciers outside the Glacier Bay drainage show yet other patterns of activity. Some may be as far forward as in any previous time. Local climate and topography are presumably involved, but the full explanation for this bewildering diversity of glacial activity has yet to be found.

Several tidewater glaciers offer a spectacular show of geologic forces in action. As water undermines the ice fronts, great blocks of ice up to 200 feet high break loose and crash

into the sea, creating huge waves and filling the narrow inlets with massive icebergs. Muir and Johns Hopkins Glaciers discharge such great volumes of ice that it is seldom possible to approach their cliffs closer than 2 miles. Margerie Glacier, while also very active, is more accessible. From a safe distance of one-half mile, boaters can observe ice falling from the glacier faces.

The snow- and ice-clad mountains of the Fairweather Range are as impressive as the glaciers. The highest peak in the range is 15,320-foot Mount Fairweather. Several other summits, including Mounts Crillon, Quincy Adams, LaPerouse, Lituya, and Salisbury, exceed 10,000 feet. The steepness of their slopes is dramatically visible throughout the upper bay. In Johns Hopkins Inlet, several peaks rise from sea level to 7,000 feet within 4 miles of the shore. The peaks supply moisture to all glaciers on the peninsula separating Glacier Bay from the Gulf of Alaska.

The deep fiords are a direct result of glacial erosion by quarrying and abrasion. Quarrying is caused by an ice mass plucking soil and rock from the sides and floor of the valleys. This material acts as a powerful abrasive on the underlying bedrock as the glacier moves forward, widening and deepening the trough. Landslides contribute to this widening. Great slides occur when the glacier removes bedrock support from under masses of soil and rock on the upper slopes of an inlet.

During a severe earthquake in 1958, an estimated 90 million tons of rock, weakened by glacial erosion, broke loose from the cliffs above the terminus of Lituya Glacier. Thundering down the mountain, the slide tore 1,000 feet of ice from the terminus and crashed into the water. On the ridge opposite the slide, a wave surged to a height of 1,720 feet. Still several hundred feet high, the wave moved seaward down the 8 miles of Lituya Bay, completely stripping nearly 4 square miles of forest from the shores. Evidence of this giant wave's destructive power will be visible for many years.