

High Country

News

The Outdoor and
Environmental Bi-Weekly

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Lander, Wyoming

Friday, Nov. 12, 1971



Photo by Laney Hicks

Utah Power and Light Company's Viva Naughton plant near Kemmerer, Wyoming, provides a preview of things to come. Coal-fired, steam-generating electric plants, and the strip mines to feed their insatiable demands, are slated to

become a part of the landscape in many western areas. The combined impact of air pollution and devastated surface areas may lead to environmental disasters.

Calls For Halt in Coal Leases

WASHINGTON, D. C. -- Sen. Gaylord Nelson Tuesday said Federal permits and leases for coal strip mining on public lands in the West should be halted until an environmental review has been made.

Already, private interests—including some of the biggest energy companies in the country—have secured leases or exploration permits for coal on more than 2400 square miles of the U. S. public lands, mostly out West.

In effect, the West is threatened with a giant coal rush, Nelson said, and without protection, the region's future "will not be as glamorous as the colorful era of its frontier past."

With 77 percent of the remaining U. S. strippable coal reserves underlying 13 Western states, future strip mining in the region "could make the ravaged coal mined areas of the Appalachians look like hen scratchings," Nelson said.

Despite the enormous implications for the entire West, not one environmental impact review under the National Environmental Policy Act has been done on the coal leases on the public, Bureau of Land Management land, Nelson pointed out.

In a letter to Russell Train, chairman of the President's environmental council, and to Rogers Morton, Secretary of the Interior, Nelson urged that comprehensive environmental studies be started immediately on the Western strip mining plans.

In the meantime, Department of the Interior issuance of coal leases, permits and approvals of mining plans should be halted until completion of the reviews and public hearings, Nelson argued. Issuance by Interior's Bureau of Reclamation of water use permits preparatory to the coal mining and processing should also be halted, he added.

The Wisconsin Democrat also urged similar comprehensive environmental studies on coal gasification, a process now being developed with Federal aid to convert coal to gas and then pipe it to urban areas.

He noted reports that a confidential survey by a private gas association has already pinpointed 176 prospective sites, mostly in the Western coal areas, for the giant plants.

The strip mining-coal gasification complexes, which are planned for as early as the next decade, would rework the face of the West, Nelson warned, drastically altering thousands of square miles of public and private lands, possibly eliminating other future uses.

In his letter to Train and Morton, Nelson argued that without adequate strip mine reclamation and strict pollution controls on the gasification plants, "these lands held by the public are in effect not being leased but sold as consumable, disposable goods."

He said that the importance of the Western public lands to any strip mining and gasification ventures "once again places the Federal

government in a key position of responsibility in a matter of enormous environmental implications to the nation."

Many of the major river basins in the country could be threatened by the big coal rush, he continued. Basins with big coal deposits include the Arkansas, the Colorado, the Missouri, the Platte, and the Snake.

Much of the pollution from the Western coal mining and gasification would find its way to the Mississippi River, Nelson continued, one of the world's major waterways that we are now spending tens of millions of dollars trying to clean up.

Under current Interior policy, only limited environmental reviews are being given proposed coal leases now, under regulations issued in 1969.

And the environmental studies on the gasification are being limited to tiny pilot plants, one-hundredth the potential size of the commercial plants for the next decade or earlier.

Nelson argued for comprehensive environment studies and public hearings instead, which would look not only at the potential damage from each lease and each gasification plant, but at the cumulative environmental and social effects of massive strip mining and coal gasification in the West, and at possible alternatives.

Nelson pointed out that the National Environmental Policy Act requires Federal

(Continued on page 4)

Friday, Nov. 12, 1971

HIGH COUNTRY

By Tom Bell

January 1, 1970, seemed to most environmentalists as one of the most momentous and propitious dates of our times. It was then that the President of the United States, the leader of the most powerful and technically advanced nation in the world's history, appeared to dedicate himself and his administration to solving our environmental dilemma.

For those who had despaired, his words of that day kindled renewed faith and hope. He said, "I have become convinced that the 1970's absolutely must be the years when America pays its debt to the past by reclaiming the purity of its air, its waters and our living environment. It is literally now or never . . . We are determined that the decade of the 70's will be known as the time when this country regained a production harmony between man and nature."

Alas, it is not to be. With not quite two years gone of the "environmental decade," the tiny cracks of credibility are beginning to open into yawning chasms. Mr. Nixon's high-flown oratory has been reduced to the level of high-blown political rhetoric.

Now, we learn it is business as usual with the money changers in the temple. Big industry must not be denied its profits. Political campaign coffers cannot be jeopardized for the sake of the national interests.

The words and actions of Mr. Nixon, and an increasing number of his top lieutenants, have indicated steady drift away from the promise which he once uttered. It might have become most evident with "Wait-A-Minute" Stans' impassioned speech before the National Petroleum Council on July 15. But there was strong evidence that the tide had already begun to run against any hope for an authentic change in the basic philosophy of the Republican administration.

Lately, it has turned into a rip tide. Mr. Nixon himself hewed to the 'big business' party line in a recent speech which almost reiterated Mr. Stans' espousal of profits before purity. It became evident when Mr. Nixon's White House assistants intervened on the side of big industry in emasculating EPA's permit system for controlling air pollution. (EPA would have required industry to use the maximum available technology in abating and controlling air pollution.) As a result, such states as Montana and New Mexico may find their strict air standards reduced to the least common denominator dictated by industry. Without strong federal guidelines, the position of individual states is undermined.

The Environmental Protection Agency has been weakened from within by political appointments rather than career scientists. The most flagrant case was the appointment of a former assistant to Senator Strom Thurmond, the Southern conservative and alleged architect of the 'Southern strategy.' One of the most qualified regional directors of EPA was booted out to make way for the political protegee.

Even in Mr. Nixon's own private backyard, at Biscayne Bay, the polluting utility got its way. Instead of having to control thermal pollution as soon as possible, the utility was allowed to take up to five years. Secretary of the Interior Morton lamely pronounced that he didn't think enough environmental damage would occur but what it could recover later.

Here in the West, the brave words of Secretary Morton were for naught. In spite of the fact that he said a decision on the \$68 million Lower Teton Dam would be made on environmental and economic grounds, the political decision was not long in forthcoming.

It was full speed ahead - and damn the facts. Meantime, another reclamation boondoggle, the China Meadows Dam, is in the making. It would be built on public land (Forest Service), and use Utah water to irrigate more marginal land in southwestern Wyoming.

The latest move by the Nixon administration is an out-and-out attempt to torpedo the new Federal Water Pollution Control Act Amendments of 1971. In spite of the 86-0 vote in the Senate in favor of tougher water regulations, the administration has already gone to the state governors to get it watered down in the House. Unless strong public pressure is brought to bear, the polluters will get their way again.

Only an enlightened and aroused citizenry can prevent more environmental degradation. It appears that such an aroused citizenry is slowly gathering force. But it also appears that political perfidy will prevail until that force displays its power at the ballot box.



The winter wonderland of a forest blanketed in snow creates a photographer's paradise.

Letters To The Editor



Editor:

I read in High Country News (Oct. 29) that one of the critical questions in the Hells Canyon controversy is a soon-to-expire option which the Forest Service holds on the private lands in the canyon. I read that private developers will move in next spring unless the Forest Service comes up with the money by then. I read further that funds will be forthcoming by 1974-76.

I would like to suggest that Hells Canyon Preservation Council buy up the land and hold it until the Forest Service is able to purchase it back. The question has national appeal, and I would predict that they could raise the money if they sold shares in the venture, with the understanding that money would be redeemed when the Forest Service bought the land. Mechanically, it would be another real estate syndicate. Failing outright purchase, money might be borrowed.

I would prefer the former route, and since I am no longer an impoverished student, would be willing to invest \$500 in "real estate speculation" by HCPC. I would also be willing to contribute heavily towards a mortgage.

"Money talks," they say. Well, if words fail us, then let our capital speak for us.

Eric S. Jacobson, M. D.

Editor's note: Dr. Jacobson's idea merits serious consideration. The Hells Canyon Preservation Council address is Box 2317, Idaho Falls, Idaho 83401 for the benefit of anyone else who might want to correspond and help to get the ball rolling on this project. Should HCPC think that it wants to pursue the idea, HIGH COUNTRY NEWS will lend its support in any way possible. At the present moment, HCPC needs letters addressed to Senator Alan Bible, Chairman, Subcommittee on Parks and Recreation, 3106 New Senate Office Bldg.,



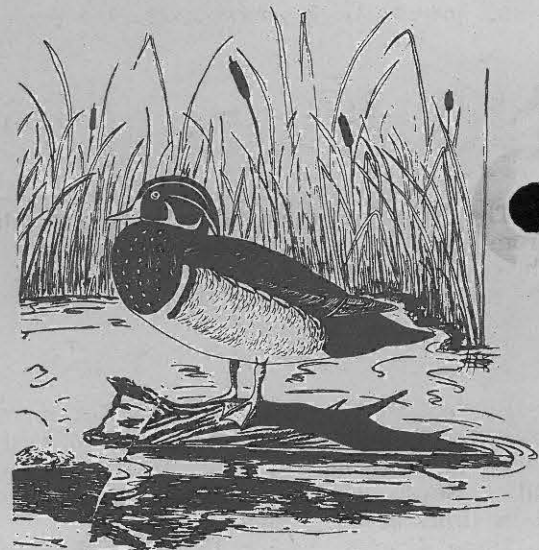
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EDITOR	Thomas A. Bell
OFFICE MANAGER	Mary Margaret Davis
CIRCULATION MANAGER	Marjorie Higley
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Washington, D. C. 20510 in support of S. 717, the Hells Canyon-Snake National River Bill. An outpouring of public sentiment on the Hells Canyon issue could still turn the situation around. The need for letters is urgent.



A Change in Values

"For some time, and indefinitely into the future, additional numbers of people can be accommodated only by a more intensive use of land and consumption of a larger share of the earth's resources.

"This prognosis implies less room for other forms of life. Sooner or later, we must decide how much life to displace. Population will increase whether we decide to eliminate all other natural life or whether we try to preserve biosphere that still provides us with most of our major needs. At the current rate of population increase such a biosphere may not last for more than 100 years.

"An indefinitely rising material standard of living has nearly the same effect on the biosphere as an indefinitely rising population. As with population, this problem must also be solved sooner or later.

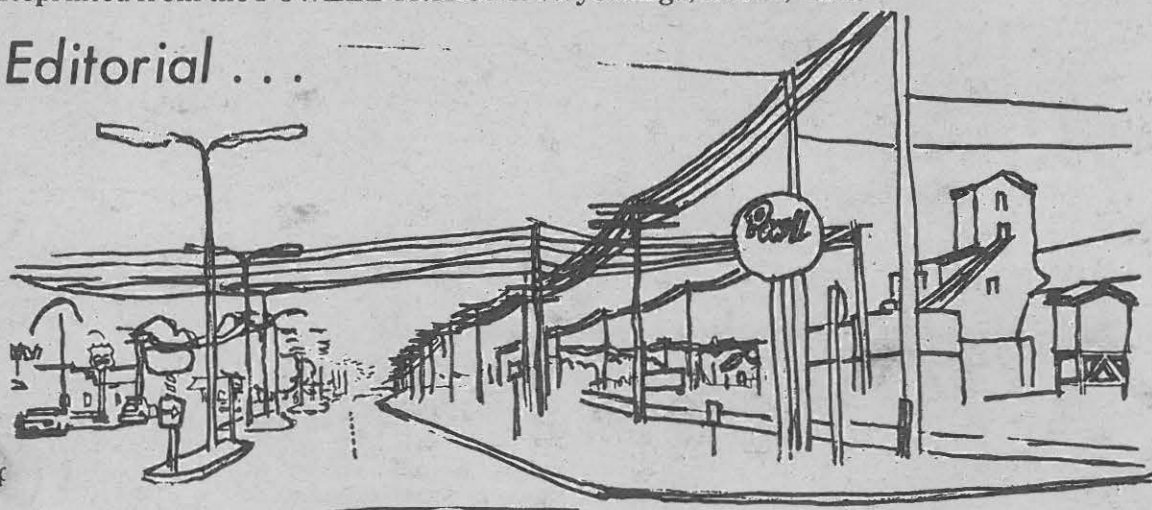
"A shift involving increased emphasis upon spiritual, aesthetic, and intellectual components in a standard of living remains the only way that standards could improve indefinitely. At present, the Gross Domestic Product (an approximation for the Gross National Product) for nations and its homologue for individuals stand as the most generally used criteria for status. A basic change in values in which increase in material wealth is not so highly rated must accompany any solution to the problem of ecological growth."

--Man's Impact on the Global Environment, Report of the Study of Critical Environmental Problems (SCEP), MIT Press.

Guest Editorials

Reprinted from the POWELL TRIBUNE (Wyoming), Nov. 4, 1971.

Editorial . . .



Cluttered Skyline

Maybe a photographer has a more than an ordinary hang-up about power poles and drooping wires everywhere. You get that way when it seems like every picture you try to take is cluttered with a loop or a pole or some similar encumbrance.

But it's not only photographers that should be bothered by the proliferation of wires and poles on the local skyline. It's a pollution problem all its own.

The artist's sketch above dramatizes the eye-competing maze of poles and wires along Powell's Coulter Avenue drive through

the city. Pick any other street or alley, and it's the same kind of thing.

There's some conscious effort to keep such eyesores from growing worse. In any matching fund projects the city enters into, all wire services must be buried. That's the way it should be, and we would hope that similar ground rules would carry over into other than matching funds development.

Then maybe someday a Lady Bird beautification-type program will help clean up the monster that has already been created by putting existing overheads underground.

No More Financial Rewards

The following guest editorial is reprinted from the Toiyabe Tattler, editor Ron Guidotti, the official newsletter of the Toiyabe Chapter of the Sierra Club at Sparks, Nevada.

* * *

By the year 2000, it is estimated that we will consume three times as much copper as today, 60 percent more iron, three times as much sulfur, seven times as much aluminum, and three times as much energy.

These figures reflect the effects of the demands of an increased population upon our dwindling natural resources -- many of which are not renewable, such as our mineral and fossil fuel reserves. As the population increases and our resources decrease, the net effect will be an increase in costs to the consumer. (This cost can be offset by practical and efficient recycling, however.)

Since we have little control regarding total resource management, it becomes imperative that we practice effective people management. Management of various species has been practiced for quite some time with good success. By controlling the population of a species so as to be compatible with available food supplies, a necessary ecological balance is maintained.

This is equally applicable to the species called *Homo sapiens*. As it is becoming more difficult to extract more and more of life's necessities from the earth -- from minerals to grain -- to keep up with the demands of a rapidly increasing population, it is not only logical, but necessary, that the number of people be limited so as to reduce the drain upon our natural resources and keep more in harmony with our environment.

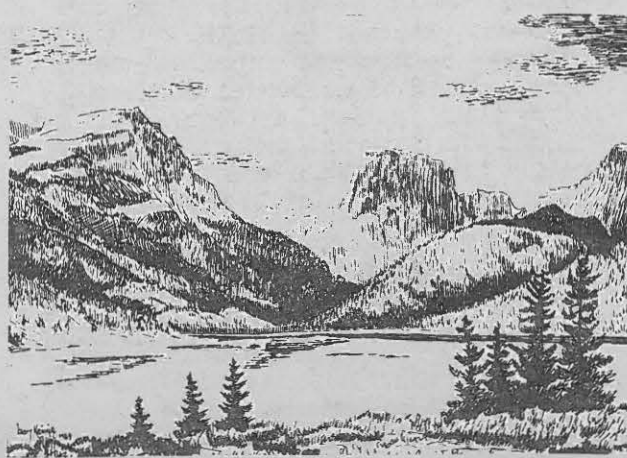
As in the case of many diseases and afflictions, prevention is the answer. There are few people today who can afford to raise a large family and see that their offspring are not denied all of the benefits of "the good life" without themselves sacrificing the same in the process. The main objections encountered in many of today's birth control programs -- not counting abortion, which is a stop-gap, last-resort measure, at best -- are of a moral and/or religious nature. But good progress is being made in educating the public in this and other important related areas, such as environmental education in the public school system -- from the elementary to the college level.

In the end, the only way to encourage smaller families is not to financially reward persons for having large families as is done under our

present taxation system -- one legally can't issue a "restraining" order not to procreate. A more equitable approach would be to tax individuals in proportion to the size of their families, as persons with large families benefit more from the schooling and education their children receive than those with only several or no children. In the latter case, these individuals are footing more than their share of the bill -- they are subsidizing the education of children other than their own. One other possibility would be to grant the standard deduction for the third child, and after that, the government starts to collect rather than disburse, payments. I'm sure there would result a loud outcry from many taxpayers were this to be implemented.

Eventually, however, some type of restrictive population control program will be initiated by the federal government -- even if it means, unfortunately, subjugating the rights of certain individuals or groups of individuals.

We are slowly but surely moving into the "Big-Brother" -- is-watching-you world of 1984 -- steps in this direction are evident in the field of federal pollution abatement regulations and legislation. One of the first symptoms attending the appearance of overcrowding, or too many people, is the loss of many accepted (or taken-for-granted) personal freedoms and options. Already there are crowded conditions prevalent in many of the nation's campgrounds, and the back country is not far behind -- a good example of loss of personal freedom is the need for a permit now to enter wilderness areas of California. With careful government planning, however, these restrictions can be minimized, hopefully, to an acceptable -- or at least tolerable -- level.



The pika, or coney, is one of the most unique little animals of the mountains. They make their home amongst the broken rocks of talus slopes and high, rocky ridges. A distant relative of the rabbits, the pika has to store food for the long winters beneath deep snows. They do so by making haystacks amongst the crevices and rocks which can be reached from the little animal's runways.



Reprinted from THE IDAHO STATESMAN,
Boise, Idaho, November 2, 1971.

Let Power Pay

Revenue from the federal electrical power system in the Northwest is used to pay for irrigation projects. Why shouldn't power revenue also help pay the cost of environmental projects?

The Idaho Environmental Council suggests that it should. Under the IEC plan, \$25 million a year would be distributed to Idaho, Montana, Oregon, Washington and Wyoming for use at local and state levels.

There's a huge gap between what the states and local governments might do for environmental improvement, and what they are able to do with the money they have.

After they get through paying for schools, higher education, welfare and public health, too little is left to put environmental policy into practice. For example, Idaho has a state fund to help communities pay for sewage treatment plants. But there's not enough money in the fund.

The state's pollution control agencies are short on staff and money.

Communities lack money to buy land for recreation. State and federal agencies are short of money to improve fish and wildlife habitat. Cities and counties have no money to buy land for use as parks and open space.

The taxpayers have helped build the public power system in the Northwest. Federal power users benefit from lower rates. A large chunk of the power revenue is used to help pay for irrigation projects.

This money for irrigation is paid for, indirectly by the taxpayers and the power users. If it weren't used for irrigation, the power rates could be lower.

It would be the same with an "environmental account." Power revenue would pay for it.

People in the Northwest have demonstrated their concern about the environment, about living qualities in their states. Those who purchase federal power should be willing to pay a little more if the money is used for environmental projects. They are now paying a little more to help finance irrigation projects. So the concept of using power revenue for other purposes is well-established.

While most Idahoans don't use public power, the state is part of the Bonneville Power marketing area and much of the water which turns the generators originates in Idaho. Irrigation projects in Idaho qualify for assistance from the Bonneville system.

The taxpayers are subsidizing a federal power system which in turn subsidizes irrigation projects -- while many worthy environmental projects go begging.

Under the IEC proposal, the assistance to irrigation would continue undiminished. The environmental account would not reduce funds available to irrigation. But the contribution of the Northwest public power system would be broadened. It would serve more people in more ways.

Wetlands Saved

More than a million acres of prairie wetlands have been placed in permanent protection in the past decade, according to Regional Director Travis S. Roberts of the U. S. Department of the Interior's Fish and Wildlife Service.

On October 4, 1961, Congress enacted legislation authorizing acquisition of natural prairie wetlands in the Dakotas, Nebraska and western Minnesota to protect the rapidly-dwindling production habitat of migratory waterfowl. Under the Act, Congress authorized the expenditure of \$105 million on a loan basis, to be repaid with receipts from future sales of Duck Stamps.

Today, a decade later, more than 50 per cent of the acquisition goal set for the wetlands preservation program has been reached.

Goals set originally included 600,000 acres of wetlands habitat to be acquired through purchase and another 1,150,000 acres to be preserved and protected through perpetual easements.

At the end of the first 10 years of the program, some 307,000 acres of wetlands habitat had been purchased, or about 51 per cent of the purchase goal, according to the federal agency. Another 842,000 acres had been protected by easement during the same period, or about 73 per cent of the easement goal.

Both programs were designed to preserve natural wetlands that have particular value as production habitat for waterfowl, and that provide other related ecological and environmental benefits.

This four-state area contains most of the waterfowl producing marshes of the continental United States, exclusive of Alaska. Some also serve as important migration habitat for waterfowl and other species of migratory birds.

Perpetual easements obtained from landowners protect wetland from draining, burning or leveling. Landowners are paid a cash sum for such easements.

In 1967, Congress granted the Fish and Wildlife Service and extension of the acquisition through June of 1976.

In announcing the present status of the wetlands acquisition program, Roberts expressed optimism that the goals of the program can be reached within the authorization time of the act.



Calls For Halt . . .

agencies to do comprehensive environmental studies before taking actions—such as the leasing—which would significantly affect the environment.

Some 160 exploration permits and 16 mining leases have been issued for the coal on the U. S. public lands since the Environmental Policy Act was signed into law January 1, 1970.

Nelson, who has been leading a fight in Congress for strict Federal compliance with this key Act, pointed out in his letter that recent court decisions on the new law's meaning "make clearer than ever" its requirements that all Federal agencies conduct full environmental reviews and take the results into account at the earliest stage in their decisions.

The importance of the Environmental Policy Act studies is demonstrated, he continued, in another coal mining situation, involving Indian lands in the Southwest. There, the study is already turning up serious environmental problems.

In his letter, Nelson said he was encouraged by indications that more comprehensive environmental reviews for the coal mining and gasification are under consideration by the Interior Department.

The Wisconsin Senator commented that "if we do not insist now on full compliance with the letter and spirit of the Environmental Policy Act, the traditional focus of bureaucracies on their own missions will prevail, and the Act will be eroded into so many meaningless words."

He added that the huge scale of the planned Western strip mining for coal becomes clear when one notes that some of the largest energy companies in the country—Mobile Oil, Peabody Coal Co., Kerr McGee Corp., U. S. Steel Corp., El Paso Natural Gas Corp., Atlantic Richfield, the Sun Oil Co. and the Carter Oil Co. among others—have already obtained large leases on the public coal deposits.



The preservation of natural wetlands and waterfowl habitat has helped maintain populations of North American ducks and geese.

Phosphates Reviewed

by Jim Rathlesberger

Ever since the Nixon Administration shocked consumers by its September 15 turnabout on phosphate detergents, it's been busy "qualifying" its statements for congressional committees and environmental groups. Originally, the government's position was summed up by Surgeon General Jesse Steinfeld: "My advice to the housewife would be to use a phosphate detergent. It is safe for the household." This advice was supposedly based on Food and Drug Administration (FDA) tests of thirty-nine detergents, but once the test results were released to the public Steinfeld and others found themselves on the hot seat. Some of the detergents found to be most hazardous were phosphate brands, and of only four products found to be safe without labels one was a low-phosphate and another was a non-phosphate. Asked about this by the Senate Commerce Committee, Steinfeld admitted that "not all low-phosphate or no-phosphate home laundry products are highly caustic. Soap, for example, . . . is an acceptable alternative from a human health point of view." Senator William Spong (D.-Va.) then asked him why this wasn't pointed out at the September 15 news conference. Steinfeld claimed that it was, but said "the press ran out of space" and didn't report it. The same committee later heard from Malcom Jensen, the FDA's Director of Product Safety. Stating flatly that he "would not have given the same advice" as Jesse Steinfeld, he said, "There is no laundry detergent on the market so hazardous that

labeling could not make it safe for home use." Jensen regretted that consumers are "totally confused now."

There has been a lot of speculation concerning what prompted the Administration to promote phosphate detergents, and most of it assumes that the White House yielded to pressure from the detergent industry. As one Chicago official put it: "Bryce N. Harlow, a top presidential aid, went back to his old job with Procter & Gamble . . . You figure it out." Another person apparently involved was White House aid Charles Colson. According to the Wall Street Journal, his "job involves doing favors for interest groups in return for getting favors for them. Thus, in White House councils Mr. Colson successfully argued the case of the detergent industry against federal limits on phosphates." The pressure from the detergent industry was apparently touched off by the Federal Trade Commission's proposal to require detergent containers and advertisements to warn consumers that phosphates contribute to water pollution. The FTC is still considering its proposed rule, and could help set our national policy back in the right direction.

Perhaps the best alternative to phosphates would be soap, which was replaced by detergents in the 1950's. The U. S. Department of Agriculture reported on October 6 that their scientists had developed soap formulations "that will wash as efficiently in hard water as phosphate detergents," and proposed that they be used "as a means of reducing water pollution." The detergent industry's main objection to soap has always been that in hard water areas it can't meet the cleaning power of detergents. Their real objection, as Dr. Barry Commoner points out in his new book *The Closing Circle*, is probably that they'd make less money from soap. Commoner says the industry increased its profits from 31 per cent of sales in 1947 to 54 per cent in 1967 by emphasizing the sale of detergents over soap.

In any event, the eutrophication of our lakes, slow-moving streams and fresh water estuaries cannot be stopped simply by building more waste water treatment plants as the Administration has suggested - phosphates must be taken out of detergents. Construction of all the necessary treatment facilities would take at least a decade, and much of our nation's water could be degraded in the meantime. Furthermore, phosphate removal from sewage would add billions to our national waste treatment expenditures.

Corps Expanded

Senator Henry Jackson says he hopes to see the Youth Conservation Corps expanded to 100,000 young men and women next summer. He has proposed a bill to provide \$150 million for the program, and says he hopes the Nixon Administration will endorse it. However, a spokesman for the administration says more time and experience are needed on pilot programs.

Sulphur Content of Strippable Coal Reserves

		Millions of tons by sulphur content			
	*Grade	Low	Medium	High	Total
Wyoming	B	13,377	65	529	13,971
Montana	B,C	6,133	764	0	6,897
New Mexico	B	2,474	0	0	2,474
North Dakota	C	1,678	397	0	2,075
West Virginia	A	1,138	669	311	2,118
Texas	C	625	684	0	1,309
Kentucky (East)	A	532	189	60	781
Colorado	A	476	24	0	500
Arizona	B	387	0	0	387
South Dakota	C	160	0	0	160
Virginia	A	154	99	6	258
Washington	B	135	0	0	135
Alabama	A	33	74	27	134
Arkansas	A,C	28	118	28	174
California	B	25	0	0	25
Oklahoma	A	10	44	57	111
Utah	A	6	136	8	150
Tennessee	A	5	43	26	74
Michigan	A	0	0	1	1
Maryland	A	0	8	13	21
Ohio	A	0	126	907	1,033
Iowa	A	0	0	180	180
Kansas	A	0	0	375	375
Pennsylvania	A	0	225	527	752
Kentucky (West)	A	0	0	977	977
Indiana	A	0	293	803	1,096
Missouri	A	0	0	1,160	1,160
Illinois	A	0	80	3,167	3,247
Total		31,787	4,036	9,161	44,986

*A—BITUMINOUS, B—SUB-BITUMINOUS, C—LIGNITE

Wilderness Suit Filed, Settled

High Country News—5
Friday, Nov. 12, 1971

DENVER, Colo. - The Sierra Club and four other conservation groups have sued to halt the US Forest Service's "divide and conquer" tactics in its proposal to declassify all of southwestern Colorado's superbly scenic Uncompahgre Primitive Area.

The suit specifically zeros in on the Forest Service's failure to consider some 36,000 acres of contiguous wild lands in its formal proposal to declassify the Uncompahgre. This omission, the suit alleges, is a basic violation of both the Wilderness Act of 1964 and the Forest Service's own manual as well.

H. Anthony Ruckel, who filed the suit in the US District Court in Denver, called the Forest Service's tactic "a serious departure from correct procedure" - one that would "negate the basic procedural guarantees for studying and designating potential wilderness areas."

This suit is but the latest in a solid month of sparring between conservationists and the government over the Uncompahgre. The Forest Service started the battle with its 10-page declassification plan issued early last month.

That document made a scanty passing reference to the contiguous lands, saying vaguely that they "should be reviewed at a later date." However, conservationists were quick to perceive that such a plan would inappropriately divide the study of wild country that is naturally all of one piece.

The next move came on October 13 when the conservationists asked Regional Forester William J. Lucas to postpone its Uncompahgre hearings until all lands in the area could be studied as a whole. "The public hearing," Ruckel asserted, "would be emasculated if the participating parties aren't given the opportunity to comment upon the Service's study of the contiguous areas - as well as the present Primitive Area."

When the Forest Service remained mum, the conservationists served notice of intent to sue if there was no compliance with their postponement request by October 29. And then the Chief US Forester, Edward P. Cliff, conceded slightly by announcing that his agency would get around to the contiguous lands "probably in 1973."

The formal Sierra Club suit followed on November 3. It asks for an indefinite post-

ponement of the hearings until "one integrated review and report" is forthcoming from the Forest Service. At present, the hearings are set for November 15 and 17 in Grand Junction and Ouray, Colorado.

For the time being these involved procedural matters have obscured the central battle over the Uncompahgre. One side is a conservationist coalition asking for a 127,000-acre Wilderness; on the other is the Forest Service, with strong backing from the Colorado Mining Association, proposing a complete declassification. In the middle is an area of three majestic peaks towering over 14,000-feet, many lesser mountains and vast, broken expanses of high, rolling Alpine tundra -- all known

as the "Switzerland of America."

* * FLASH * *

The U. S. Forest Service agreed on November 10 to settle out of court with Colorado conservationists and the Sierra Club on the matter of the Uncompahgre Primitive Area. The government agency agreed to a continuation of the scheduled hearings until sometime in the spring. This means the hearing record will stay open until hearings have been held on de facto wilderness contiguous to the primitive area. The Forest Service also agreed that no report will be submitted until findings have been completed on the areas proposed by conservationists.



Hayden Peak (12,987 ft.) from Last Dollar Road along the western edge of the Western (or Sneffels) Unit of the proposed Uncompahgre Wilderness.

'Use It or Lose It' Is Guiding Principle

by Colleen Cabot

The following report was written by Miss Colleen Cabot of Laramie, Wyoming. Miss Cabot is one of the founders and a former president of the University of Wyoming Environmental Action Group. She is now employed by the Wyoming Outdoor Coordinating Council on full-time environmental work.

"Water is Wyoming's Gold - Use It or Lose It!" was the theme of the annual meeting of the Wyoming Water Development Association at Cheyenne, November 1-2. Sprinkled through the audience were a few industrialists; a number of state agency representatives - State Engineer (for water), Game and Fish, and Department of Economic Planning and Development; a small group from the League of Women Voters, and a few other curious people with varying interests in Wyoming's water. But most of those present were ranchers and farmers - men tied to the land and thus to their life-blood, water.

As the program unfolded, the prevalent themes of 'use it or lose it' and 'save Wyoming's water for use in Wyoming' underscored the tenacious attitude these men have for the water. Speakers covered topics from the Green River Basin to the recently released report on the Platte River Basin, and from the West Wide Water Plan to smaller water developments in the state. In addition, the emphasis on land-use planning, water law recodification, and litigation affecting water development projects showed a wide-ranging involvement and total commitment to unrestricted and complete water development. Although there were topics on recreation, minimum stream flows for fisheries, environmental protection, and water quality, the emphasis was decidedly on heavy water development, based on a rather narrow approach to water use.

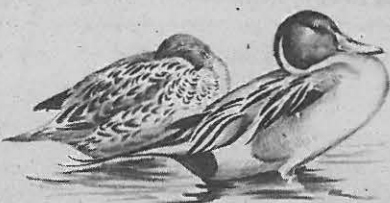
A look at the program gives one the tendency to view the association as a rather broadly based citizen group with a comprehensive outlook on Wyoming's water. But because they view flowing water only as a potential to be dammed or diverted, finding recreational value only as it backs up behind a dam, or actual value only as it spreads across fields or finds its way to a thirsty

cow, many in Wyoming find themselves disagreeing with such water-use priorities. The association is much more narrow than it likes to be viewed in the public eye.

The name of the association certainly implies that the members are openly committed to water development. Little fault can be found with this thesis - if you are a water developer. The members view their personal interests as being in the best interests of the state.

However, other citizens hold contrary views. And these citizens question the view of state officials who seem to believe the developers articulate the feelings of most of Wyoming's citizens. Furthermore, many state officials seem to cultivate their attitudes on water use primarily amongst these developers. They have ignored the weighty opposition to the Green River dam proposals, as well as some other reclamation projects.

The meeting would certainly have been an eye-opener for many Wyoming citizens. Mighty plans are afoot for Wyoming's waterways besides those involving just the Green River. Within the Green River Basin, the China Meadows Dam has received a \$500,000 appropriation through the Bureau of Reclamation and seems to be slated for construction.



The Seedskaadee Project-farm has been sold, after the economic studies showed that 500 acres would be required per family in order to be successful. But, the studies also showed that the Bureau of Reclamation would have had to finance land-leveling and other services before people could succeed even with that acreage.

The Savery-Pothook Project will be renewed with a \$250,000 write-in appropriation, although it has not yet been released to start construction.

Besides these older projects, the Bureau of Reclamation is involved in many others across

Wyoming. A look at the map of proposals for potential development shows just about every river, creek, and gully flowing in the state is under consideration.

Transbasin diversion was another much discussed topic at the meeting. The planned projects would place a virtual spider web of pipelines from one basin to another across our state. From the Bighorn River to the Powder River and Gillette (as described in a report to be released by the Bureau of Reclamation in 1973); from the Green River to the Platte, directly or via the Sweetwater River, or from the Green River to the Platte River and thence to the Powder River Basin (as described in Wyoming water planning reports) - all would have immense environmental impacts upon the state.

A man named George Laycok (AUDUBON, Jan., 1971) described it well: "We are in a great rush. And although we may not know where we're going, we're making good time."

Other conference topics included the Bureau of Reclamation's cloud-seeding project, Skywater. This is a pilot project to be conducted over the Medicine Bow Range. An environmental study is to be done by the University of Wyoming under the direction of Dr. Dennis Knight.

One of the directors announced that the association is moving to reclaim lands from the Bureau of Reclamation projects for private development.

The association's directors took a tour of the Green River and the proposed dam sites in August and were informed that the dams would enhance recreation, hunting, fishing, and even the ecology! (Editor's note: If both dams proposed for the Upper Green River were built, some 40-45 miles of Wyoming's blue-ribbon and top quality trout streams would be unundated. In addition, as many as a thousand moose could be lost through the loss of critical range. Some 5,000 antelope and possible 3-4,000 deer could be seriously affected, and possibly lost.)

Myron Goodson of the State Department of Economic Planning and Development announced that ALL public announcements and news releases on the Green River Feasibility Study (for dams) would be issued from the

(Continued on page 12.)

The Dilemma of Roads

by Dick Prouty
Denver Post Staff Writer

The people of southeast Utah are feeling the eyes of developers on the backs of their sun-tanned necks.

Having seen what arid deserts similar to theirs have become at Tucson, Phoenix, Las Vegas and in Southern California, the possibility of a necklace of neon clusters on a ribbon of pavement is forcing some serious thinking.

Already there's polarity — the leave-it-like-it-is advocates on one side and those who see development meaning jobs and economic vitality on the other.

The spurs of the issue are the lure of development around Lake Powell, created by Glen Canyon Dam on the Colorado River, and efforts to preserve the unusual geological features of the desert outside national parks and monuments by thwarting development.

And in the middle of it is the federal government, which owns much of the land in question, a lot of it potentially rich in minerals like uranium which put it in the public eye in the late 1940's after nearly a century of virtual isolation.

"Polarized extremes aren't going to solve anything," says Sam Taylor, editor of the MOAB TIMES. "It's high time people on both sides of this thing sit down and try to solve it."

"This thing" is a lot of things, but first it's roads, and then government administration which could spur or deter development, land use, and who decides — people in New York or San Francisco, or the citizens of Utah?

The area is southwest of Moab, west of Monticello, east of U. S. 89 and north of the Colorado and San Juan Rivers. It's more than 20,000 square miles of some of the most desolate, arid and beautiful land in North America.

Hidden Canyons

It is a region of fantastic rock formations, hidden canyons where perhaps no white man has ever been, for there is no known access into them in a maze of sheer cliff walls of red, purple and black stone.

It is a land of moderate winter cold and intense summer heat. In the region of sand and rock, a few springs nourish oases in green, cool contrast to the arid, almost moonlike terrain. Rainfall is about five inches a year.

The canyons give way to a rocky sea of stony waves moving fold on fold across the land and then into more cliffs.

Yet in all this labyrinth of canyons, there are only a few, maybe five — Escalante, Paria, Dirty Devil, Trachte, Indian — that have water adequate to make them attractive to prolonged recreation use.

It is a land where water is carried routinely with extra cans of gasoline, spare tires, supplies of food, shovels and other emergency tools on the most ordinary trips.

Link With Past

Yet the ancient ones, the Anasazi, have lived here. Their drawings are etched on canyon walls. Ruins of cliff dwellings and grain storerooms are sprinkled throughout the area.

A few roads cross the region, leaving most of it wild and probably the largest, least known area in the contiguous United States.

These roads, which connect communities like Blanding, Bluff, Mexican Hat, Glen Canyon City, Henrieville, Bullfrog, Boulder and Escalante in an erratic and roundabout way, could be improved — some of them are still dirt — to form a Canyon Country Parkway System, leaving undisturbed the areas just north of Lake Powell, Escalante River Canyon country and along the Colorado River south of Moab.

The Utah State Highway Commission also has suggested a Colorado to Arizona Highway running along the Colorado River from near Grand Junction, Colo., to Glen Canyon City. A section of it would cross the undisturbed Escalante area.

Tourism Goal

"We'd like to see progress," says Henry Helland, director of Utah Highways, "Tourism is the greatest thing going for this state. I think it (a highway across the Escalante country) would be good for Utah."

He said the scenic wonders of the state shouldn't be set aside for only the able-bodied, but should benefit all the people of the nation, "not just for the Sierra Club and some of the conservationists of the United States."

Therefore, new roads are desirable, he

believes.

Countering this view is the Sierra Club, which has a lively Uinta Chapter based in Salt Lake City. It calls the difficult and expensive job (estimates of \$2 million a mile for a two-lane road) through the canyon country "a boondoggle."

'Tragic Mistake'

"It would be a tragic mistake that may well destroy a great portion of Utah's magnificent wild canyon country, which is possibly its greatest asset," a Sierra spokesman said.

An anti-road speaker at a recent Sierra Club meeting at Canyonlands, said "the automobile does something to the country that walking doesn't do. That's why we object to the roads."

The noise, the frightening of wildlife, the introduction of man-oriented littering and pollution were cited.

"Visitors stay on the roads or within a few yards of them" Taylor countered, "Roads protect the nonroaded areas from the four-wheelers. If we don't provide roads, good roads, the people pressure will totally crush this fragile area."

To muster support for its position, the conservation group claims established communities would suffer because a new road would have tourists going elsewhere to spend money.

It recommends recognition of Lake Powell itself as a water highway, possibly with auto ferry service up and down the 186-mile-long reservoir. Also, existing roads could be improved, as probably would be the case anyway, although, according to Ken Sleight, prominent Utah river-runner and conservationist, the highway department seems more intent on building a new road than improving old ones.

Who Determines?

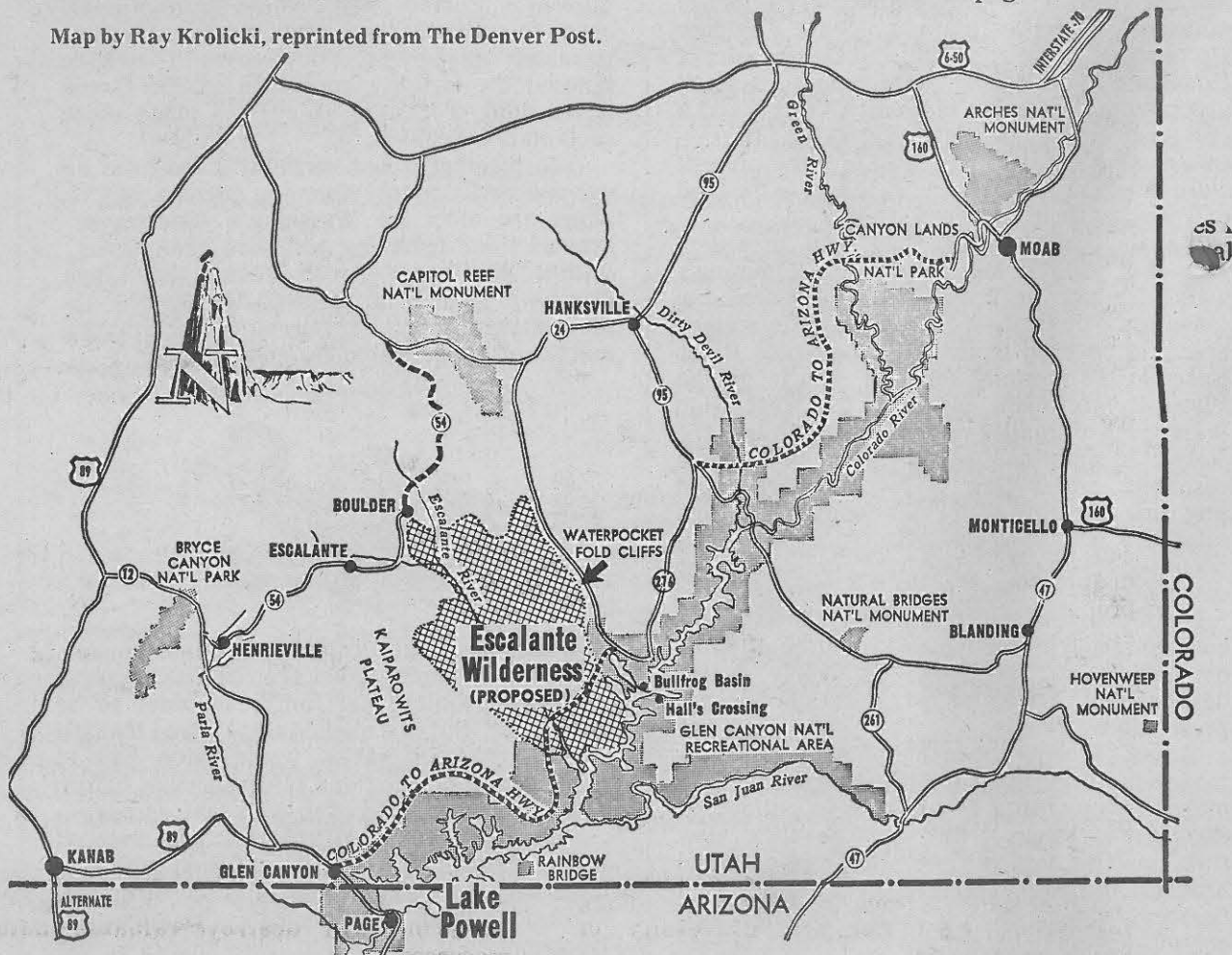
Cal Black, San Juan County commissioner, is concerned both about the highway and about federal agencies like the Bureau of Land Management and the National Park Service "making arbitrary decisions that aren't based on reason."

"We shouldn't favor recreation use over other uses to the exclusion of them," Black said, saying that the second-and-third-generation residents of southeast Utah should be able to manage the lands, not the outsiders. Hunting, livestock grazing and mining shouldn't be automatically curtailed, but put in relation with other factors — recreation and the livelihoods of area residents.

"It's more than a privilege to be here," Black said, "We've a right. We've lost 700,000 acres (to national parks and monuments) in the past few years. But we've lived in this magnificent country, we've loved it, and now we see people coming in and taking it away from us."

Jack McLellan, of Salt Lake City, a Sierra Club official, said his organization is "thinking of future generations, not just the present inhabitants of southeast Utah."

Map by Ray Krolicki, reprinted from The Denver Post.



"We want to hold open options for the future," he said. "That's our basic concern."

Robert Redd, of the Dugout Ranch on Indian Creek just north of the east portion of Canyonlands National Park, countered that "people will ruin any country if they're paid enough to do it. It seems the first step to progress and development is to force the local guy out."

Philosophies Vary

He said the California philosophy of "progress for profit" isn't the basis for local people wanting to keep the area open for other uses besides preservation of the area for tourism.

"Everyone can be a conservationist in a place where they're not," Taylor concluded, directing his remarks to Sierra Club members from outside the state.

It's obvious that local residents didn't like being told by outsiders, even those from Salt Lake City, what should be done with their back yard.

But the conservationists defended their interest, saying that the public domain belongs to all the people of the country, not just to citizens of Utah.

Referring to the new Sierra Club book, "Slickrock," which features the area and argues for its preservation without development, Taylor said, "I appreciate the fact we'll have more people here, thanks to publications like yours."

'No Padlock'

"It behooves us, all of us, to get together and figure out how to handle them. You aren't going to do it with a padlock," he said.

Other ranchers have one dominant outlook: They don't trust the government agencies — the Bureau of Land Management and the National Park Service.

While ranchers are being assured that grazing will be permitted within the areas of proposed expanded parks, monuments and the Escalante wilderness, the fact remains that a land administrator could decide, by regulation, to end or reduce grazing although the law allows it. That's the case now, but increased recreation use might force other curtailments, they fear.

Another aspect is that managing cattle, although still a horseback operation, depends considerably on using trucks. There's apprehension that restricting existing four-wheel drive trails would affect livestock operations.

"I'm wary of the National Park Service strategy," said a spokesman for the Western River Guides Association.

Battle in 1930's

The Utahan's concern isn't new. In the late 1930's the state had a running battle with the U. S. Department of Interior, especially the Park Service, over setting aside scenic lands as

(Continued on page 7)

Dilemma...

national monuments.

That proposal was for 6,968 square miles north of the Arizona line along the Colorado River from Colorado to Lee's Ferry. The Glen Canyon Dam didn't exist then.

Power, water, minerals and grazing lands were vital concerns for hardy Mormon settlers who inhabited the area. Later the proposal was reduced to 2,450 square miles along the river. But it wasn't until 1964 that Canyonlands National Park near Moab was created on 515 square miles. By then Glen Canyon had been built.

Today there's a proposal to enlarge Canyonlands by about 80,000 acres to 337,000 acres. Similar bills have passed both houses of Congress and are before a joint conference committee.

President Lyndon B. Johnson doubled the size of Arches National Monument. Congress is considering making it a park of 73,500 acres by deleting nearly 10,000 acres from the monument and making other boundary changes.

President Johnson also increased by proclamation the size of awesome Capitol Reef National Monument nearly five times. Along with the Arches and Canyonlands enlargements, there is legislation in process making it a national park with 242,500 acres.

Largest Proposal

By far the largest proposal is the Glen Canyon National Recreation Area of 1,285,310 acres, which is now more name than fact.

Senate Bill 27, sponsored by Sen. Frank Moss, D-Utah, would create the preserve on both sides of Lake Powell by law, replacing the current administrative designation.

Thus much of what was sought a generation ago in one piece is now nearing reality in Congress.

An Escalante Wilderness, devoutly sought by the national Sierra Club and the Wasatch Mountain Club of Salt Lake City, is only a proposal for 118,000 acres to be tacked onto the Glen Canyon Recreation Area bill for temporary protection.

The recreation area status has more management flexibility than the National Park System. It allows hunting, for example, where hunting in parks is forbidden.

Parks are to be established by acts of Congress. But a presidential proclamation can create a monument and enlarge it, as President Johnson did.

Housing Plans

State development officials have mentioned plans for prefabricated housing developments adjacent to Lake Powell, in conjunction with the influx of workers for the proposed Kaiparowits power plants and the strip coal mine operations

Noise Reduced

The din of highway traffic, shopping centers, and heavy industry can be substantially reduced when screened through properly located tree and shrub plantations.

This is the major finding detailed in a new bulletin published by the University of Nebraska in cooperation with the Forest Service, U. S. Department of Agriculture.

The 77-page report, "Trees and Shrubs for Noise Abatement" (Research Bulletin 246), is a technical account of the experiments conducted in a three-year noise study funded by the Forest Service. David I. Cook, Professor of Engineering Mechanics at the University of Nebraska, was assisted by Dr. David F. Van Haverbeke, Forest Service research scientist at the Lincoln, Neb., field office of the Rocky Mountain Forest and Range Experiment Station at Ft. Collins, Colo.

The two scientists say the report is designed to provide accurate, useful information which can be used by landscape architects, horticulturists, and nurserymen in determining proper placement, heights, and widths of tree and shrub belts. They point out that the information should assist in achieving the best noise filtering for parks, picnic areas, housing developments, etc., from highway and industrial sounds. They report that the continual increase in the community noise level during the past 20 years indicates a future noise problem comparable to the current air pollution problem of large industrial centers.

A limited number of the reports are available for 50 cents each from the Department of Information, East Campus, University of Nebraska, Lincoln.

necessary to sustain them.

The plant, relocated for aesthetic reasons from its original site, is northeast of Glen Canyon Dam on the west of the Kaiparowits Plateau, where the coal deposits are.

The labor force of several hundred workers, is expected to foster a population of several thousand in the area. Their recreation outlets will be aimed at the remote Escalante area as well as Lake Powell, state planners say.

The Huntington Canyon power plant, under construction, south of Price, Utah, and a coal mine, as well as other power-mine complexes in the Four Corners Area are expected to have great impact on southeast Utah because northern Arizona is mostly Navajo Indian Land.

Water Critical

Thus a major area of the region is off-limits to development without tribal approval.

"Water is critical," said Lee Kapaloski, environmental consultant to Utah Gov. Calvin Rampton. "Yet no one seems to be looking at it in discussions on the future of southeast Utah."

Other than water for power plant needs, the vital resource hasn't received the attention other environmental-economic factors have.

So the national spotlight, via Sierra Club and Audubon Society publications and the National Park Service, which is actively promoting increased visitors to "under-used" parks and monuments in the Southwest, is on the land Father Escalante skirted in 1776.

The view of Lt. Joseph Ives, commissioned by the government in the 1850's to explore the land west of the Colorado River, no longer prevails.

Ives predicted the area would be "forever unvisited."



Shooting Ended

Senate passage of a bill prohibiting the shooting of wildlife from aircraft was hailed by Senator Gaylord Nelson as "another short but important step along the path of intelligent environmental control."

The legislation, previously passed by the House of Representatives, is similar to legislation Nelson has introduced in this and previous Congresses.

The airplane hunting was dramatized in a television documentary, "The Wolfman," which pointed out that many hunters kill wolves in Alaska as sport, despite the fact that there are only about 5,000 of the animals left in that state and probably less than 800 left in the rest of the United States.

Under the bill, airborne hunting of wildlife or use of aircraft to harass wildlife are prohibited and a criminal penalty is provided for violations.

Where shooting from aircraft is necessary for protection of other wildlife, livestock, or human life, and for other limited purposes, the activity would be allowed if conducted by a person with a special Federal or state permit issued for that purpose.

Petition On Suit

The Idaho State Reclamation Association has petitioned the U. S. District Court to enter the lawsuit against the Lower Teton Dam as a "friend of the court." The association says it can inform the court of certain facts and legal matters which might otherwise escape the court's attention.

A suit to prevent the construction of the \$58 million Lower Teton Dam was filed Sept. 27 by conservation organizations and concerned individuals. A bid has been let by the Bureau of Reclamation to build the dam.

Conservationists contend that the dam is not economically justifiable, and that the resulting reservoir will destroy valuable natural resources.

As another explorer of a century ago, Capt. John N. Macomb, foiled at crossing the country, noted: "I can't conceive of a more worthless and impracticable region."

The question before the citizens of Utah and of the nation now might be: "Will our visions of the future of the region be any better?"

Just Thinking

The following comments are reprinted from "this ISSUE?", a newsletter published by a group dedicated to preserving Southern Utah's environment. The newsletter is edited by Lloyd Gordon, Box 728, Cedar City, Utah 84720.

We've been thinking about the highway from Glen Canyon City to Moab for quite a while, and we finally have a feeling about it. It has to do with the reasoning behind the decision to build it. The people who badly want it say it is justifiable on economic grounds. It will help the counties, they say.

After thinking about it, we decided that there were two parallel situations; Wayne County, which got a paved road from Richfield to Green River through Capitol Reef about ten years ago, and the road along the north shore of Lake Mead, from Henderson to Overton.

According to figures released by the Utah Foundation, population declined in Wayne County from 1728 in 1960 to 1483 in 1970. Simply building roads, then, does not build up a county, in spite of claims to the contrary.

We haven't found figures on the Lake Mead road yet, but we've seen it. On an airplane flight over it one morning last week, I counted two automobiles on the length of that road—though I must confess I could have missed a couple. There is precious little business activity to be found on that road either from the air or from the ground.

If we remember correctly, it's going to cost 70 million to build the road, and a quarter million a year to maintain it. That's seventy dollars per capita for Utah residents for construction.

If any other department of government sponsored projects of that magnitude, they would have to have pretty good justification. Highway builders seem exempt from that economic necessity, however. Seems like if they want a road, they have access to the public treasury without having to explain why they should get the tax money.

Some kind of assistance to depressed counties is in order, but spending 70 million on that road seems a bit much, when so little benefit will result to those who need it most.



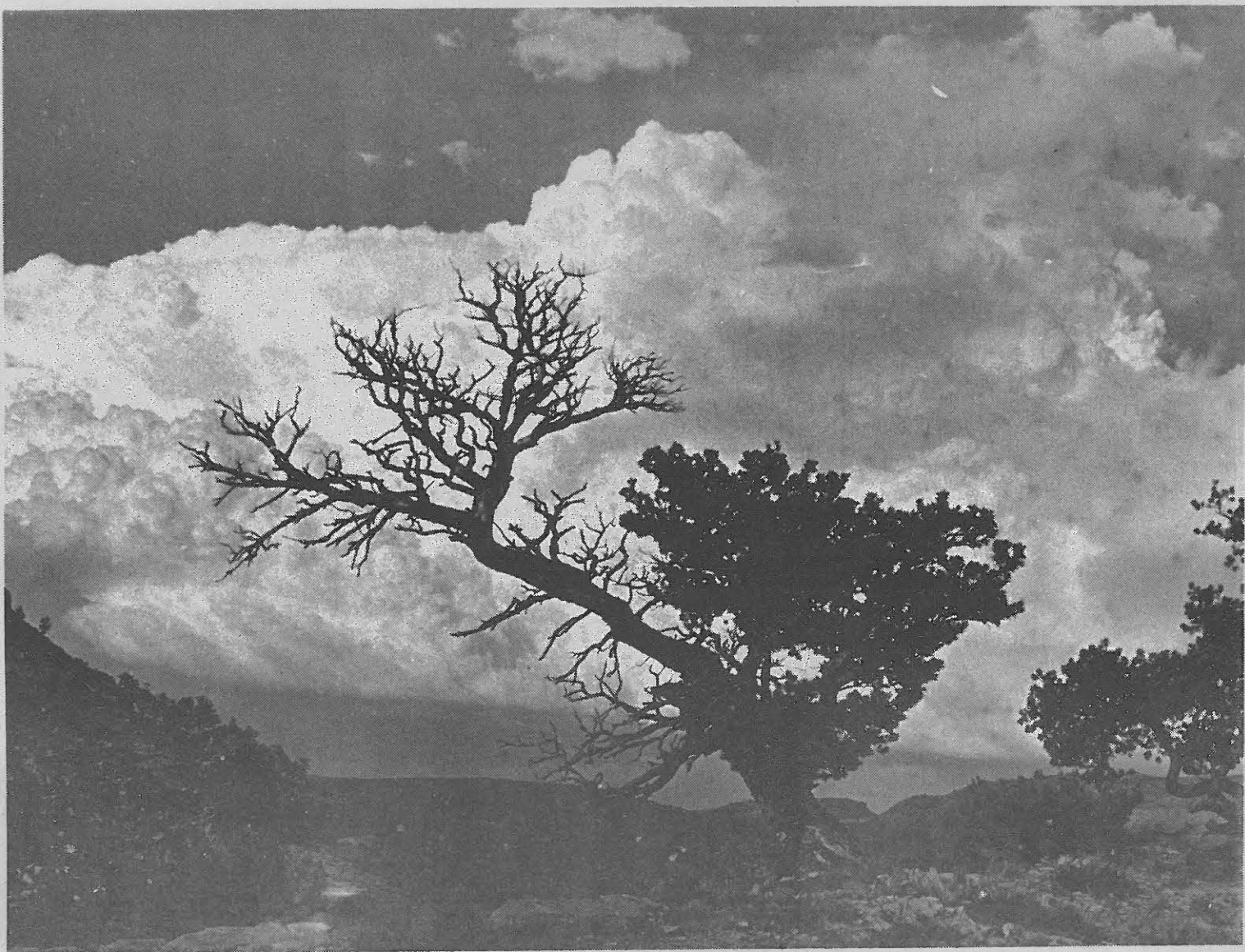
Leopold To Speak

Dr. Luna Leopold, nationally and internationally known water scientist, will be featured speaker at Wyoming's Third Environmental Congress to be held in May. The announcement was made following a meeting of the board of directors of the Wyoming Outdoor Coordinating Council at Thermopolis where the Congress will be held.

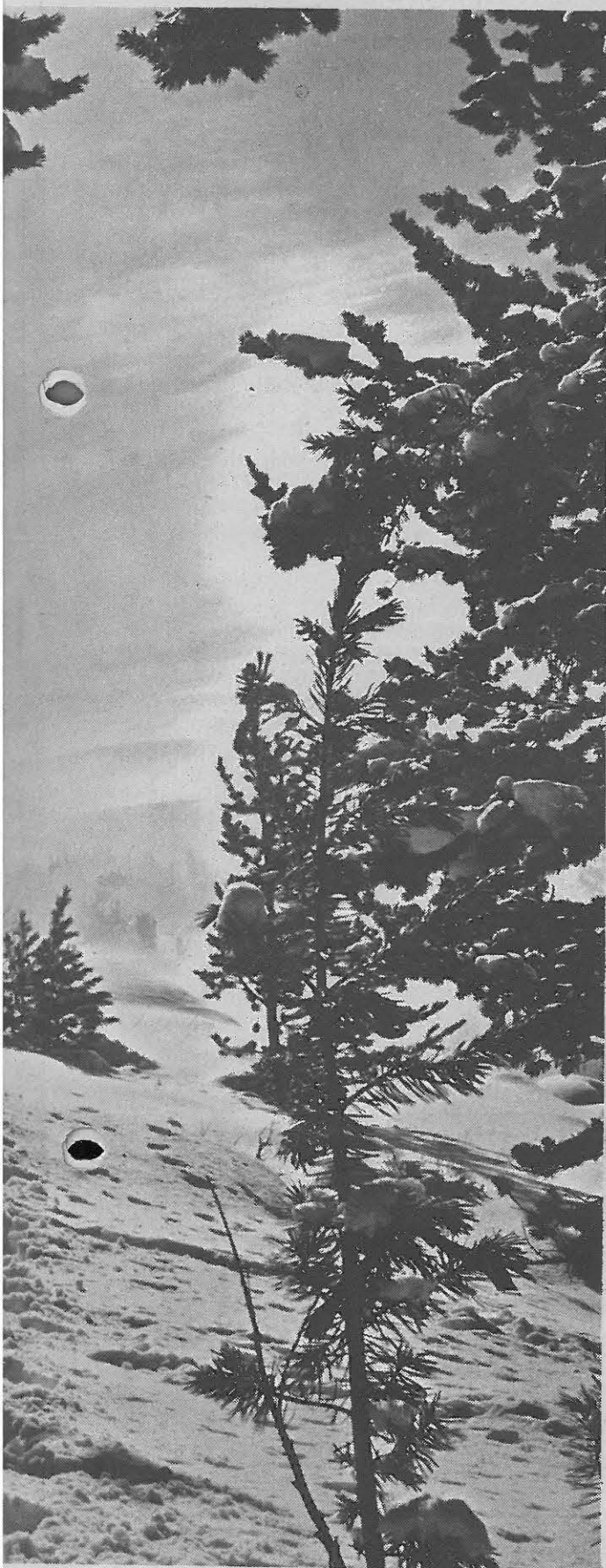
Leopold will participate in the day-long program, speaking on the objectives of water planning. He will also be featured banquet speaker at the evening ceremonies.

The Congress is sponsored by the Wyoming Outdoor Coordinating Council and its participating organizations. These include the Wyoming Division of the Izaak Walton League, the Wyoming Chapters of the Audubon Society, the Wyoming Wildlife Federation, the League of Women Voters, the Wyoming members of the Sierra Club, Jackson Hole ENACT, the University of Wyoming ENACT, and others.

SILHOUETTES



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The Shortest Distance?

by Sylvia Harrell

The road east of Pierce stretches out as a narrow ribbon of pavement into the Clearwater National Forest. A carved wood sign beside it says: Missoula 110 miles.

Could this be another main highway route from North Central Idaho into Western Montana? Should it be?

The subject is one of earnest discussion among Clearwater National Forest officials.

Snowfall will close the route again this winter east of Pierce. The U.S. Forest Service doesn't maintain its forest roads as all-weather routes for through traffic.

In summer, the road—which actually leads to Superior, Mont., not Missoula—is seeing increasing use.

The Lewis & Clark Highway—U.S. Highway 12—is a breathtakingly scenic route as it winds along the Lochsa River canyon and then up across Lolo Pass and into Montana. But as a fast, direct route from point A to point B it doesn't fill the bill, and probably never should.

Already truck traffic along the Lewis & Clark is reaching the point of aggravation. Motorists would rather look at the scenery than dusty rear of a highway transport they cannot pass because of the many curves along the narrow highway.

Grain Haulway

With the arrival of slack-water little more than three years hence and the development of ports at Lewiston and Clarkston, there is talk of vast shipments of grain pouring out of Western Montana for loading on barges at the terminus of navigation.

Reports have been filtering across the Bitterroots to the Lewiston-Clarkston Valley that a fleet of 500 trucks is being assembled by Montana wheat growers for grain transport across the mountains to lower-cost barge transportation.

The Lewis & Clark Highway wasn't designed for high-speed travel of heavy motor transports. Already with the increasing volume of truck traffic, truck accidents are occurring.

There may be real pressure to improve U. S. Highway 12.

But the Lochsa and the Middle Fork of the Clearwater River into which it flows have been designated as part of the National Wild and Scenic Rivers System. Such highway upgrading could be incompatible with the environmental protection afforded by wild rivers legislation.

Even if such "improvement" were not vetoed at official levels, would it not destroy the very concept of the scenic river route which by its narrowness, its lack of spare gigantism which marks most modern highways, provides an intimacy with the trees, the rocks, the water along more than 100 miles of forest land unspoiled by commercial signs?

Shorter Route

Would the Pierce-Superior route, then, afford an alternate to this dilemma if more travel space is needed for trucks and other traffic?

Jerome B. Knaebel of Orofino, Clearwater National Forest engineer, expresses the general viewpoint of forest officials:

"Already there is some talk of an alternate to U. S. Highway 12," he said recently.

"The Pierce-Superior road is a logical alternate. But whether we want it to be or whether it should be, is the question."

Knaebel noted that although both east and west ends are paved, and get a substantial amount of traffic, stretches of the mid-section are typical one-lane forest road with turnouts. "This is an area used principally as a wilderness," he added.

"There is a real question," he continued. "If we upgrade one end, this generates more traffic demand on the middle."

As a result of this quandary, the Clearwater National Forest has stopped all engineering work designed to improve segments of the Pierce-Superior road.

Instead, it has turned to gathering background data.

"Without looking at the route as a whole, we are building a box," Knaebel commented.

"What are the effects of the tributary road system? What about the new Grandad Creek Bridge across the North Fork of the Clearwater and the traffic across it from the Moscow area to Headquarters?"

"What part does this route play in the transportation system, in the Clearwater National Forest?"

"How does the public feel? What role does the public wish this road to serve? We invite public

comment. There is need to get this into a decision-making process."

Meanwhile, the Forest Service has under way an in-depth study of such factors as natural resources, land stability, present traffic and projected future traffic.

Analyze Data

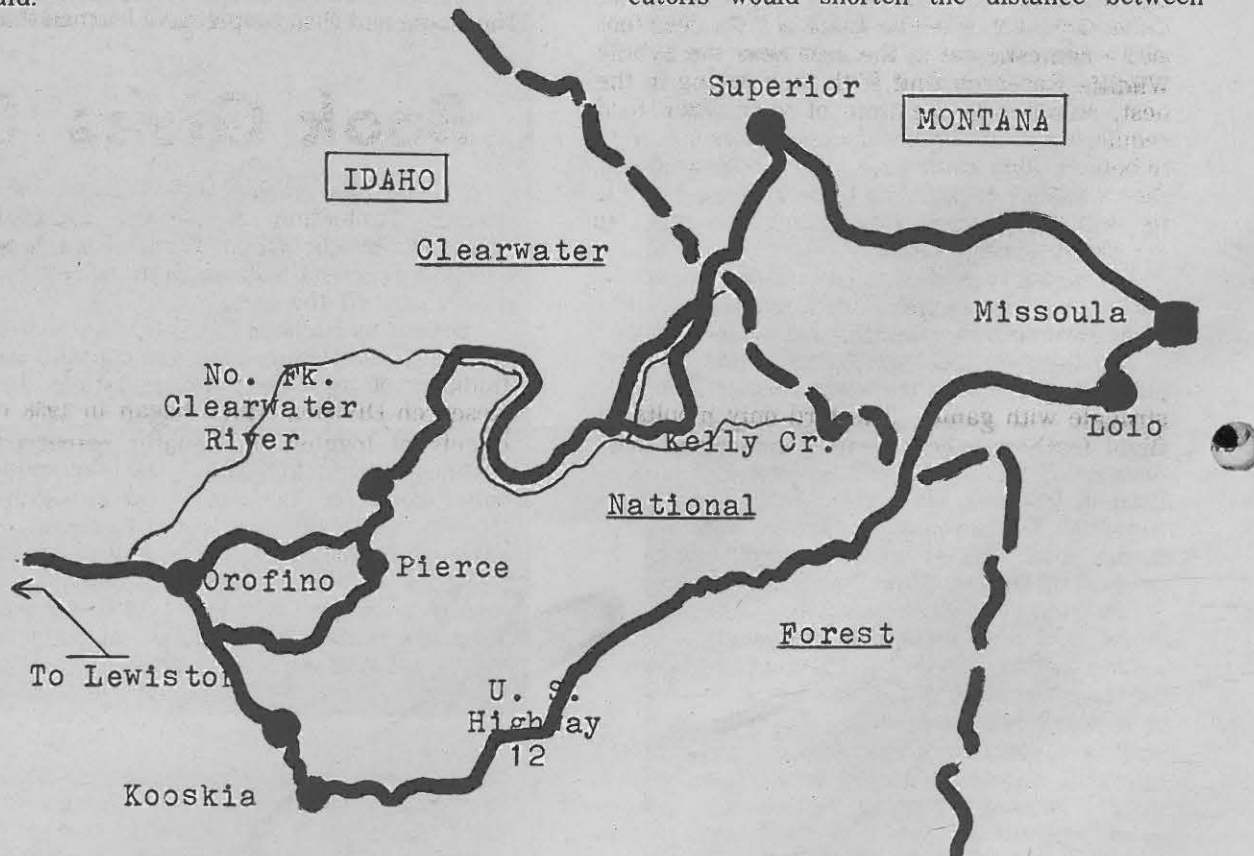
This winter the Forest Service staff at Orofino will work on an analysis of the facts gathered over the months.

"This will establish, first, whether there is a need and second, whether the land can stand the imposition of a higher standard road," Knaebel explained. "There are some indicators that we should make an analysis whether we upgrade it or whether we leave it as a low-standard road."

Despite the pavement on the east end and the paved section extending 7.2 miles east of Pierce, none of the road meets current secondary road standards. From a highway standpoint, the worst section is from Kelly Fork to The Cedars. It still is in its CCC-days condition.

Knaebel isn't as opposed to paving forest roads as some environmental purists who argue that pavement is not compatible with a forest environment.

"I say pavement is more compatible than dust or mud and the destruction of water quality that comes with a well-used unpaved road," he said.



Construction of a paved road is more economical, both in terms of money and in destruction of nearby terrain as less rock depth is required and there is a smaller prism of roadbed, he added. "It's not much, if any, costlier to build and far less costly to maintain. You can spend \$30,000 in just two months for dust abatement such as we did by sprinkling water on 24 miles of the Beaver Creek road."

"We are not so concerned with highway alignment as state highway departments," Knaebel continued. "We try to fit our roads to the land. Ours are designed to speeds of 35 to 40 miles an hour whereas most state highways are designed for 60 to 70 miles per hour."

"If you build a road that destroys the forest environment, you destroy your objectives."

Too Slow

But travelers and truckers seeking a through route won't be content to travel at 35 to 40 miles an hour. They can travel faster than that on many stretches of the Lewis & Clark Highway. So the Forest Service has some deep concern about what should be done to the Pierce-Superior road, if anything.

Snow avalanches are a problem on the route. Two of them—one 150 feet deep—closed the road to through traffic until late last summer. The road through Black Canyon from Kelly Forks to The Cedars has a history of snow slides.

Should the entire route be improved to secondary standards, which call for a 28-foot wide roadbed? (The paved section from Pierce east is 24 feet wide and old portions of U. S. 95 between Slate Creek and Whitebird in the Salmon River Canyon are only 20 feet wide.)

Or should any improvement be minimal and leave the mid-section as one-lane forest road?

Right now, the highest traffic on the Idaho side is between Pierce and Bungalow. From there the traffic splits. One portion goes to Kelly Creek, the other portion along the river toward Canyon Ranger Station. The traffic splits again at Kelly Forks.

Alternates

One possibility might be a one-way loop, with traffic going one way along the North Fork to The Cedars, the other way over Deception Saddle and along Kelly Creek with a two-way road maintained between The Cedars and Superior.

Another possibility which has been discussed is an entirely new cutoff. It could link a portion of the Pierce-Superior route via Kelly Creek with Lolo Hot Springs on the Lewis & Clark Highway.

Included in that concept is the new Grangemont cutoff, the do-it-yourself route to link Orofino through Grangemont to Hollywood, a point between Headquarters and Pierce on State Highway 11 which cuts the distance between Lewiston and Pierce.

"If you were to lay a straight-edge on a map between Lolo Hot Springs and Lewiston, you'd find that route wouldn't vary more than six or eight miles from the straight line," said Knaebel. He noted U. S. Highway 12 makes a deep swing to the south.

Together, the Grangemont and Kelly Creek cutoffs would shorten the distance between

Missoula and Lewiston by 35 miles.

But even as the forest engineer discussed it, he was marshaling arguments against the Kelly Creek cutoff.

"It presents some real problems," said Knaebel. "Even if they can be surmounted, there are some real constraints against constructing such a road."

For one thing, he said, such a highway would require a mile of tunnel under a sharp, high ridge known as the Cache Creek Saddle.

For another, he added, "the Kelly Creek drainage is magnificent country. There is a real question of ethics on whether a highway should be constructed through it." Knaebel indicated he personally has real doubts that such a highway would be compatible with that rugged forest land.

Without the cutoff, the Pierce-Superior road still exists as a possible alternate east-west through route. But should it be so designated? The Clearwater National Forest at Orofino would like to hear from its public.

Use Questioned

A question of the feasibility of using water to concentrate human populations has been raised in regard to the Central Utah Project. Project proponents say the water is an absolute necessity if the needs of an expected one million people in the Salt Lake Valley are to be met.

Others have raised the question as to whether it is "wise planning" to triple the present population. They say the deliberate planning to concentrate that many people will lead to increased air and water pollution, sewage and garbage disposal, less open space and other environmental considerations.

Observations on Eagles, Sheep

The following letter is self-explanatory. Some interesting observations are made concerning the eagle and sheep. It is presented herewith for the information of our readers.

Dear Fellow Citizens,

I have had access to some information on the subject of eagles versus sheep which I feel should be shared with you. I've pondered and debated this for a long time and I believe the logic is fairly well sorted out. This will not be cold scientific "truth" but may help to illuminate a mighty shady subject.

For the past twelve years including four years I spent in college in Laramie, I have been interested in falconry. While at the University of Wyoming, I met David Current who had two golden eagles which were taken prior to their protection in 1961. Much of the following deals with what we learned from working with those two birds.

Despite the large appearance of the eagle, it is surprisingly light-weight. Dave's male weighed nine pounds and his female thirteen pounds. It is normal for a female to be that much heavier, and we felt that these were average eagles. To help keep this in focus, a white-tailed jack-rabbit weighs about seven pounds.

For the last ten years, Dave has observed about 20 eagle nests yearly in the Laramie Valley and has this to report: Overwhelmingly, the food remains at the nest sites have been rabbits and prairie dogs. The single exception, Dave says, was when he found a fawn deer foot and a domestic cat in the nest near the Sybille Wildlife Research Unit. With their young in the nest, summer is the time of year when food requirements are highest for the eagles. It is hard to believe that if the eagles were killing sheep, they wouldn't bring some part of them back to the nest. At several of these nest sites you can see sheep grazing below.

We began to ponder this question, why is the golden eagle so large? Has it evolved to take large game or is there another reason for the size?

One thing we had learned from hunting with hawks is that it is to the hawks' disadvantage to struggle with game. The bird only moults its flight feathers once a year (and eagles don't even moult that often). If it breaks very many of them in between, its ability to fly is seriously impaired. We have, in fact, found several hawks in the wild, wandering around unable to fly because of broken flight feathers.

We finally decided that winter is probably the prime factor in influencing an eagle's size. Golden eagles winter in Wyoming, and around Laramie I've seen 34 degrees below zero with a 20 to 30 mile per hour wind. On that day, or at least on several days immediately previous and following, the eagle has to knock over a jack rabbit without wasting too much energy struggling with it. And it has to dissect and eat most of the rabbit before it freezes.

Now for the sake of an old Wyoming folk tale, imagine if you will a thirteen pound eagle wrestling with a (and I'll be modest but remember this is on the hoof) 90 pound antelope in that kind of cold. Let's say he finally kills it and eats a full crop. The antelope freezes leaving the eagle to repeat the process the next day. If you understand me, this is a joke—this is preposterous, even impossible.

Dave has observed that nearly every year some smaller eagles hatch out and yet the size of the average adult eagle stays the same. Several bitterly cold days every few years takes care of the smaller eagles. In other words the golden eagle may just barely be big enough to survive.

Last fall I got a job guiding hunters on the Upper Hoback around the south side of Hoback Peak, an area where sheep were pastured last summer. At the time I didn't know what dead sheep smell like. (It's a heavy, musty smell with about as much rancid fat as dead animal in it.) I couldn't imagine what it was and finally decided that I must be near a bear. I couldn't seem to locate it. This happened several times until one day, hot after a bugling bull elk we stopped in some trees and I found a sheep carcass under the brush. I examined it and was surprised to find that it hadn't been eaten on. It wasn't killed, it died and was hidden.

One of the herders told us this spring that last fall they left about sixty head in the Grizzly Creek area of the Upper Hoback. I've talked to residents in the Bondurant area and they say that it's not uncommon at all to find sheep in the hills after the sheepmen have gone.

So it appears that sheep have found more ways to die than being eaten by eagles. The country I am talking about is big, it's heavily

timbered and steep. Accidents, sickness and lost sheep are bound to occur and I can understand it. But let's call a spade by it's name. Did you see any categories for disease loss or sheep left in the hills in the astronomical totals that the sheepmen claim to have lost last year?

This past spring I had some personal experience with young lambs and came to realize how small they actually are.

Let's consider on paper, making the range safe for a young lamb standing about 18 inches tall and weighing, (I'm guessing) 6 to 8 pounds. He's not one heck of a lot larger than our jack rabbit. To be absolutely sure, we have to figure out all of the creatures that might possibly kill our lamb and get to them first. Or so some minds in Wyoming evidently think.

There are problems. One is that of evolution. Evolution works like this. Wherever potential of various sorts occurs, various things try to take advantage of it. When the range from Canada to Mexico is full of critters that are nearly the same size (lambs, calves, jack rabbit, etc.), a vast food potential exists. Since most of these animals are under no, or very loose, surveillance by man, it's asking a lot to let Mother Nature decide which are wild (i. e. free for the taking) and which are domestic (i. e. cost you your life). It is not a problem that can be solved by getting rid of a species that is trying to utilize that food supply because something will always take its place and some things are harder to kill than eagles.

Another problem is that of natural controls. The Game and Fish people have learned that it's

not wise to be too gentle with the game herd. If none or very few of the weaker animals survive there is less chance for disease to become widespread. This is not exactly in line with the policies of the rancher who likes to keep every animal alive that he can. I am sure you can see that the problem runs a little deeper than shoving one bunch of animals aside so we can put some others in their place.

So, we've seen the crime, we've heard evidence from all sides, but where, oh where is that spooky old criminal?

He's probably a hell of a nice guy who works hard for a living. Labor costs him a lot, machines cost him a lot, and he has to cut corners where he can just like all businessmen. Whether he justifies himself in terms of the impact he has on the land or not may be a hard question to answer. Or maybe he's a large operator who is used to getting what he wants whether it's from the Governor or the Game and Fish or local legislators and law enforcement people or whoever.

I'm not saying that eagles can't or don't kill sheep but the wool is not so far over my eyes that I can't see some mighty big discrepancies. Either somebody's not telling all they know, or they are telling all they know and they don't know much of anything.

Hoping a better solution can be found,

Eugene A. Linn
Wilson, Wyoming.

Book Gives Guides For Logging

A little blue booklet titled "Guidelines for Stream Protection in Logging Operations" published by the Game Commission late this summer received wide acclaim almost as soon as it came off the press.

Written by Richard L. Lantz, fishery scientist for the Game Commission, the contents include findings of long-term investigations by the Research Division which began in 1958 of the effects of logging on aquatic resources and outlines a practical basis for the management of watersheds for the continued production of timber, fish, and high quality water. The Commission's Research Division, under the direction of Dr. John Rayner, continues to investigate this problem in several watersheds to learn new facts and to refine existing knowledge.

Lantz prefaces his remarks with the reminder that timber and fish have flourished in the Pacific Northwest since pioneer days. Legends grew up around the colorful individuals who made up the backbone of each trade. Today the timber industry and the commercial and sport fisheries are still vitally important to the economy of the state. Conflicts between trees and fish arise because the two resources share the same watersheds.

The main thrust of the bulletin is that forestry and fishery management need not conflict. By protecting streamside vegetation and minimizing sources of sedimentation through careful planning, these resources can be produced at the same time in the same watersheds for the benefit of man.

Lantz outlines the requirements of salmon, steelhead, and trout and points out the vital importance of small streams and creeks, many of which may be intermittent or dry in summer, in the production of salmonids. In many cases these small tributaries provide most of the spawning gravel for migratory fish runs.



The research scientist emphasizes -- as has been pointed out many times in the past -- that most salmon, steelhead, and trout production comes from nature. Since the spawning gravel for an entire watershed often occurs in extremely small headwater streams or in a few restricted areas, such gravel possesses a high dollar value in terms of fish produced.

He cites two examples. The first relates to fall chinook in Battle Creek, California, which spawn in only a 4.5-mile section of stream. Chinooks produced here have a value to the sport and commercial fisheries of \$350,000 annually per acre of spawning gravel. The second relates

to the sockeye runs in the Fraser River, British Columbia, where most of the spawning occurs in about 300 acres of spawning gravel. With the commercial catch valued at as high as 50 million dollars annually, each acre of gravel is capable of producing salmon valued at more than \$160,000. Such dollar value points out the fact that few, if any, land uses produce as high a per-acre yield as that produced by the limited acres of spawning gravel in Oregon as well as other salmon, steelhead, and trout rivers of the Pacific Coast.

Hatcheries, Lantz advises, supplement natural production and play an important role in fishery management. However, hatcheries have not replaced natural production. Furthermore, maintaining hatcheries involves high costs that are not present when these fish spawn and rear under natural conditions. What Lantz is saying is that nature provides the bulk of our fish resources for free, the same as she provides most other natural resources. He concludes that the future of Oregon's salmon, steelhead, and trout resources depends on how our streams are protected.

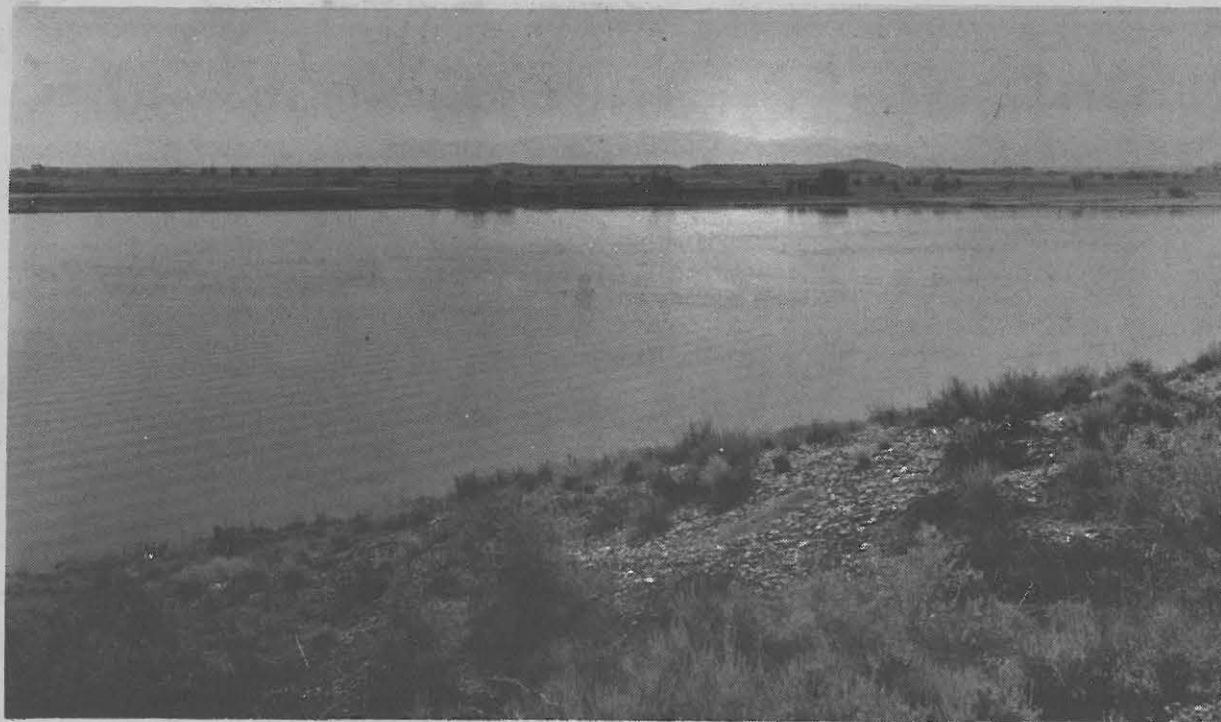
Lantz discusses the effects of logging operations on fish and water quality in the Douglas fir regions of the state. He points out that physical changes in streams caused by logging can be avoided by keeping streamside vegetation intact and taking precautions to minimize soil disturbances and erosion.

He discusses surface dissolved oxygen levels in relation to logging debris; subgravel dissolved oxygen in relation to yarding and falling; streamside vegetation in relation to water temperatures; stream sedimentation in relation to fish, their habitat, and food; and logging road location, design, construction, and maintenance.

Lantz recommends four main points to protect fish habitat and water quality in logging operations and elaborates on each. These include stream clearance requirements and enforcement; the protection of streamside vegetation in all logging operations where fish, wildlife, and water quality are involved or can be affected in downstream areas; harmful effects of falling trees into or across streams; and the detrimental effects of yarding through streams.

Can our forest watersheds be managed to provide wood products as well as fish for commercial fishermen and a growing number of sport fishermen, Lantz asks? He then answers his own question by saying -- yes. Yes, if both resources are considered in planning and the plans are fully implemented on the ground.

Lantz describes how specific water quality changes are related to specific logging practices. Once these relationships are understood, he advises, information can be applied during the planning states of any logging show so that detrimental changes to streams can be avoided. And in the planning, emphasis must be placed on prevention of physical changes to streams rather than on rehabilitation after the damage is done.



The natural phenomenon of water turnover takes place each spring and fall in such bodies of water as Ocean Lake in central Wyoming. The turnover not only aerates the lake from top to bottom but disperses chemicals in solution such as fertilizers. Too much fertilizer increases the eutrophication, or aging, of the lake.

A Conservationist Comments on the System

by Gerald A. Jayne
President, Idaho Environmental Council

A public hearing on a major conservation issue is a game which only those with adequate interest, money, and time can play first-hand. Those who do play feel compelled to do so, recognizing both the short-comings and the advantages; even more curious, they were probably the ones who felt compelled to request the public hearing in the first place.

Since two of the major national conservation issues involve Idaho, Hells Canyon and the Sawtooth-White Clouds, Idahoans have a great deal of interest in congressional hearings on those topics. So far, most of these hearings have been held in Washington, D. C. Typically, it costs \$300 to \$400 and two to four days off work to send a participant back there from Idaho.

There are few individuals who pay their own way back; industry pays the way of their representatives and consultants and conservation organizations that of their representatives. The expense obviously tends to keep down the number of witnesses from Idaho, particularly from the latter category. Those representing the latter generally find, in addition, that it is necessary to take vacation or time off without pay for the necessary two to four days.

Such a hearing, even if it is held in Washington, D. C. rather than in the field, does serve a function. It calls public attention to the issue, gains the ear of some of those on the congressional committee holding the hearing and furnishes them information of both a descriptive and a political nature, and it points up some of the ramifications of the issue, sometimes clarifying them. It represents a valuable vestige of a former democracy when our society was smaller and simpler, and one would hate to see it discarded in spite of its weaknesses: the lineup of witnesses does depend largely on the resources of the various interests and organizations involved; U. S. senators are extremely busy men and most of those on the committee will not even be able to attend the hearing; and of course there is plenty of room for political maneuvering which effects the lineup, the content of the statements, and the responses to cross-examination.

The hearing on the Hells Canyon - Snake National River bill, S. 717 by Senator Packwood of Oregon and 25 other co-sponsors, held September 16 and 17 (and to be concluded on Sept. 30), exemplifies some of the above comments. It was a major hearing, involved much controversy, and saw some maneuvering which did little to inspire confidence, at least among conservationists, in the continued future of the public congressional hearing as a vehicle for expressing public opinion.

It was held by the Parks and Recreation subcommittee of the Senate Committee on Interior and Insular Affairs, chaired by Sen. Alan Bible, chairman of that subcommittee of 10 members. Senators Jordan and Packwood, neither on the subcommittee, were granted permission by Bible to sit in. During the two days of the hearing, Senators Bible, Church, Jordan, and Packwood were present most of the time. Senator Hatfield (Ore.) much of the time, and Senators Hansen (Wyo.), Anderson (N. M.), and Fannin (Ariz.) a little of the time. This is

fairly typical; at any given time during such a hearing, there are usually two to four senators present, and frequently only one.

After Senators Jordan and Packwood presented diametrically opposed opening statements on the National River Bill, and after Senators Jordan, Bible, and Church questioned Senator Packwood, it became obvious that (1) Packwood is not a member of the same "club" which those three belong to, and (2) his bill was in for some tough going. As the witnesses appeared, those opposed to the National River Bill slightly outnumbering those who supported it, the topic of reclamation in Southern Idaho began to receive about as much comment as did Hells Canyon.

Although Senator Packwood did question some witnesses, it was, by and large, Senator Jordan's show. He questioned Dr. Robert Lee, director of the Idaho Water Resource Board, who gave him favorable responses for over half an hour. Most of us were limited to five minutes each, due to the large number of witnesses. (\$300 and three days of vacation for five minutes -- an expensive game.)

When ex-Commissioner of Reclamation Floyd Dominy presented a vigorous statement about the virtues of damming the Middle Snake immediately, we marveled and someone suggested privately that his views on rivers should somehow be embodied in a Smithsonian of Attitudes.

When Douglas Hofe, director of the Bureau of Outdoor Recreation, got up, most of us present probably expected to hear a word of support from a friend. Wrong. He supported the moratorium, opposed the National River Bill, and introduced Ellis Armstrong, present commissioner of Reclamation, who did likewise. Senator Jordan then called up H. T. Nelson, retiring director of Region 1, Bureau of Reclamation, who happened to be sitting in the front row just behind Mr. Armstrong, with a roll of illustrative charts in his hands, which he used to go into more detail on the matter of future reclamation in Southern Idaho. He and Armstrong used this as a basis for opposing the National River. And as is often the case, conservationists couldn't say who was more frustrating -- anti-conservation politicians or anti-conservation bureaucrats.

Further examples of political pressures brought to bear: the Environmental Protection Agency has been interested in the Hells Canyon issue for some time, and a statement by EPA was anticipated. However, pressure applied to the Council on Environmental Quality was apparently transmitted to EPA and was adequate to quash their statement, which was conspicuously absent.

Chief Ed Cliff, representing the Forest Service, supported the moratorium but opposed the National River Bill, even though the Forest Service is on record as opposing any more dams in Hells Canyon.

When, in response to questioning, Arthur Godfrey made the admittedly extreme comment that he would like to remove all dams, each senator present had trouble restraining himself until his turn to ask Godfrey questions. It has not traditionally been wise to bad-mouth dams in general to Western senators, who do after all comprise not only the subcommittee on Parks

It's Turnover Time

In the lakes, ponds and reservoirs around Wyoming it's turnover time. Not cherry or apple but water turnover. Twice a year, because of a peculiar property of water, the liquid in a lake will make a complete reversal. That is, the water at the top will sink to the bottom which will push the deeper water to the surface.

Water is heaviest at four degrees centigrade or 39 degrees Fahrenheit. When the surface waters cool to that temperature each autumn, they sink. The water pushed to the top will eventually reach four degrees and, for a little while, all of the lake's water will be at the same temperature.

In the winter, the surface of the impoundment will freeze and register zero degrees. So, actually, the water at the bottom of the lake is warmer than the surface water. In the spring there will be a reversal of this process and another turnover.

These turnovers are valuable because they circulate important minerals and oxygen into parts of the lake where they have been absent. A fisherman's time would be well spent angling in a lake or impoundment at this time of the year. Unencumbered by physical restrictions such as oxygen low areas, the fish are likely to be found throughout the lake.

and Recreation, but also the full committee on Interior and Insular Affairs. Of the 17 senators on the full committee, the only one not from the west is Sen. Gaylord Nelson of Wisconsin.

All of the 17 Western states and Alaska, which area represents the domain of the Bureau of Reclamation, have one senator on the committee except California, Texas, Kansas, and Nebraska; and Alaska and Idaho have two each.

It is not so surprising that the committee is made up of Westerners since most of their business does involve Western federal lands; however, the composition does perhaps shed some light on why the Bureau of Reclamation has been so powerful and so successful in obtaining authorization and funding for its projects.

The bureau was certainly in evidence at the National River bill hearing, and the emotionally-charged issue of water for irrigation was a pervading theme.

My own belief is that the claim about the National River Bill precluding upstream irrigation development is largely a red herring; that Senator Church is using it as a reason to not support the National River Bill because he and Senator Packwood are not on the best of terms; that Senator Jordan is using it to frighten the people who depend on irrigation for a livelihood and to avoid discussing his life-long dream of a reclamation dam in Hells Canyon with pump-back to irrigate Southwest Idaho -- a plan which is not now greeted with enthusiasm by most Idahoans.

The proposal for an increased minimum flow below Hells Canyon Dam is certainly relevant to the consideration of upstream irrigation development, but it is an issue separate from the National River bill issue. It has already come up, and will come up again, regardless of what designation we give or do not give the incomparable Hells Canyon area.

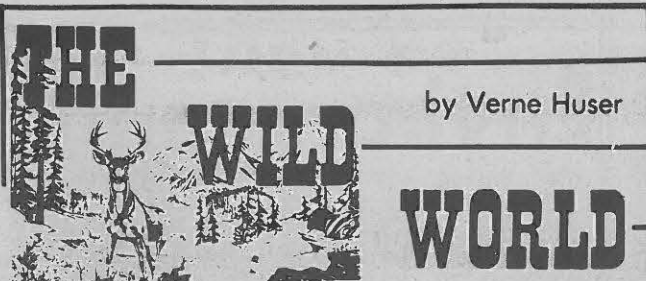
Principle...

Governor's office. Since that study is coming into its ninth month, there seems to have been quite a silence on the part of that office. How come?

Paul Westedt of the Wyoming Recreation Commission announced that a stretch of the Upper Sweetwater River has been proposed as an addition to the national system of wild and scenic rivers.

One comment heard at the meeting was that the amount of food consumed per person should increase significantly by 1980. (Another example of wants over needs, and gross over-consumption.)

The conference was quite an experience for this observer. It's the kind of experience that more people should encounter. If Wyoming people are truly interested in their water, they should be actively participating in the association. The Wyoming delegation to the national convention in Dallas has a special appointment with the Bureau of Reclamation to talk over Wyoming projects. Shouldn't there be more than ranchers and industrialists doing the talking? We need to get into the action.



by Verne Huser

It was the day of the big game in Seattle, the University of Washington hosting Stanford, but we headed for the hills, northeast into the North Cascades: Snohomish, Granite Galls, past Mt. Pilchuck up the Stillaguamish, past Big Four Mountain—I felt as though we were in the Alps just under the Eiger.

Autumn lay on the land, but last year's snow still filled the shadowy declivities. Vine maple caught the sunlight and burst into flame against the rich ribs of cedar bark. Bright yellows, subtle mauves, burnt orange and brilliant reds flashed by in open country, but in the deeper woods only sifted beams broke the forest gloom to catch a falling leaf, twisting slowly, silently to the moist earth already clothed in moss and fern and mushroom.

Over the pass we dropped down through giant forests of red cedar and Douglas fir to the Sauk River, a tributary of the Skagit, which cuts North Cascades National Park in two. It is the upper Skagit that is dammed to form Ross Lake, that part of the North Cascade Complex sacrificed as Ross Lake National Recreation Area—but more of that later.

At a bend in the road, a hair-pin turn, a tiny lake reflected autumn-colored leaves, and stopping to flick a camera shutter, we discovered a water ouzel. It was out of place—it seemed—in this quiet pond, shattering the mirror surface of the dark lake in its quest for insects. Ripe blueberries grew in the deep shade of the tall conifers, big fat berries that had failed to sweeten for lack of sun—they looked so good but tasted so flat.

A dozen different mushrooms in as many patterns and hues grew on the forest floor, damp and cool, green with mosses and lichen, soggy with decaying wood, thick with Devil's Club. And again a ray of sunlight highlighting a falling leaf, twirling downward in a dizzy pattern to lightly ripple the surface of the reflection pool.

The turn-off to Meadow Mountain climbs abruptly, an old logging road that scars the land and seems not to have been re-worked this year. Slides and boulders nearly block the road in spots, and the road itself has slipped in places, the shoulder—that few inches of unstable earth—cracked and ready to prove the law of gravity. Steep country and tall trees and distant vistas—Glacier Peak directly east, the late afternoon sun shining on its snow-covered glacier-carved flanks—magnificent.

At the dead-end of the frightening road, we park the bus and taking along only cameras and jackets, we begin hiking the switch-back trail up through the dense woods, the trees almost all growing upward from a slight bend where the heavy winter snow had laid them flat when they were still small. Presently we break out into an opening and are momentarily blinded by the light on the vivid autumn colors of the low vegetation—the plants again seem on fire, seem to exude their own light.

We're too low for treeline, but these trees are sub-alpine fir, scattered in clumps here and there along the mostly-open hillside, sharply contrasting with the deciduous shrubbery in their dark coniferous green. We move slowly upward toward the saddle, bemused by the beauty that surrounds us. And at the saddle we pause, climb a slight ridge to the north and see the Pickett Range (can it be?), sharp as the Teton, even sharper in the fading light of early dusk, pink light sweeping the distance away and choking us with the splendor of the view.

Ridge after ridge after ridge of forested mountains and in that transparent distance, the rock and ice and snow of mighty peaks beggars the imagination. Glacier Peak lies out of sight somewhere to the east behind the forepeak above the saddle, but to the north, toward the new national park, a paragon of peaks and passes and paradise.

In the early darkness we move back down the trail. Chilled by the absence of the sun, we put on our jackets, and against the root-and-rock-rough trail, we turn on the flashlight, almost a sacrilege after the sights we've seen.

But what we haven't seen is an even greater sacrilege for Lake Ross, which lies in that deep mighty-mouthed hollow to the north, is about to be raised another 122 1/2 feet by Seattle City Light. Ross Dam is already 545 feet high. At 667.5 feet, it will back water up into British Columbia (and the Canadians don't particularly like that idea—what right have those power-mad Americans....?).

Big Beaver Valley and its climax stand of western red cedar will be drowned forever for

the sake of a temporary solution to Seattle's need for more peaking power. The Federal Power Commission still has jurisdiction in the Ross Lake National Recreation Area. (Consider the degree of protection that national recreation area status provides for an area before you support the next proposal).

Thousands of private citizens of both Canada and the United States have joined the battle to stop the higher dam, but the conservationists need money to fight the dam-builders, money for legal and travel and other expenses. To aid in raising funds, nonprofit North Cascades Foundation has been formed (209 College Club, Seattle, Wa. 98104).

If you'd like to help save the cedars, stop the higher dam, prevent the drowning of Big Beaver

Book Review

As We Live And Breathe

The Challenge of Our Environment

Copyright 1971 by The National Geographic Society

Reviewed by Marge Higley

This very readable book is a comprehensive study of the environmental problems man faces today. It is authored by diverse well-qualified writers, and is generously illustrated with photographs (most of them in color) and photostories.

The first chapter deals with man's impact on the land from the days of the colonist, who "—fell upon wild America as though it were a host of heathen enemy," and on through history to the present time.

Dr. Paul B. Sears, author of *DESERTS ON THE MARCH*, one of the earliest conservation works dealing with environmental problems on a global scale, has written the second chapter: "Ecology, The Intricate Web of Life." He says: "Food and feeder, eater and eaten, all depend on each other in a tangled web of life that includes the wind, the rain, the seasons, and the minerals in the earth." And later: "There is no such thing as waste in nature -- no beer cans on the beach, . . . no disposable products made of indestructible materials."

Ensuing chapters discuss the effect on our environment of Agriculture, Energy, Industry, Transportation, Urbanization, Waste, and Population. Each presents a clear picture of what problems are created, how they are caused, what is being done at present, and suggests some possible future solutions.

Of Agriculture, Ronald M. Fisher (of the National Geographic Special Publications staff) says: "Struggling to wrest sustenance from the earth, man often seems more gladiator than grower. . . He cultivates his land, and if he is not very careful he turns his creeks and streams silt-brown in the process. . . He enriches his soil with millions of tons of inorganic fertilizer. . . He fattens his livestock on huge feedlots, and in doing so creates serious problems of animal-waste disposal. He uses poisons to rid his crops of enemies, and sometimes kills insect friends in the bargain." He reviews some of the alternatives, and ends with the hope that we have now begun to reverse the trend, so that we will not leave our grandchildren the legacy of a toxic, ruined land.

In the chapter on Energy, science writer Henry Still explores man's hunger for enormous amounts of electricity, and the need for fuel for the power plants. It covers strip mining, oil spills, power plant emissions, and radiation. Mr. Still suggests that fusion may possibly be a non-polluting source of tomorrow's energy. In discussing Industry, the same author says: "As people awaken to the harmful side effects of technology, they are beginning to insist that industry clean up." Areas covered here are logging practices, water pollution, and toxic substances. He concludes: "If we are to live in a nonpolluted world, consumers as well as manufacturers must be prepared to pay the cost of cleaning up."

Free-lance writer Philip Kopper, on the subject of Transportation, says: "Today the car is king -- and not a very benevolent one. A single automobile may dump up to a ton of pollutants into our atmosphere each year." Answers to the problem include changes in engine design and fuels, and mass transit systems.

H. Robert Morrison writes on Urbanization. He includes air pollution, dying metropolitan areas and slums. Of new suburbs, he says: "As people fled the congested cities, their great migration to the suburbs resulted in haphazard, careless development that exploited the land around ever-expanding metropolitan areas." More recently, many developers are making their plans to include protection of the environment.

Valley, send your contributions to the above address. If you want more details on the subject, see Audubon magazine (September 1971, pages 114-115) and contact the North Cascades Conservation Council (through the above address).

Dam builders can be stopped. The people of the nation stopped the dams proposed for the Grand Canyon. Can the people of two nations stop the "improvements" on Ross Dam? You might write to John N. Nassikas, Chairman, Federal Power Commission, 441 G Street, N. W., Washington, D. C. 20426 and ask his help in stopping the project.

Henry Still writes of "Waste: The Burden of Affluence." This includes superfluous packaging, polluted waters, sewage treatment, and garbage disposal. Solutions lie in recycling of any usable matter, and someday perhaps the use of heated gases produced by burning trash to generate electricity.

Writer Charlton Ogburn discusses Population. He speaks of famine, family planning, and our rapidly diminishing natural resources. "Slowly we are beginning to realize that a rapidly growing population is placing a greater and greater burden on the earth."

Pulitzer prize-winning journalist Haynes Johnson writes the final chapter, "Concerned People: Key to Tomorrow." He chronicles many instances where aroused citizens have successfully challenged the present system, indicating that the citizenry is becoming actively concerned and involved.

"Already," he says, "the record is filled with notable victories that show how citizen action can triumph against what seem overwhelming odds. They testify to two profound facts about American society today: grass-roots democracy does work, and the system is responsive to changes."

"..Noted & Quoted.."

"Wyoming people would be stunned if they were fully aware of the amount of Wyoming's landscape now mapped out for strip mining. It is unfortunate that the longevity of most of these operations are comparatively short. We should be budgeting Wyoming's non-renewable resources on a thousand-year-plus basis, not just 20 to 50 years as is now the case. . . The people of the state must be better informed of . . . significant programs such as changes in water allocations, strip mine leases, power plants and other correlating activities well in advance of implementation."

John Turner
State Representative, Teton Co.

"During the depression, smokestacks and blackened sky meant prosperity. Today it means trouble."

Louis Nannini
Executive, U. S. Borax

"On the third day we flew with Jim Pope in his helicopter up over Hells Canyon Dam where we could observe how that obscenity has profaned the gorge above. We cannot - we must not - ruin the last remaining free-flowing segment of the Snake River, just to provide a mere added fraction of one percent of our total energy. Nor must we permit this outrage in the high-sounding name of reclamation. The folly of destroying one ecosystem to "develop", and thus equally destroy, another kind of ecosystem hundreds of miles away, surely is now self-evident. I respectfully implore this committee to unanimously support Senator Packwood's Snake National River Bill and urge its immediate passage by the Congress."

Arthur Godfrey
Senate Hearings on S717
Sept. 17, 1971

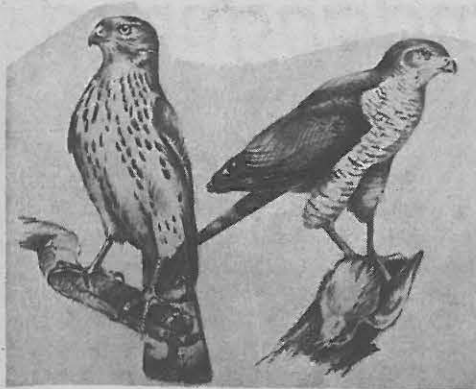
Endangered Birds

At least four species of North American birds of prey continue to approach the danger point for survival, and another — the Peregrine Falcon — has already reached it, according to the National Audubon Society.

The Society's bimonthly journal, *American Birds*, analyzing the reports of last summer's breeding success sent in by more than 1500 field observers, is publishing this conclusion in its October issue. The reports, coming from every state and province in the U. S. and Canada and representing thousands of hours of observation, show that, "with a few exceptions, there has been a continual overall decline in the hawk and eagle population," says editor Robert Arbib.

Declines in these species have been attributed to the effects of DDT and other pesticide residues; loss of habitat for nesting, and most recently the possibility of mercuric chloride poisoning. In addition, large numbers of hawks and owls are still being shot, despite the fact that, with a few exceptions in some states, it is against the law to shoot them. The Audubon Society has been waging a long campaign to educate hunters to the laws, and to explain that these birds, far from being "harmful," have an important role to play in keeping populations of rabbits, rats and other species in check.

Most severely threatened of all the birds of prey, and already extinct as a breeding species in the northeast, is the swift and handsome Peregrine Falcon, which is now becoming extremely scarce throughout North America. Only one or two nesting pairs are reported in the American Birds survey.



The Cooper's and sharp-skinned hawks may be on the way out. Never abundant, the hawks are now down in numbers throughout their range. Above, left, is a juvenile sharp-skinned hawk. Adult Cooper's hawk at right.

Hunters Are Told Don't Drive - Walk

MINNEAPOLIS--Hunters can do wildlife and their own physiques a favor this fall by doing more of their hunting outside their cars, the U.S. Fish and Wildlife Service has proclaimed.

"A lot of small game hunters could use more of the exercise afforded by walking in the woods and fields," according to Forrest Carpenter, regional supervisor of the Service's Division of Wildlife Refuges.

In addition, they can avoid causing serious damage to wildlife habitat by refraining from off-the-road motoring in search of game.

In the northern sections of the Great Lakes and Great Plains areas, with their short growing seasons, serious damage can be done to vegetation in prairies and marshes by motor vehicles. Tire tracks from a single vehicle often can beset the prairies for two or three years. Compaction of vegetation often destroys important plants which afford food and cover to wildlife.

Tire ruts also invite erosion of the soil from wind and water, adding to the damage to wildlife habitat.

Carpenter said federal regulations prevent off-the-road driving by hunters on federal wildlife refuges and waterfowl production areas.

These regulations will be rigidly enforced this year.

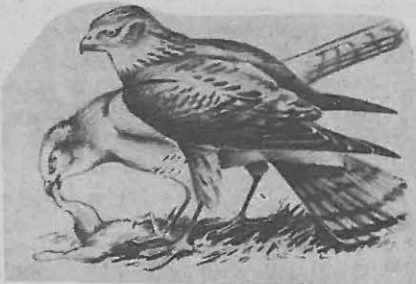
In the event of a dry fall, off-the-road driving also can constitute a fire hazard, he said. He added that hunting from a moving motor vehicle is illegal in most states as well as a way to invite firearms accidents that could have fatal results to the hunter.

"Roads are designed to furnish access to the hunter to hunting areas. If the hunter wants to help protect his sport as well as his bank account, he can start by doing all his hunting on foot," he concluded.

Restrictions against off-the-road driving apply on other federal lands as well as most state-owned properties.

Drastically reduced in numbers are two of the long-winged forest hawks — The Cooper's and the Sharp-shinned. "Continue to decline" was the report from the Appalachians. "None breeding anywhere" from Quebec and New York state.

Also in this category is the once-familiar Red-shouldered Hawk, reported down in numbers in the upper Midwest, in Saskatchewan, in the Northeast and elsewhere. The little version of the Sparrow Hawk that inhabits the Florida Peninsula was reported to be "growing in scarcity."



The once-common marsh hawk is now becoming rare over most of its range. The reason may be loss of habitat and possible pesticide problems. It is mostly beneficial in that it preys heavily on small rodents.

The Marsh Hawk, America's only harrier, was everywhere down in numbers, reflecting the diminution of its marshland habitat and possible pesticide problems. "Now scarce in southern New England," "Disastrous in Idaho," "None reported in the Ottawa, Ontario area," "Down in the upper Midwest" were among the comments.

Species showing mixed reports — down in some areas and holding their own in others — included the Osprey, the Prairie Falcon, the Red-tailed Hawk, and Golden Eagle. The eagle, however, was subjected to illegal hunting (500-800 killed) in Wyoming this season, a loss it cannot repeatedly sustain.

Species apparently holding their own included the Bald Eagle, Broad-winged, Swainson's, and Ferruginous Hawks.

Contrarily, three species of kites, the White-tailed, Mississippi, and Swallowtailed, showed increases and range extensions, while the fourth, the extremely local Everglade Kite failed entirely to nest in 1971; this last was attributed to the drought in Florida.

Efforts Needed

While pro-hunting and anti-hunting conservation groups argue about the best way to protect our nation's wildlife, the real enemies of wildlife are escaping unnoticed, warns Dan Saults, chief of information and education for the U. S. Fish and Wildlife Service.

"The danger today is that these two groups will get so emotional arguing for or against hunting that they'll not unite against the real threats to wildlife — pollution and habitat destruction," Saults said.

"Whether a person chooses to hunt wild animals or not is a matter of personal choice," he said. "But this difference should not keep the two groups from working together for conservation."

In addition, Saults pointed out that much of the sentiment against hunting is based on misinformation. "Legal hunting is not a threat to any species in this country," he said. "Indeed, the hunters and fishermen of the U. S., through money from license sales, special taxes on sporting goods and individual contributions, pay most of the funds spent on wildlife and its habitat."

While hunting endangers no species, pollution is threatening scores, Saults pointed out. Over 40 species of birds are threatened by shell thinning caused by DDE, a DDT metabolite. Pelicans, the bald eagle, 13 species of hawks and even the mallard duck are seriously affected.

Twenty states have closed rivers and lakes to fishing because of mercury levels in fish.

Our estuaries, the cradles of the sea, each day give ground to the onslaught of the dredge and the bulldozer. Chemical wastes, detergents, oil, sewage and exhausts pour into our air and waters daily. Each year brings the discovery of new pollutants and new facts concerning old ones. It will require the cooperative efforts of all those interested in conservation to stem the flow of this poison.

"This is not the time for conservationists to attack each other but to join together in bold new programs to defeat the real enemies of wildlife," Saults said. "Lest we forget, if wildlife is in trouble, so are people."

Environmental Eavesdropper

LOONEY LIMERICKS

by Zane E. Cology

A foolish young man named O'Hare
Sprayed pesticide into the air.
When he took a deep breath,
His untimely death
Threw a scare into folks (-here and there).

* * *

The U. S. Commission of Population Growth and the AmericanFuture reported on a national survey just completed. Its results: 50 percent of the public now favors complete liberalization of restrictions on abortion (as compared to 85 percent opposed in 1968); almost 80 percent of the public favors voluntary sterilization; more than half believe government should try to slow population growth, and promote development of smaller cities for better population distribution, and more than half said people should voluntarily limit the size of their families even if they could afford more children.

* * *

The Washington Center for Metropolitan Studies says a "baby bust" in this country may result in zero population growth within a few decades, possibly within this century. The Center says there have already been some economic effects. It says, "The private sector must adapt to a situation in which a steadily increasing flow of customers is no longer assured."

* * *

A family planning blueprint was sent to Congress by the Nixon Administration. It is considered to be the first such official population policy ever to be considered by an industrial nation. The plan predicts that national family planning costs will double by 1975, and that 6.6 million low-income women will need subsidized birth-control devices by then.

* * *

The University of Wyoming student newspaper, *The Branding Iron*, was ordered to refrain from printing abortion information. State Attorney General C. A. Brimmer said the material could be a violation of the 1890 law forbidding publishing such material.

* * *

Oregon State Representative Don Stathos, who was instrumental in getting a bill passed to set aside state highway funds for bicycle trails, had to hire an extra secretary to answer mail asking how he did it.

* * *

New York State residents believe pollution is their most serious community problem, according to a Harris opinion poll. Thirty-seven percent believed the federal government would be the most effective agency in controlling pollution, while 17 percent favored state clean-up agencies, and 12 percent said local authorities would be most effective.

* * *

Scientists are not only concerned with the action of phosphates in hastening eutrophication of water, but also the possibility of exhausting all sources of phosphorus. A report prepared by the Institute of Ecology for the 1972 U. N. conference on the environment says all known reserves may be used up in 60 years. The scientists point out that phosphorus is the most nearly limited, and the least efficiently recycled of all the key elements in nature.

* * *

A pair of the rare ivory-billed woodpeckers has been sighted and photographed in the Southeastern United States, according to a report from the National Audubon Society.



Lest Thou Be...

by Ed Will

It seems that many in more or less high positions, who are basically opposed to environmentalists, are growing impatient as their "don't-look-and-it-will-go-away" philosophy in dealing with ecologists fails to work. They increasingly resort to anti-ecology propaganda, much of which approaches the ridiculous in content. Latest of these blurbs being used repetitiously by the let-nothing-interfere-with-making-a buck crowd is to stress the fact that nature itself is a vast pollutor. They righteously point out that pollutants in the atmosphere from such natural sources as volcanic eruptions and forest fires vastly exceed man made pollution. That decaying vegetation, erosion, etc. have polluted land and water since time began so that the additional pollution caused by man actually causes little harm; that ecologists are making a mountain out of a molehill. At first glimpse, this seems a strong argument because of the truth in it. But like much of the logic of these special interests it is a half-truth that omits more than it says.

The really astonishing thing is that this blurb has largely originated from men with engineering and technical backgrounds. These are men whose training and work should prove the fallacy of their own argument. One of the chief bugaboos of all engineering is the overload factor. Any engineer is well aware that any piece of mechanical equipment subject to continuous heavy overload will break down; that a ditch constantly overloaded will wash out; that a ship loaded beyond it's capacity to float will sink. That some engineers should ignore such basic lore in their assessment of the earth's ecosystem is astonishing, to say the least.

The complexity that technology has achieved in such fields as electronics and chemistry may be almost unbelievable. But compared to the simplest of ecosystems, their greatest accomplishments compare as a stone axe would compare to an atom bomb as a weapon. It has taken nature billions of years to create these ecosystems, in the course of which nature has geared itself to handle its own forms of pollution. What nature is NOT geared to handle is the sudden surge of pollution and destruction of natural resources caused by man's sudden emergence into an industrial age. It is strongly possible that given a few million years to adjust, nature would handle this load as well. But the few centuries of the industrial age are to nature's time as a split second is to man's time. Even man needs time to adjust to a change.

It is not nature's own pollution that is causing the present ecological crises, it is the overload caused by man. Therefore, Mr. Engineer, when you cite nature's own pollution to excuse and justify the overload of pollution caused by man, stop and think of your own training, lest thou be hoist by thine own petard.

Natives Sue For Oil

The Artic Slope Native Association, representing the Alaskan Eskimos, has filed suit against Interior Secretary Rogers Morton and the Interior Department. The Eskimos claim that the North Slope Oil actually belongs to them and that oil leases on the North Slope were sold illegally. The suit contends that the Eskimos have an aboriginal right, and that the sales were made in violation of Section 6 of the Alaska Statehood Act. The suit casts further doubt on early approval of the Alaska pipeline.

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Photo credit Montana Fish and Game Dept., by Lloyd Casagrande

High Country News—15
Friday, Nov. 12, 1971



In what must surely be one of the rarest photos of grizzly bears, photographer Lloyd Casagrande has captured five of the great beasts. Members of the endangered species are now rare or non-existent in most states. Only in and around Yellowstone Park is there a significant population in the lower 48 states.

More Species Endangered

by Kliess Brown

Chief, Information and Education Division, Idaho Fish and Game Dept.

Rare and endangered species of wildlife are receiving much more attention since the advent of the new age of environmental concern than ever before. This is good, but along with this interest should go an awareness of the real factors involved -- the reasons, if you will, that this "rare and endangered" list keeps right on increasing.

--From the birth of Christ until 1800, man alone was responsible for the extinction of one species of mammal every 55 years.

-- From 1800 to 1900, man extinguished one every 18 months.

-- From 1900 through 1971, one species has been eliminated every year. And the rate is still increasing.

This is the frightening picture of what is taking place around the world -- including Idaho. Let's take a look at the wildlife trends in our state. There really is cause for concern, even in our beautiful, wild Idaho -- considered by many to be a last frontier for American wildlife.

For example, take the grizzly bear. Just a couple of decades ago the grizzly was known to be a regular resident of the Bitterroot Mountains, the Selkirks and the mountains of the Snake River's North Fork. country east of Yellowstone National Park. Now, the Fish and Game Department's game chief, Roger Williams, says it is not believed that Idaho has any resident grizzlies at all -- that the only ones now are occasional wanderers from Yellowstone and the higher mountains along the Montana border.

Caribou is another example. A dozen or so years ago there was a small herd in Northern Boundary County. Admittedly, this was a migratory herd that moved between Canada and Idaho, at least a part of the time, but there have been no sightings of caribou in that area for some time. Should this one be crossed off the list now?

Sage grouse is another native Idaho species that has been in trouble. Fifteen or 20 years ago the hunting season was all but closed on this great game bird. A little research and a lot of sweat and careful negotiating on the part of Fish and Game fieldmen paid off.

It was found that the widespread elimination of sagebrush without regard for the habitat of the grouse was all but eliminating the living quarters of the sage grouse. Game managers started sitting down with land managers and stockmen to see if sagebrush eradication programs could be altered a little in favor of the birds. We now are realizing better populations of sage grouse.

The American eagles were facing the same fate as other endangered species a short year or two ago when concerned citizens, keynoted by Bill Meiners and falconer Morlan Nelson, both of Boise, promoted the birds of prey sanctuary on federal lands along the Snake River in southwestern Idaho.

Although they are not on the rare and endangered list, several species of trophy big game animals could well be there if it were not for a very carefully considered game management program. Antelope, bighorn sheep, mountain goats and moose all have limited populations in Idaho, and hunting of them is allowed only on a controlled hunt basis to make sure that the basic breeding stock is protected.

Invariably, the results of the field studies on declining species of wildlife center around the same conclusion -- the habitat, or environment. Call it bad range conditions, insufficient forage or a lack of the right kind, poor winter range, overgrazing on grouse strutting grounds, or a dozen other things -- it all boils down to the same thing.

To maintain a given species of wildlife, you must provide the right kind of environment. It's that simple. And when the people of this country allow the land, water, air and associated natural resources to become so degraded that they no longer will support wildlife, the country no longer will support people, either.

There are other examples that should be listed when talking about endangered species of wildlife. Cutthroat trout are having a most difficult time withstanding the pressures of modern day numbers of anglers.

Millions are being spent by state and federal agencies in the Columbia River system to maintain anadromous fisheries, namely chinook salmon and steelhead trout, against increasingly difficult odds. Each dam built across the path of the migrating fish takes a toll, and in the past few years a new problem has been added: nitrogen supersaturation.

There are other species less important to the game and hunting picture, some all but forgotten. However, they, too, are important when considering the total picture of rare and endangered species. No confirmed sightings of the timber wolf have been recorded in Idaho for some 50 years. Bison, or buffalo, is limited to a stray one or two that wanders out from Yellowstone Park. The wolverine has all but disappeared (12 have been reported since 1954) and the big sturgeon of the Snake River are now limited to a short section of the Lower Hells Canyon -- on a "fishing for fun" basis; and a limited amount of sturgeon fishing in the Kootenai River.





The summit of Wyoming's highest mountain (Gannett Peak, 13,785 ft.) is already powdered with new snow. Glaciers and perpetual snow fields crowd its flanks. In the

distance to the left of the summit, the Teton Range is dimly outlined.

Yellowstone Has Major Construction

A total of six major construction projects amounting to \$2.3 million in contracts were recently completed in Yellowstone National Park, according to a progress report issued today by Superintendent Jack K. Anderson.

By the end of November, three more projects including a new visitor center complex of three buildings at Old Faithful are expected complete. Additional improvements in the Old Faithful area, to include boardwalks, outdoor seating, and low-level lighting, are expected ready next spring in time for Yellowstone's 100 year anniversary celebration. By then, and with the completion of other projects, \$4.5 million will have been spent.

Some \$6.5 million in contracts representing 13 major building, road and sewage construction projects have been awarded in Yellowstone this year.

With the majority of work finished before heavy 1972 summer visitation begins, only two projects are expected to remain -- a \$466,000 sewage plant at Canyon and a bypass road around West Thumb for \$1.5 million.

Anderson gave the following breakdown of projects completed in October:

--A \$572,000 contract for a new Old Faithful parking lot which can handle about 1,000 cars. New circulation roads also were built. The old lot had a 600-car capacity.

--A \$75,000 contract for a 5,000 foot long water transmission line to service the new visitor center complex, the Inn and other facilities at Old Faithful. Work involved laying 12-inch, Techite pipe made of spun fiber glass which will not react with underground thermal features.

--A \$657,000 contract to install guardrails and surface seven miles of the east entrance road from the gate to Sylvan Pass.

--A \$488,000 contract to rebuild two miles of the Fountain Flats scenic road for 2-way traffic. The road is used especially for spring and fall wildlife viewing and as access to fishing areas beyond Goose Lake, Feather Lake and the Firehole River.

This contract also included reconstruction of two miles of the Grand Loop Road above the Firehole Canyon at Madison and three miles on the east side from Little Thumb Creek to Arnica Creek. In addition, part of the Grand Loop Road on the Upper Geyser Basin at Old Faithful was removed and two miles of new trail blazed to Castle, Riverside and Grotto Geysers.

--A \$455,000 contract to realign portions of the north rim Yellowstone Canyon road away from the Canyon rim, thereby eliminating an intrusion on the view of a prime scenic and natural feature--the Grand Canyon of the Yellowstone. Access roads to the cabin area at Canyon Village also were rebuilt.

--A \$135,000 contract to build a new sewage pumping station at Bridge Bay. The project involved laying 10,000 feet of pipe to move sewage to an existing treatment plant below Lake.

Planned for completion in November are:

--A \$593,000 contract to build a visitor center and two smaller audio-visual theaters as the main features in a totally re-designed Old Faithful visitor area. When open to public use this facility will add to the visitor's appreciation and knowledge of the natural, scenic and wildlife wonders of Yellowstone National Park.

--A \$115,000 contract for two new comfort stations at the Old Faithful Visitor Plaza.

Planned for completion by spring are:

--A \$696,000 contract to build a bypass road at Lake Village making destination travel more convenient around this heavily visited area

located on the shore of Yellowstone Lake.

--A \$267,000 contract (85 per cent complete) to construct new access roads to the Lake Hotel, expand the parking lot to a 250-car capacity and to install new lighting and walkways.

--A \$434,000 contract (85 per cent complete) to provide new radial and circular boardwalks at Old Faithful. Low-level, low-intensity lighting will also go in along the walkways that provide visitor access to the famous geyser. The contract also calls for some illumination of the parking lot located behind the visitor center plaza.

Anderson said the new Canyon sewage treatment plant, scheduled for completion next August, will discharge a pollution free effluent into the Yellowstone River bringing it well within established water quality standards. The system is being built at a cost of \$466,500 and is about 35 per cent complete.

The West Thumb bypass road is 45 per cent complete with a final target date of September 1972. Two bridges are being constructed here to re-route traffic away from heavily used intersections and remove an intrusion from the fragile thermal features of West Thumb. The project is contracted at \$1.5 million.

Historic Soldier Station Restored

The historic Norris Soldier Station in Yellowstone National Park, an army styled log cabin built for use as a patrol outpost at the turn-of-the-century, has been restored as a new Centennial exhibit for park visitors, Superintendent Jack Anderson announced today.

The seven-room cabin, located on the Grand Loop roadway near the Norris Geyser Basin, was built about 1908 by the U.S. Army, at that time responsible for administration and visitor safety in the park.

The rigorous and oftentimes perilous life of the soldiers detailed to the outpost will be explained in a permanent wayside exhibit panel to be erected in time for the Yellowstone Centennial next spring.

The station was accurately rebuilt from the ground up, log-by-log, using old photos and Army records in the park archives and in Washington, D.C., even to the point of reproducing an error in the original construction.

The error was discovered during restoration

work this summer when it was realized that the window openings were too small for the windows. Apparently the Army had ordered the wrong size windows which were set in place anyway with oversized frames, once they were delivered to the park.

Norris, the site of the restored cabin, is located near the Gibbon River at the junction of the road which forms a girth in the Grand Loop. It is 28 miles east of the west entrance to the park and 12 miles west of the Grand Canyon of the Yellowstone River.

