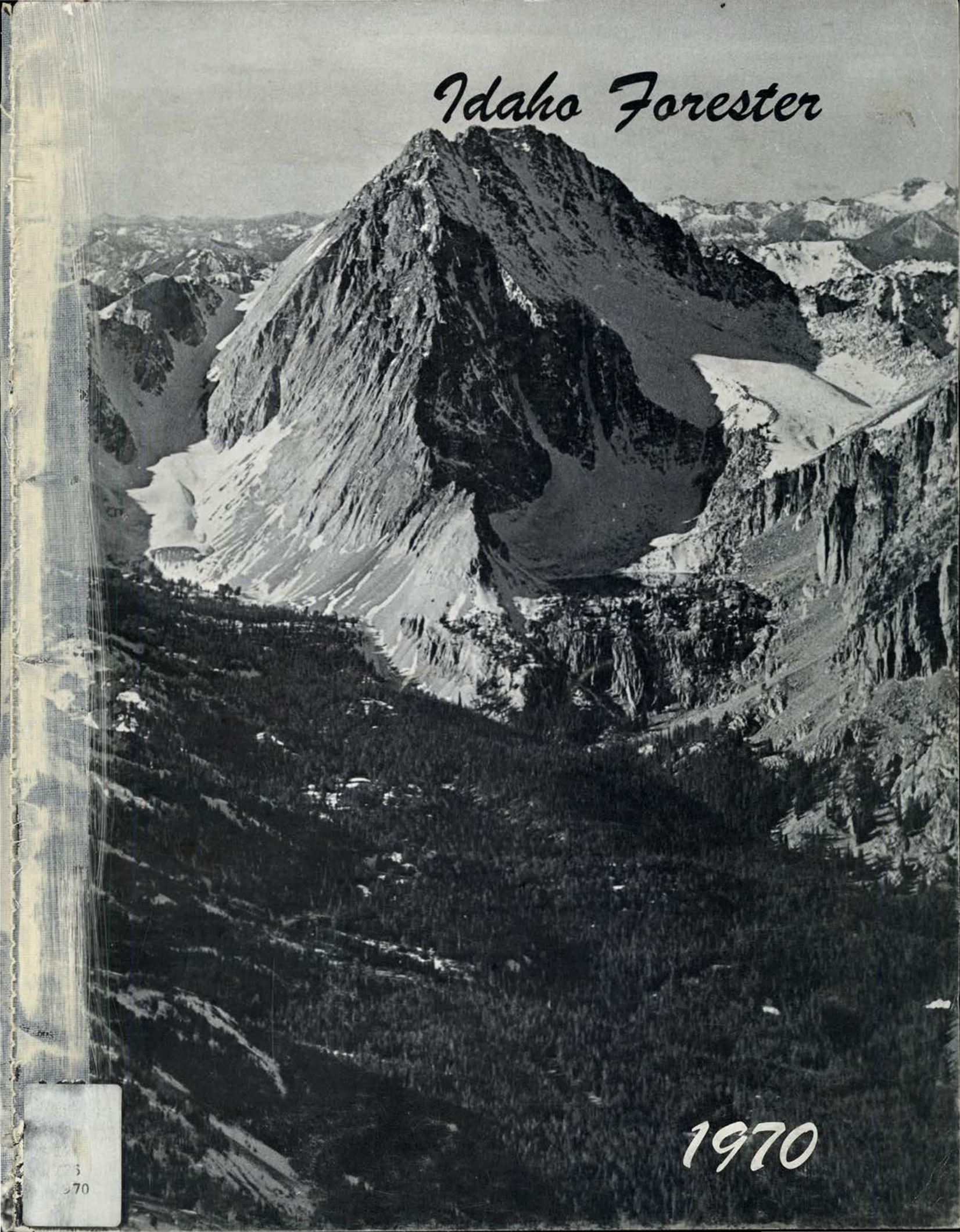


# *Idaho Forester*



1970



# Acknowledgements

The staff of the IDAHO FORESTER would like to thank the many people who have made this year's magazine possible.

Special thanks go to Dean Wohletz and his secretarial staff for their support and many hours of work.

We would also like to thank the alumni, authors of articles, advertisers and fellow students for their cooperation and support. As editor, I would like to extend my gratitude to Professor Elwood Bizeau for his good advice and hours of extra work.

## PHOTOGRAPHS

The front cover photo was contributed by Ernest Day. He has titled it "Castle Peak and Upper Part of Little Boulder Drainage". The back cover photo was donated by Professor Fred Johnson.

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# Editorial

Thomas B. Miller

The 1970 *Idaho Forester* marks the second year of publication under a new format. This new format is distinguished by the increased emphasis on semi-technical content and less on social activities of the college.

Two questions that come to mind about the *Idaho Forester* are:

Why does it have a new format?

and

What goals are the magazine moving toward?

The answer to the first of these questions lies in the student body of the College itself. The students who developed and successfully published the 1969 *Idaho Forester* under the new format correctly analyzed an increasing desire by the students for a magazine that would be more representative of their interests. The staff of the magazine felt that these interests could be best represented by semi-technical articles concerning research and management of forests, wildlife and range. Our assumptions are based on the increasing trend of establishing professionally oriented clubs within the College and the failure of past *Idaho Foresters* to capture student interests. However, recognizing that a format based entirely on semi-technical articles could be dry reading, we have tried to balance the content with some human-interest articles.

Our goal is to continue to produce a relevant student publication. The magazine should always adequately represent new developments and student interests in the fields of forestry, range and wildlife. The 1970 *Idaho Forester* is a significant step toward our goal of relevancy. With continued support from our readers, it can only improve.

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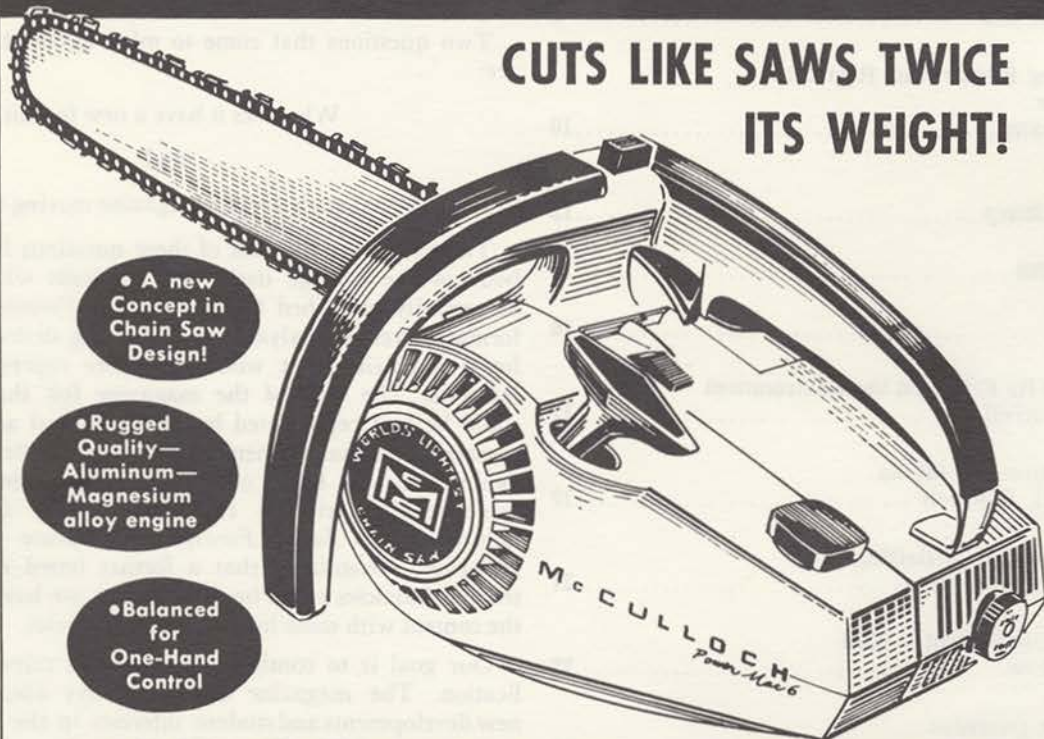


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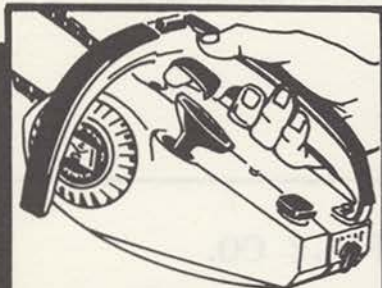
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# *The Forestry Building*



**The Planning**



**The Beginning**



**The Construction**



# 1969 Questionnaire Results

The changes included in the format and content of our 1969 issue were reflections of our own feelings as to what was lacking and what should be included in the *Idaho Forester*. Realizing that these reflections represent ideas of only six people, we circulated a questionnaire in all our magazines.

We received 26.6 per cent of the questionnaires that were sent. This resulted in 102 returns from which to draw our conclusions. The results can best be shown in the accompanying graphs.

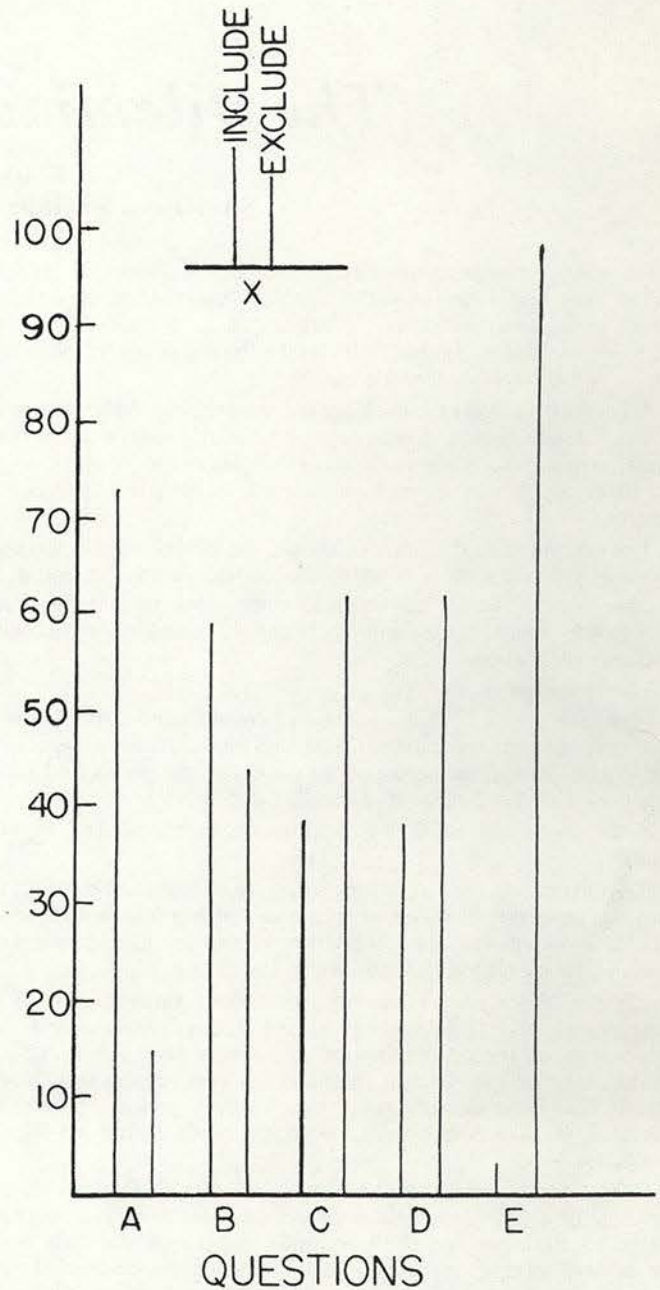
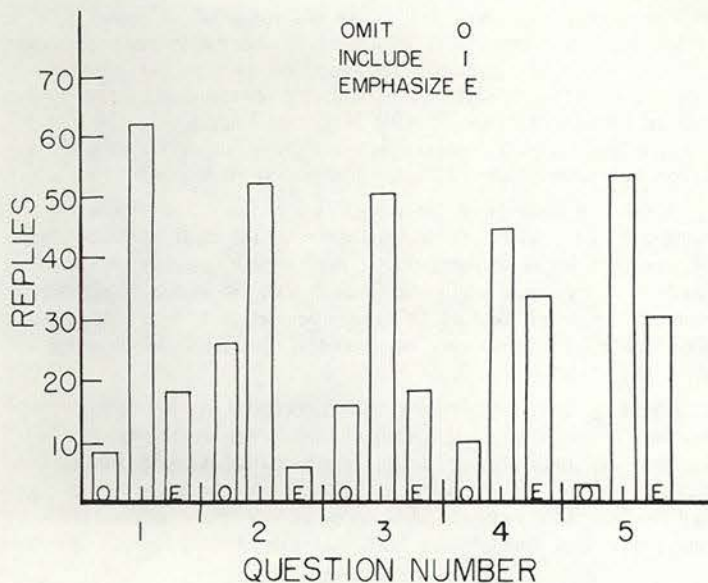
When looking at the results of the questionnaire as a graph, the general conclusion could be that: given a choice, our readers do not want to see any exclusions from the magazine. The question that did receive the most negative response was the inclusion of faculty, or senior pictures. A change of title would be out of the question since only two answers in favor of a change were received.

We would like to thank those who wrote additional comments on the questionnaires. We have tride to take the comments into consideration in developing the content of the 1970 issue. Any further comments or suggestions from readers will be greatly appreciated.

IDAHO FORESTER Staff

## QUESTIONS

1. Details about college and /or club activities.
2. Pictures of the faculty and /or seniors.
3. Articles of controversy and /or opinion by people outside our College.
4. Articles dealing with current natural resource problems by professionals in the field.
5. Articles by faculty members and degree candidates on projects and activities within the College.



- A. Alumni directory
- B. Outstanding accomplishments of alumni
- C. More photography of general interest
- D. More photographs with the articles
- E. A new title



# WHITE

## *The Dilemma Of Castle Peak*

Keith Whiting  
American Smelting and Refining Company  
January, 1970

For the past several months, White Cloud Peaks in central Idaho have been the subject of intense and continuing debate in the press and elsewhere. What began as a series of public hearings in Boise, Idaho Falls and Challis quickly escalated into a full-blown controversy.

According to **American Forests** magazines, "The majestic White Cloud Peaks, serene and beautiful, have become the latest symbol for conservationists all over the country who are determined to save such wilderness as remains as it is for posterity."

The White Cloud question should be placed in perspective because it focuses on a fundamental dilemma that is going to trouble Americans for all years to come, and, in fact, is going to become more acute and increasingly complex with each passing generation.

The question is:

How are we, a Nation, going to provide adequate and suitable living and recreational facilities for future generations while also providing, at the same time, for the goods and services they will need equally as well?

Both needs can be met from but a single resource — our lands.

Resolution of the question soon must be forthcoming or growth, progress, and our very pursuit of happiness will be in serious jeopardy as the population continues to explode and demand more materials and better facilities.

Clearly, discovery of minerals and their mining is vital to the present and future needs of the United States, and development of the molybdenum deposit in the White Cloud Peaks area of the Challis National Forest serves this interest. It has been demonstrated that mining properties can be operated in a manner fully consistent with sound ecological practices.

Public lands, such as the Challis National Forest, should be used in as many beneficial ways as their resources permit. Balanced multiple use of these lands is perhaps the only way, we in the mining industry feel, to develop much-needed recreation resources while continuing to meet our people's requirements for the metals and minerals that make their enjoyment possible. No area should be closed to exploration or to mining in the absence of a **compelling** national interest.

The multiple-use principle applied in this case would yield for Idaho the double benefits of desirable economic development as well as preserving and enhancing recreational features of the area. It is our policy to work with the Forest Service to achieve these goals and to conduct our operations so as to have the least practicable impact on all resource values of the area.

We believe we can do so within the framework of the proposed Sawtooth National Recreation Area, and that our activities could enhance the recreation potential of the area.

We, therefore, do not oppose including the White Cloud Peaks in the Sawtooth National Recreation Area.

Several misunderstandings surround the project and fears have been aroused that the mine will destroy Castle Peak and pollute Little Boulder Creek; that the access road will create serious erosion and sediment problems not only in the small stream but the Salmon River as well; that noise pollution will drive wildlife out of the area. It has been said that the mine isn't necessary in the first place.

With respect to necessity for the mine, Asarco is looking to the future when this nation will need metal for which we are exploring today. Molybdenum, an essential element of modern steel, is classified as a national strategic material. It is not in short supply today, but the Bureau of Mines estimates that United States need for the metal is expected to rise to 175 million pounds within 15 years and to 350 million pounds within 30 years. U. S. production in 1968 totalled only 94 million pounds.

The rough grandeur of the high peaks will not be disturbed since mining will not touch the slopes of Castle Peak, nor any of the White Cloud Peaks. When mining is finished, walls of the open pit will blend in with the slopes below the peaks and the open pit eventually will fill with water and form a lake.

Tailings — ground-up rock from which the metal has been extracted — will be impounded in a future lake formed by a dam constructed from natural material in Little Boulder Creek valley. If there is any excess water from rainfall or melting snow, it could be by-passed around the mine and mill. In one of our Western states, a trout hatchery operates below the tailings pond of a well-known molybdenum mine.

The access road will not cause erosion and sediment problems. It is surveyed and designed to Forest Service specifications which are expressly planned to avoid these ill effects. Several roads and trails were built by others during the summer of 1969 within the Challis National Forest, and the Forest Service bulldozed a motorcycle road by a scenic route to Frog Lake, two miles away from the molybdenum deposit.

Noise pollution will be insignificant since the walls of an open-pit mine reflect noise upward and the mill buildings will be designed so as to limit noise. As a result, outside of the immediate area, practically no sound will be audible. At times during the week during mining operations a dull "crumpp" like distant thunder may be heard if the wind is blowing in your direction.

The molybdenum deposit that precipitated the controversy reposes in an area of less than 1,000 acres, to the best of our knowledge, near Baker Lake northeast of Castle Peak, the summit of which is over a mile from the nearest of the ore bodies. The entire 1,000 acres is less than three-tenths of one percent of the Challis National Forest and less than two-

*(Continued on page 8)*



# CLOUDS

## *The Real Question In The White Clouds Controversy*

Ernest E. Day  
Idaho Environmental Council  
National Wildlife Federation  
January 1970

Simply stated, the question is: Should a public asset of magnitude of the White Cloud area be written off permanently for a commodity which is in surplus supply?

### **The Road In — The Opening Wedge**

The area involved east of the "spine" of the White Cloud range between Railroad Ridge on the north and the Chamberlain Lake chain is roughly eight by ten miles, a relatively small but uniquely beautiful segment of Idaho's choicest environment. Within this area are some fifty alpine lakes. Five of these are directly affected by being partly or completely surrounded by mining claims. The others would be vulnerable to bulldozer exploration should a road be constructed into this fragile area. One has to look no farther than the road dozed out in violation of U.S. Forest Service rules above the Livingstone Mine to see the horrible devastation wrought in dozer exploration on the slope just south of Railroad Ridge. This is not being done by either American Smelting and Refining Company nor by the Vernon Taylor Company of Denver, who are the two principal giants involved in the White Cloud controversy. It does, however, graphically illustrate what will probably follow once a road is built eight or ten miles into the east side of the White Clouds up Little Boulder Creek. The road, then, is the core of the problem when analyzed against the present inadequacies of the outdated 1872 Federal mining laws — the real villain of the piece.

### **The Open Pit Mine**

The enormity of the proposed open pit mine cannot be glossed over. The ore body is very low grade. ASARCO's figures are that 20,000 tons a day for 360 days a year for up to twenty years must be processed for a profitable operation. It is stated that the lake formed by the pit and the dam will be from one and one-half to three miles long. This is in a valley which falls more than six hundred feet to the mile. An exceptionally high dam, or a vast cut, or a combination of both will result. Twenty thousand tons a day of finely ground spoil pile can simply not be swept under the rug.

### **Effects on Fish and Wildlife**

What will be the probable effect on fish and wildlife? Dams around holding ponds do not have a good performance record, especially during the heavy run-off period. In jeopardy below is a good resident trout fishery. Perhaps of even more value are the spawning areas for anadromous fishes on the East Fork of the Salmon River. Siltation alone from the spoil pile above could wipe out these valuable piscatorial bedrooms much as spawning areas on the nearby South Fork of the Salmon River were destroyed by the abuses of man and nature several years ago. There remains the distinct possibility of poisonous leaching of minerals from the spoil pile when the exposed

minerals react to the air and water. This could poison the East Fork of the Salmon River in a manner similar to that of the cobalt operation on Panther Creek near Salmon, Idaho. Even if they are not poisoned, the redds could be silted with the same disastrous effect.

Mountain goats and big horn sheep abound in the White Clouds. Both need isolation from man and his machines. Blasting, gear-jamming and the roaring of trucks are an integral part of open pit mining. The big horns and mountain goats will simply be forced to evacuate to other areas which may not provide livable environment for them. Their loss will be an important part of the price paid for temporary economic gain in producing more surplus molybdenum.

### **The Molybdenum Surplus**

"Moly" is in enormous surplus supply for our domestic needs. The estimate by the U. S. Bureau of Mines is that our known domestic reserves of molybdenum (prior to the White Clouds activity) "are more than adequate to meet our domestic requirements to the year 2000." Mr. Don Jackson writing in LIFE magazine in the January 9, 1970 issue stated that our reserves are adequate for over 100 years of domestic use at present consumption rates.

There is in fact a tremendous surplus of Moly on our market and ways are being sought to diminish the forty million pound ((Engineering and Mining Journal, March, 1969) stockpile without damaging the present market price. One has to but look at the open pit and ghost town of Stibnite to see the effects of a drop of a few cents a pound in the market price of a metal

Man most assuredly does not live by bread alone. If this mining operation were to take place in a far less desirable environment, the profit motive alone would be a justifiable criterion. If this Idaho-mined metal were vitally essential for our national defense and could not be obtained elsewhere, then sacrificing a public treasure of such high recreational value would certainly be worthy of consideration. But such is not the case.

### **Restoration Promises**

ASARCO has voiced concern for restoration of this scenic resource "as far as possible." It may be that ASARCO makes this statement in good faith although their record on the Puget Sound, on Chesapeake Bay and in Arizona on pollution counts leaves grounds for honest concern. The Taylor Company, on the other hand, showed no appreciation for the resource nor public relations when they said that Little Boulder Lake No. 1 would not only be polluted but *would disappear* if they were to mine the area. And there are other mining interests with

*(Continued on page 13)*



## (White Clouds — Whiting)

tenths of one percent of the proposed 508,000-acre Sawtooth National Recreation Area which would include the mine site.

The mine can be seen only from the air and two points on existing forest trails, both more than 500 yards away.

The Little Boulder Creek Valley is oriented in an east-west direction with the cirque at the west end. The elevation ranges from 8,000 to 10,000 feet at the cirque head below Castle Peak. The slopes of the valley contrast strikingly in their vegetation cover. The north slope (south-facing) supports a closed stand of Western sagebrush, with widely scattered small groves of aspen and lodgepole pine. The south slope (north-facing) is forested with a mosaic of stands: whitebark pine or spruce and fir at 9,000 - 9,500 feet, and lodgepole or Douglas fir lower down. Part of the valley floor is covered with a sedge meadow with willows around the margin. The heavily glaciated headwalls at higher elevations (9,500 to 11,000 feet) support sparse forest vegetation on ledges and very small meadows in depressions containing glacial till. The area receives enough winter snowfall to make it inaccessible most of the year.

The White Clouds Peaks can be reached by several public roads and a system of trails provide access to most drainages. Access to the Asarco claims is by horseback, by hiking along a Forest Service trail paralleling Little Boulder Creek, or by helicopter.

There are no developed recreation facilities in the high country and forage for recreation pack and saddle stock is very limited. The lack of easy access and remoteness of the area from centers of population severely restrict recreational opportunities.

At lower elevations, five local ranchers graze 700 head of cattle and 2,500 sheep for 2½ months a year in the rangelands in and around the White Cloud peaks, according to the Forest Service. There has been some minor timber harvesting. Nearby in the Big Boulder Creek - Livingston Creek drainage, one mine — the Livingston — has a history of silver and lead mining going back 80 years.

ASARCO interest in the area stemmed from a U.S. Geologic Survey publication released in 1965 which described the investigation of a molybdenum occurrence along Little Boulder Creek which had been made by the Geologic Survey and the U.S. Bureau of Mines in 1943. The Geologic Survey and the Bureau of Mines encourage and aid in finding and developing new mineral deposits in the United States and the Forest Service recognizes and supports bona fide prospecting and mining as a valid activity designed to utilize mineral deposits within the National Forests. The area in which the claims are located have not been withdrawn from mineral entry by the Government.

Study of the maps and records showed that the claims, which had been staked nearly 50 years ago, were in good standing. The owner, a prospector living in the area, was found, and permission to examine the property was obtained. An agreement to purchase the claims was negotiated in 1967 and an exploration program of mapping, sampling, aerial photography, geological and geophysical surveying and scout diamond-drilling was commenced in 1968 and continued in 1969 at a cost to date of approximately \$500,000.

Results indicate the presence of a large deposit of low-grade molybdenite, and indications are that the property at Little Boulder Creek may have the potential, developed as an open-pit mine, of producing 20,000 tons of ore per day for perhaps 20 years or longer. In such case, the mine and related mill could provide direct employment for some 350 men and indirect employment for another 500, equivalent to support for approximately 2,500 people. Estimated county and state taxes at current rates would approach \$1 million annually.

Throughout our work in the Challis National Forest, we have exercised care to avoid unnecessary adverse effects on the recreation, watershed, wilderness and other values of the area. We have maintained a model campsite and cut a minimum of trees to accommodate the diamond drills and helicopter landing sites. The drills have been dismantled and moved by horses, tractor and helicopter from point to point on the mineralized area. The number of sites has been kept to a minimum by inclined drilling.

To help us in the protection of environmental values of the area, we have engaged ecologists with expertise in vegetation, wildlife and fresh-water biology who will observe the area at various times and under a variety of conditions. Consultations will continue throughout the course of work. Also, we will engage agronomists, landscape architects and other recognized authorities to advise us on how to minimize the impact of the mine on the natural environment.

As responsible citizens, we intend to continue our practice of cooperation and consultation with the Forest Service in development of plans for the area both during and following mining. We have begun planting certain grasses and legumes recommended for high elevations in order to revegetate drill sites and other prospecting areas as a result of some of these consultations with the Forest Service.

Visualize, if you will, the scene twenty or thirty years from now. None of the cathedral-like heights will have been altered; fish will still abound in the lakes; and antelope will be drinking from ponds of melted snow in the mined area which in time will provide an important new water resource for scenic, recreation and other purposes.

Developed in this fashion, we believe the mine area could achieve its full potential as a multiple-use resource. It is capable of yielding minerals worth an estimated half-billion to one-and-a-half billion dollars — three quarters of which would remain in Idaho. It will provide many years of employment for hundreds of people. It will furnish millions of tax dollars to Custer County and the State during its lifetime.

And, in addition, a large usable recreation facility and valuable water resource will have been created for posterity.

Under proper supervision, mining, grazing, lumbering, and recreation are compatible and can go forward together in our own time.

The best way to hold in trust the heritage of our great outdoors for our children and our children's children and offer them a life equal to or better than our own lies in the multiple-use concept of our public lands.

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# Reminiscences Of Thirty Years At Idaho

Dr. Merrill E. Deters  
Professor of Forestry  
University of Idaho

Back in the summer of 1940 I was at the forestry summer camp of Michigan State University located near Sault Ste. Marie on the Upper Peninsula of Michigan. A long distance call from Dean Jeffers of the School of Forestry, University of Idaho conveyed the message, "would I be interested in joining the forestry staff at the University of Idaho?" An interview was arranged for the following week at Minneapolis and resulted in my decision to come to Idaho. The state was not entirely new to me, however, as the summer of 1926 was spent working in the forests of the Priest Lake country. This was a critical fire year and I recall fighting fires for 42 days straight, averaging 16 hours per day at 33 cents per hour. One fourth of the Kaniksu National Forest burned over that year.

In early September Mrs. Deters and I drove to Moscow via the Black Hills, Yellowstone Park, southern Idaho and the north-south highway. There was little pavement. The north-south road was all graveled, narrow, dusty and with many hairpin curves. It was quite a thrill to negotiate Whitebird, Winchester and Lewiston hills back then.

The forestry faculty in 1940 consisted of Dean Jeffers and Professors Wohletz, White, Young, Stone, Ehrlich, Pierson and Graduate Assistants Gil Doll, Whiz Slipp, and Loren Baker. Prof. Pitkin was Nursery Superintendent and Prof. Pierson was also Extension Forester. Forestry occupied the third and a part of the fourth floors of Morrill Hall. The remainder, and main part, of the building was occupied by Agriculture. When the new Ag Science building was erected the old Ag headquarters became the forestry building. At first we didn't know what to do with all the room and parts of the building were shared with others. Gradually as the staff grew, forestry took over all offices and, of course, today we don't have nearly enough room to accommodate all activities.

The war years brought big changes. Dr. Ehrlich left to engage in antibiotic research. Dr. Stone left for industrial work. Dr. Young resigned to take over the range department at Texas A & M. Prof. Pierson resigned to enter other work. That left Dean Jeffers, Wohletz, White and myself to take over all teaching work. Since Dr. White was assigned also to teaching in Chemistry, the burden of all forestry courses fell on the Dean, Wohletz and myself. In addition, we were asked to take teaching assignments in connection with certain armed forces programs. During one semester I recall having from 5 to 8 hours of classes each day. I don't recommend trying to talk for 8 hours a day or trying to work 18 hours a day for weeks at a time.

By 1944 classes were getting small, 10 to 15 with mostly 4-F students or veterans who had been discharged because of disability. On one occasion, the silviculture class was engaged by the Nez Perce National Forest to plant trees in Black Canyon on the Selway River out of the Fenn Ranger Station. Base camp was down next to the river and we arrived there Friday evening. At 6:00 A.M. Saturday morning, the gong rang. After breakfast the crews were organized with mattocks, planting bags, a supply of trees and lunch. Then came the climb up the 100% plus slope almost to the top. From here the men planted down hill toward the river which was reached about 6:30 P.M. a quarter mile below camp. A fine meal awaited the planters and by 7:30 everyone had finished. Within five minutes all had sacked out, dog tired from the rugged planting job. Again at 6:00 A.M. the gong sounded.

Elmer Skeje, one of the student planters, sat up, rubbed his eyes, looked around and remarked, "It didn't take very damn long to spend the night here."

A big game field trip to Yellowstone National Park was a regularly scheduled event in the forties. Dr. Young taught wildlife management as well as the range courses. University vehicles were few and far between so transportation was a problem and Dr. Young vigorously recruited other staff members to participate by supplying private cars for the field trip. As a result, I went on most of these big game trips. The park was a wonderful example of how not to manage game and land. The overstocked winter ranges were so overcrowded and overgrazed that vegetation was virtually annihilated. Dead and dying elk, deer and antelope littered the range. Coyotes and bear had a field day working on the carcasses.

The field trip was scheduled for the week prior to the opening of the park in spring and fishing in Yellowstone Lake was tops at that time of year. So someone always made a motion, readily seconded and unanimously voted, that Sunday should not be an official class day and that liberty be granted to all to pursue such activities as were deemed most appropriate. The result was that almost everyone went fishing and getting the limit of five good trout was no real problem.

It was usually a thrill to ride with Dr. Young. He greatly enjoyed the view of the landscape much more than that of the highway and he would often wax eloquent with one hand while driving with the other. It must be said, however, that some sixth sense always saved the day and brought his vehicle back from the very edge of disaster. One student once remarked, "I'm not going to worry anymore — the Lord must be on his side."

In May 1941 Dr. Young and I packed into the Middle Fork of the Salmon River to visit a graduate student, Gordon Ellis, who was making a study of bighorn sheep on a cooperative project with the State Fish and Game Department. The packer met us at Shoup with broncs fresh from the range, not having been ridden all winter. They were plenty skittish and we had an interesting trip into Stoddard Creek where Ellis was stationed. We arrived just at dusk and awaiting us was a wonderful, hot meal with a dozen trout that would go a pound each. This was beautiful primitive country. The horses were turned loose to graze on the abundant bunch grass and in the morning the packer went out to round them up. A bear had spooked them during the night, however, and getting the halter rope on them was not easy. Having placed the rope on my saddle bronc the packer tied it to a rock of about twenty pounds so that he could go after the other horses. Soon something spooked my bronc again and down the hill it started at a good clip, the big rock rolling along behind it. When the flat bench along the creek was reached, the momentum of the rock was slowed while the bronc was still at full speed. Quickly snubbed, the bronc turned a double summersault and neatly broke its neck. So I went out on mare's shank.

The end of the war brought in a flood of veterans under the G.I. bill. As a group they were more mature than the usual 18-year-old freshman and pretty well knew what they wanted. They were serious and many of them were married and raising families. The forestry staff was kept very busy with them and gradually built up to better accommodate the increasing load.

*(Continued on page 13)*



# Progress in Breeding Blister Rust Resistant Western White Pine

Richard T. Bingham

Principal Plant Geneticist

Intermountain Forest and Range Experiment Station, Forestry Sciences Laboratory,  
Moscow, Idaho

## INTRODUCTION

Nowadays, we foresters can expect increasingly frequent "mandates" from the public concerning the preservation of wildlands we manage. We know that this trend of increasing public awareness and involvement is healthy — even though such active interest can temporarily upset established practices or delay ongoing programs.

In our attempt to prevent further deterioration of sensitive forest ecosystems (especially by pesticide accumulation), we foresters are placing renewed emphasis on biological, rather than chemical, control of forest pests. This paper explains the mechanics of one of these biological control methods, improvement of genetic resistance in western white pine to blister rust disease.

## HISTORICAL

Blister rust disease in an incubation (hidden) stage on white pine nursery stock was introduced into western North America in 1910. By 1923, it had spread from Vancouver, B.C., into northern Idaho, and by 1941, the blister rust epidemic had spread to most of the Inland Empire's 3-million acres of western white pine.

Conventional rust control measures, e.g., mechanical and chemical eradication of alternate host plants (*Ribes* spp.) and other chemical (antibiotic) controls applied to the primary pine host, proved to be inadequate. Consequently, aside from research, attempts to control the disease in this region were abandoned in 1967.

We are now engaged in a massive salvage operation, seeking to harvest severely damaged, salable trees before they are lost. At present, our best hope of restoring western white pine to Inland Empire lands lies in development of genetic resistance, a slow but sure means.

Recognizing the high intrinsic and aesthetic values of western white pine, the Forest Service has become the leader and primary investor in research and development of blister rust resistant western white pine. We have refused to abandon a highly valuable and tractable species or to add it to what is becoming a dangerously long list of pest-threatened species. Implied in the genetic control we seek is the stabilizing influence of resistant types on sensitive forest environments, and the avoidance of environmental pollution.

## THE RESEARCH JOB

The clear history of the rust's introduction from Europe and the severity of resulting epidemics in western white pine led to the assumption that this pine was undergoing its first exposure to blister rust. Host populations appeared to be

uniformly and highly susceptible. Soon, however, — unlike American chestnut trees, which appear to be consistently susceptible to chestnut blight — rare white pines were found to be disease-free, despite long exposure in heavily rusted stands. And, when such rust-free selections were mated, some really remarkable gross levels of resistance were noted in the first generation ( $F_1$ ) seedling progenies.

## Resistance, What It Is

Resistance reactions were found to occur at a succession of sites in needles and bark, as follows:

1. In the needles, resistance reaction(s):
  - a. Limited penetration or establishment of the fungus and resulted in either a decrease or an absence of needle lesions; or
  - b. Slowed or prevented extension of the rust mycelium down the needles and into the bark, which resulted in fewer bark cankers per given number of needle lesions.
2. In the bark, where the same or other resistance reaction(s) resulted in:
  - a. The bark rapidly becoming necrotic in the immediate area of very young bark cankers at needle-bundle bases; or
  - b. Lengthier "corking-out" syndromes involving well-established bark cankers.

From this series of reactions, we hypothesized that four or more resistance genes might be involved in the survival of test seedlings.

The sum total effect of these resistance reactions was a range of from 0 to 50 per cent survival of  $F_1$ , or first-generation, progenies. These survival levels seemed to follow normal distribution. This and the evidence on sites of reactions led to suggestions that (1) resistance may be controlled by several to many genes, and (2) survival level might be inherited quantitatively, as reported for many cereal rusts. Quantitative genetical analyses were undertaken.

Narrow-sense heritability ( $h_2$ ) analyses of progeny survival percentages indicated that a high proportion (60 per cent) of the phenotypic variance, or total genetic and environmental variance in the system, was of the additive-genetic type. About one in four of the parents exhibited general combining ability for transmission of blister rust resistance (i.e., a number of  $F_1$  test crosses were consistently high in resistance). When both parents exhibited a general combining ability, their  $F_1$  crosses averaged  $30 \pm$  per cent survival. Subsequent genetic gain analyses then showed that by breeding a second generation from the survivors of such crosses the survival level might reach  $50 \pm$  per cent. With about one in four of some 400 selected, rust-free parents exhibiting general combining ability, a genetic base of  $100 \pm$  trees was available for practical breeding work.





**A blister rust resistant western white pine from near Fernwood, Idaho. One of 400 such trees tested by the Forest Service for transmission of suitable resistance.**

Survival level, the gross effect of all resistance reactions, was considered a useful interim concept. However, studies were obviously needed to define individual resistance genes, pathogenic races (if any) of the fungus, and interactions of these that produce visible resistance reactions. Such research was planned, but not manned, until the late 1960's.

#### **Practical, First-stage Breeding Work is Under Way**

In our work, we observed levels of survival in  $F_1$  progenies and predicted levels of survival in the  $F_2$  generations were accepted as adequate to permit the use of  $F_2$  stocks for reforestation of select white pine lands. In 1957, we began a "first-stage" developmental work program, designed to produce about 10-million  $F_2$  seeds and semi-resistant seedlings per year from 40 acres of  $F_1$ -seedling orchards. This program is underway and will have continued for 28 years before initial production of  $F_2$  seed in 1985. It is estimated that by that time, the program will have cost about \$1-million. In the 20 years following 1985, 600,000 acres of the best white pine lands will be restored to that species.

In undertaking this program, the Forest Service accepted two known risks. We realized that:

1. The resistance expressed by parental trees long exposed to the rust might be unrelated to that observed in their juvenile test progenies in the rust nursery, and vice versa;
2. That effects of most resistance genes would be short-lived, because they might have been or soon might be bypassed by various pathogenic races of the rust fungus.

#### **Newer Research Results Indicate a Change of Direction for "Second-Stage" Work**

The wheat breeder has been fighting leaf and other rusts of wheat for 50 years. It seems that no sooner does he produce an immune variety than the rust makes an end run and genetically altered races of the rust negate his hard-fought gain. This see-saw battle is economically sound in annual crops, but it is obvious that pines cannot be bred rapidly or economically enough to solve the rust race problem this way.

Agronomists are finding, however, that certain forms of genetic resistance (called uniform or horizontal) defy breakdown by genetically labile disease fungi. Corn breeders have been especially successful in accumulating and using uniform resistance as a basis for lasting resistance. In fact, the United States had never had a major, cataclysmic epidemic of corn leaf rust. This is what we want to accomplish in blister rust resistance research and development work.

Over the past 2 years, results of anatomical and genetical analyses based on resistance reactions have disclosed the existence of five discrete blister rust resistance genes in western white pine, and at least two pathogenic races of the blister rust fungus. All of this new knowledge concerns reactions occurring in western white pine foliage, through which the rust enters the pine. We expect equally important findings from analyses of disease reactions that occur after the rust enters the bark. Surprisingly, some of the resistance reactions we have noted in western white pine foliage and bark are also characteristic of reactions known to occur in Himalayan or Armand pines, two white pines that, in effect, have grown up with the rust and are little affected by its attack. It may be that certain single resistance genes identified in western white pine are much more stable than the single immunity-imparting genes that led to the downfall of the wheat breeder.

Only more research will provide answers to these questions. When we have the answers, we will be ready to take another large step, this time toward permanent resistance. We are now planning research in preparation for second-stage improvement of western white pine. We feel that with new knowledge from the agronomists and from the *Cronartium* resistance breeders, the development of new western white pine varieties with higher and more stable resistance to blister rust, plus improved growth, is only a matter of time.

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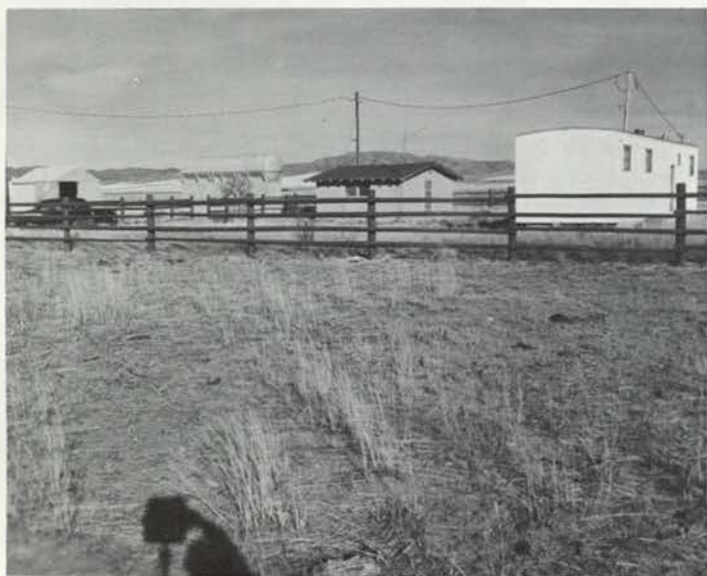


# Point Springs

Dr. Lee A. Sharp  
Professor of Range Management

About 500 miles from the Moscow campus, almost on the Utah border, is an experimental area designated "Point Springs Seeding." The site is on public land administered by the Burley District of the Bureau of Land Management. The name for this seeded rangeland is derived from a spring located on a point of Black Pine Mountain about two miles south of the area.

Prior to 1952, big sagebrush was the dominant vegetation and livestock carrying capacity was very low. The sagebrush was removed by plowing in the summer and fall of 1952 and crested wheatgrass was planted on approximately 7,500 acres. Livestock were not permitted to graze the area for two years following seeding so that the crested wheatgrass could become established.



Point Springs Seeding

The University of Idaho began an evaluation study of range improvement practices in 1953. A cooperative agreement was developed between the University and the Bureau of Land Management to use the Point Springs seeding for study. In 1954, a portion of the seeding was fenced into pasture units, water was piped to each pasture, corral facilities were constructed and a livestock scale was installed to weigh experimental animals. The project was under way in 1955 after a group of livestock producers from Malta, Idaho agreed to furnish yearling cattle for experimental grazing trials. These grazing studies are continuing and are providing information for use in developing range livestock management programs.

The original studies were confined to 960 acres. In 1964, the livestock producers using the remainder of the 7500-acre seeding requested that the University suggest a management program for the total area. A plan of grazing management was developed and implemented in 1965. Evaluation of this program is now underway.

The purpose of the studies on the smaller area was to determine plant and animal response under varying intensities of grazing in different seasons of the year. Results to date show that crested wheatgrass rangeland can be grazed at a greater intensity than previously assumed. Livestock response is very good in the spring of the year, more than two pounds of gain per day per animal from May 1 to late June. Weight gains are acceptable in the fall also. This range land type can be grazed heavily at any season without losing the stand of grass. However, heavy spring grazing lowers forage production.

The studies since 1965 on the larger area are indicating that heavier stocking rates may be attained with rotational grazing than under continuous grazing. Calf crop and weaning weights have improved over the time of study. The potential for manipulating animals to achieve desired objectives is greatly improved where large areas are subdivided and fenced for rotational grazing. The results of this study apply to over one million acres of crested wheatgrass range land in Idaho and to a much greater acreage in the Western States.

The field experience in range land management provided to the many students that have assisted in gathering research data has been as important as the study results. The instructors for this field experience have been mother nature, the livestock producers and the cowboys who herded and helped weigh the livestock. Weighing days offer an experience for students of land management that would be difficult to obtain in any other way. The language is rough but descriptive and, although the exchanges between livestock ranchers, Federal agency personnel and University researchers are friendly, the conversations are sharply pointed toward problems of land use and land use regulations.

After weighing and sorting the animals, the group generally congregates for lunch in a cabin similar in size to the tent frames at the Forestry Summer Camp. Sourdough corn fritters, chili beans or "son-of-a-bitch stew" coupled with Jim Beam, Lucky Lager or other brands fill the stomach and produce interesting conversations. Fifteen to twenty people are commonly fed during these lunch sessions. Dean Wohletz, Dean Kraus and various other University staff members have had occasion to participate in these weighing and eating activities.

Many of the students who have assisted in the research work as undergraduate field assistants or graduate students on research projects have gone forth to make contributions in land management organizations and other fields. Some of those who gained field experience at Point Springs are Drs. Kendall Johnson, Fred Proshold, Rex Pieper, Jack Nelson, Don Foskett, and Jack McAninch. Students who assisted as undergraduates in the field work are LaForrest Twitchell, Delmar Vail, Keith Lilico, Paul Barnes, Bill Clifton, Dick Looney, Bill Riedeman, Bill Foster, Dale Turnipseed, Whitey Nelson, Ronald Dean and Tommy Gooch. Several students have worked on Master's degrees at Point Springs or have



used it as a headquarters to work adjacent areas. Among these are Arnold Bullock, Joe T. Helle, Leonard Burns, Leaford Windle, Jay D. McKendrick, Duane Andrews and Jerry Reese.

In addition to serving as a University student instructional area, Point Springs has been visited by several organizations on field trips, including the Idaho Section of the American Society of Range Management, the Research Committee of the Idaho Cattleman's Association, the Western Regional Research Committee. The Bureau of Land Management has used the area for Advisory Board trips and as a training area for new employees. Several foreign students have spent time with the research personnel at Point Springs.

Financial support for research work and student training has come from many sources. The Bureau of Land Management has provided financial support and technical assistance throughout the study. The ranchers of Malta (Glen Parke, Jack Pierce, Dale Pierce, Lindy Neddo, Ed Hitt, James R. Hitt, James B. Hitt, Bill Hitt, Grant Hitt, Shirley Hitt, Glen Kunau, Wilford Wrigley and others) have furnished the livestock, helped weigh the animals and assisted in a number of other ways. The University of Idaho through the Forest, Wildlife and Range Experiment Station, the Agricultural Experiment Station and Special Research Funds provided the project design and personnel for conducting the various studies.

As the author looks back over the fifteen years of research at Point Springs, the benefits in terms of better land use, student and professional training, and improved communications among agency personnel, livestock producers and the University far exceed the costs of achieving these benefits.

### (Reminiscences — Deters)

Foreign aid and assistance programs also brought us a number of students from other lands. All of these were outstanding individuals, brilliant and so sincere. Many of them are now leaders in their own countries and I am sure provide an international understanding and good will that could not be achieved in any other way. The language barrier was the most difficult one to surmount. Usually about two years were required to gain the competency of language needed for highest achievement. Working with these students was a rewarding experience because they so deeply appreciated the opportunity to attend the University of Idaho and did their best to make good.

Dean D. S. Jeffers who succeeded Dean McCardle in 1935 reached retirement age in 1953 and our own "Smokey Joe" Wohletz was appointed to take over. I recently had a fine visit with Dean and Mrs. Jeffers at the A.A.F. meeting in Miami. They both looked unchanged from their last year at Idaho — truly remarkable people and still as spry as ever. There must be good genes as well as high ideals. Actually, the Dean served out more years of distinction at the Oregon State College of Forestry where he was visiting professor of forestry until several years ago. All of us who knew the Jeffers are richer for that experience.

There are many recollections of work on the University Forest. During my early years it was necessary to resurvey

and post the University Forest boundaries and re-establish the corners and then to cruise the forest to determine what we had. Mr. Walter West, a local resident, and fine woodsmen assisted with both these and other jobs on the University Forest, including a significant timber salvage operation following the tussock moth epidemic of 1946. A steady and increasing timber sales program has developed over the years. Many hours have been spent on timber stand improvement and setting up study, research and demonstration areas. I have always loved to be in the woods working with trees so this has been enjoyable work.

The most pointed memories, however, have been the experiences of working with so many forestry students through forty years of teaching, thirty of them at Idaho. This work has consumed most of my time. There is a huge satisfaction in seeing the students earn their professional degrees and step out into the world to do their part. It is a particular delight to attend local, regional, or national meetings and to see the many people whom you have helped to train. Foresters from Idaho are widely scattered over the nation. Many have made wonderful achievements and are leaders in many different fields.

### (White Clouds — Day)

much less restoration capability waiting off stage with their dozers. Construction of the Little Boulder Creek road would provide a springboard for the land abuses which would surely follow.

It is painfully obvious that the 1872 mining laws do not provide the administering agencies with the clear power to control environmental abuse.

### Economic Gain for Idaho

There will be no direct payments to Idaho for metal recovered. Neither is there any severance pay to the state and counties similar to payments from timber sales on National forests.

Idaho's economy will receive only the income tax on the miners' pay and corporate income tax (less an increased depletion allowance on Moly) and whatever Ad Valorem taxes are applicable

On the other side of the ledger, Custer county and the town of Challis will have to build new schools, hospitals, roads and bridges, furnish more law enforcement and other services. If the Climax operation in Colorado is any indicator, there will be periods of non-operation and labor-layoffs to be assimilated and for which State unemployment compensation will be sought.

Add to this the ever-present possibility of permanent closure if the price of Moly falls below profitable production costs in this low-grade operation. There is no guarantee involved in the law of supply and demand.

Mining operations here would be of relatively short economic duration. Preserved over the years the recreational value of this mountain paradise would inevitably increase in value as the need for quality recreation becomes more pressing. We are still fortunate. As someone has said "we are not so poor that we must destroy such a treasure. Nor are we so rich that we can afford to lose it."





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## Club Report

The school year 1969-70 has been a very active year as far as the various groups and societies associated with the College of Forestry is concerned.

The Wildlife Society had one of its most active and successful years ever. It met its expressed objective of familiarizing "members with the general nature and the issues of the wildlife profession. . ." by co-sponsoring with the Idaho Cooperative Wildlife Research Unit a slide presentation by Dr. John Craighead, University of Montana, entitled "The Grizzly — an Endangered Species." Perhaps the most important accomplishment of The Society was hosting the 2nd annual winter meeting of the Idaho Chapter of The Wildlife Society. During this meeting, a very pertinent panel discussion entitled "What's Happening to Idaho's Quality Environment?" was held. At the regularly scheduled meetings, the Society presented speakers from the University and the general northwest who spoke on a wide range of conservation topics and issues. The 2nd annual gun raffle was the major source of revenue for the Club.

Xi Sigma Pi has undertaken this year to get the students a voice in determining their own curriculum. They held elections to determine students who would serve on a student curriculum-advisory committee. Not only were students elected to this committee, but to a wide range of other committees designed to involve the student in an active role in his College.

As far as the Associated Foresters are concerned, 1969-70 was a year of evaluation. The Associated Foresters want to become a vital, informative organization which will be of service to its members. A committee has been formed to study a possible affiliation as a student chapter of the Society of American Foresters SAF. Such an affiliation would make professional programs available to student members. The main concern among student foresters is that this will amount to a change in name only, not service or benefit to the student. At the time of this publication, several alternate proposals are being presented for College approval.

All in all, 1969-70 reflected a growing concern of students and a desire to participate effectively in their professional and technical organizations.



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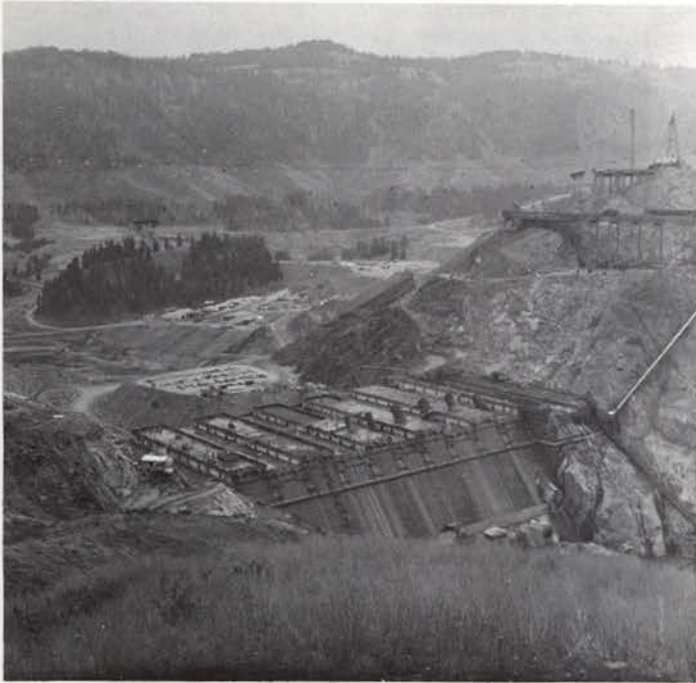
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# Dworshak Dam and Its Effect on the Environment

Stuart L. Murrell  
Regional Conservation Educator  
Clearwater Region  
Idaho Fish and Game Department



**Dworshak Dam under construction.**

Dworshak Dam (formerly called Bruce's Eddy) has been a controversial project from its beginning. The original hearing was held in Orofino in November, 1953. The basic reason put forth for its construction at that time was flood control for the city of Portland. According to the Corps of Engineers' "Water Resource Development — Columbia River Basin" report of June, 1958, the flows from the North Fork of the Clearwater contributed about 5 percent of Portland's flood waters. This same report indicated that over half of the flood flows came from the Columbia, Kootenai, Clark Fork and Pend Oreille Rivers. The plan for power generation was minimal at that time. It has since been increased to a maximum of 1,060,000 kilowatts, or the equivalent of one atomic power plant.

The dam is presently under construction. It is located 1.9 miles upstream from the mouth of the North Fork of the Clearwater River and will extend up the North Fork for 53 miles. It will be 717 feet high and flood 17,000 acres. The cost to the public is currently estimated at 248 million dollars.

## Wildlife Studies

Wildlife studies by Elmer Norberg of the Idaho Fish and Game Department were begun in October, 1954 and completed in September, 1957. He studied the big game and their range in the North Fork, Selway and Lochsa drainages. Particular emphasis was placed on the effects of Bruce's Eddy Dam on the North Fork of the Clearwater and of Penny Cliffs Dam on the Middle Fork of the Clearwater. Norberg's findings were published in a report titled "Clearwater Game and Range Study," PR Report W-112-R. This report formed the basis for most of the recommendations on big game management for the Bruce's Eddy Project.

The Idaho Fish and Game Department and the U.S. Fish and Wildlife Service continued their studies on the effects of the proposed dam on wildlife and fisheries until authorization of the project in 1962 and through to the present. The Fish and Wildlife Service completed one report in June, 1960 titled "Bruce's Eddy Dam and Reservoir, North Fork Clearwater River" and another with the same title in August, 1962. Both reports indicated the U.S. Fish and Wildlife Service and Idaho Fish and Game Department were opposed to the project because of its adverse effects on fish and wildlife resources.

## Effects of Dam on Fish and Wildlife

What are some of the predicted effects on the fish and wildlife which are part of the environment of the North Fork of the Clearwater River? Here are some facts taken from the 1962 report:

1. *The project would cause loss of all steelhead trout, chinook salmon, and resident fish spawning habitat which presently lies within the reservoir area.* This comprises about 717,000 square yards or 47 percent of the anadromous fish spawning habitat available in the North Fork drainage. Another 813,000 square yards lies upstream from the impoundment. The gravel in the North Fork would be sufficient to support 109,000 steelhead redds and 74,000 chinook salmon redds annually. A fish hatchery costing the tax payers 8½ million dollars was requested to replace this run. The annual operation cost of the hatchery is about \$500,000. This was a fishery that nature was providing at little or no cost and which could go on forever if managed properly. The life of Dworshak Reservoir is rated at 50-100 years.

2. *An even greater reduction in the fishery will result on the hundreds of miles of tributary streams which will lose their populations of steelhead smolts.* These little downstream migrants are providing the majority of the trout fishing in the area at the present time. Sampling of fish populations reveals that approximately 70 to 80 percent are juvenile steelhead. A massive planting program will be required to release enough fish to replace this lost fishery, again at considerable taxpayer expense.

3. One effect which was not foreseen in the U. S. Fish and Wildlife Service reports was the *clearing operation around the reservoir between high and low water levels.* The clearing operation was performed rapidly with a serious effect on the environment and has resulted in excessive soil erosion caused by the skid roads running right down to the river; this exposed bare soils on almost perpendicular slopes. It has resulted in silt loads downstream which have silted spawning beds and reduced the suitability of the lower Clearwater River for steelhead fishing. Large landslides into the reservoir may occur when the water fluctuates the expected 150 feet annually on these steep slopes covered by unstable granitic soil. There has already been a giant earth slide near the Visitors View Point. Maximum drawdown could reach 255 feet between high and low water levels.



4. 15,000 acres of big game winter range will be inundated by the reservoir. Norberg's report indicated that all of the whitetail deer and about 25 percent of the elk censused by helicopter were counted downstream from Canyon Ranger Station in or just above the reservoir area. The U. S. Fish and Wildlife Service report in 1962 lists an expected reduction of 40 percent of an estimated 3,000 whitetail deer when Dworshak Dam is constructed because the deer normally winter in the lowest part of the reservoir near Dent. An elk herd which was estimated at 12,000 animals in the late 50's would be reduced by about 15 percent, the percentage of winter range within the pool area. This herd is supplying elk for two of the best elk-hunting Units in Idaho, Units 9 and 10.

5. It is expected that the disruption of elk migration routes by the reservoir in the upper limits of the pool will also contribute to herd decline. The reservoir will be drawn down during the fall and winter months leaving a series of ice shelves and other dangerous conditions for animals attempting to cross it. Trapping and tagging studies on Smith Ridge have revealed elk migration routes across the Little North Fork and main North Fork in the area of the upper limits of Dworshak pool.

#### **The 50,000 Acre Block**

It was recommended by wildlife agencies that a block of about 50,000 acres adjacent to the upper reservoir be managed to provide big game winter range in the reservoir area. This block of land consists of about 38,000 acres of state land and 12,000 acres of private land. There have been wildlife management agreements drawn up between the Idaho State Land Department concerning this tract, but the beneficial results from these agreements will not be realized for a number of years.

#### **The 5,000 Acre Parcel**

To provide more immediate help for the elk, the Idaho Fish and Game Department has requested that the Corps of Engineers purchase a 5,000 acre parcel of critical winter range on Smith Ridge for intensive habitat management for elk. To date, little has been done to provide for these animals and the dam is scheduled for completion in 1971.

#### **Winter Forage Within the "Take" Line**

In addition, the Idaho Fish and Game Department would like to have a portion of the 23,210 acres of land acquired by the Corps of Engineers around the margins of the reservoir, turned over to the Department for big game management. This is the land which lies between maximum pool level and the Corps' "take line".

#### **Low Elevation Forage Important**

To understand the problems associated with inundating big game winter range we must realize that the elevation lost in the pool area cannot be replaced. Even if we are able to provide optimum management on adjacent lands above the reservoir levels, in a severe winter these lands may not be usable by elk because of their higher elevation and deep snows.

We have lost thousands of miles of our most beautiful recreation lands along our river bottoms by dam construction in the United States. The North Fork of the Clearwater River is no exception. I floated through the reservoir site last summer and it struck me as having great potential for being one of the top family canoeing and rafting rivers in the nation. It has just enough rapids for excitement but the novice would be able to navigate them. We observed a group of Boy Scout canoeists camping on a white sandbar. They had come all the way from Oregon to float the river before it was dammed. The scenery is beautiful and with proper management the fishing could be great for the West Slope cutthroat, presently on the endangered species list. When the gates close at the dam, Idaho will lose what could have been a nation-wide tourist attraction.

#### **The Drawdown**

Try to visualize as a recreation attraction a reservoir with a 150 foot annual drawdown and potentially 255 feet. Raw mud banks will extend along the margins for people to fish from, picnic on, and view as they run their boats on the reservoir. Campgrounds will be many vertical feet away from the water and boat docks will have to be constantly relocated as the water goes up and down.

#### **Fishing Potential in the Reservoir**

The reservoir may be productive for fishing for a while, but experience with other reservoirs of this type in the sterile, granitic soils of the Idaho Batholith has shown the fishery will probably be of poor quality in the reservoir. Even though the Idaho Fish and Game Department plans to conduct a control program for trash fish prior to the closure of the dam, there is the possibility of squawfish and other undesirable species taking over the reservoir. It is the shallow depths around the margins of other lakes and reservoirs that produce the food needed by fish to maintain good populations. With Dworshak's steep sides and wide fluctuations few such areas will be available.

#### **The Specter of Lenore Dam**

In addition to the loss of quality recreation in the reservoir area, there is the potential for destroying about half of the lower Clearwater River below the dam. During the prolonged fight between conservationists and the Corps of Engineers, there was no mention made of Lenore Dam. This dam, if authorized, would be constructed just upstream from the town of Lenore and would flood upstream to Ahsahka. Its purpose is to re-regulate the peaking flows released from Dworshak Dam at the 1,060,000 kilowatt capacity for power.

The stretch of water between P.F.I. mill pond and the Dworshak Fish Hatchery at the mouth of the North Fork is one of the most heavily utilized rivers in Idaho by steelhead and bass fishermen, family picnickers, swimmers, boaters and rafters. Experience has shown steelhead and salmon are extremely difficult to catch in a reservoir situation. It is expected that Dworshak Fish Hatchery will be very successful and that steelhead will return to the hatchery from the ocean in large numbers. If Lenore Dam is built, Idaho fishermen will have left only 12 free-flowing miles of the Clearwater River in which to fish for these steelhead. In addition, there is the distinct possibility of confusing these steelhead in their migration back to Dworshak Fish Hatchery and possibly disrupting the hatchery operation. Conservationists are bitterly opposed to Lenore Dam and have the support of Senator Church in their stand.

With the increasing demand for quality recreation — with the other flood control projects being built on the Columbia River — with the alternative sources of power now available — with the fast-growing concern of the public over destruction of our natural environment, we can speculate that Dworshak Dam, if it were being presented to Congress for approval in 1970, would never make the grade.

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# Forests, People, Cities, and Myths

Dr. Harry H. Caldwell  
Chairman of Geography  
University of Idaho

Population forecasts are notably tricky because of changes in values, behavior, economics and concentration patterns. Even in such an advanced country as the United States, 4 forecasts made in the period 1931-1947 for the Census of 1960 were all low by 24 to 35 million.

In 1965 the U. S. Bureau of the Census, recognizing the key variable in the number of children per woman, produced the following four alternative population projections up to the year 2000

Projection	Children per Woman	Population in Millions			
		1970	1980	1990	2000
A	3.35	208.9	249.4	298.1	356.1
B	3.10	207.1	241.9	284.4	331.6
C	2.77	205.5	233.6	268.8	304.4
D	2.45	204.1	226.0	254.0	280.1

Forecasts in late 1969 suggest that the 1970 Census may pass 205 million with a forecast for the year 2000 at 304 million — an increase of 100 million people in the United States in the next thirty years. This includes an estimated average annual immigration of 400,000 which will not greatly affect the projection. Extending this forecast to 2050, only 80 years away, we reach 470 million — unless people change their behavior, values and ideology fast throughout America.

## WORLD POPULATION FORECASTS

In mid-1965, the United Nations estimated the world population at 3.25 billion with a 1968 estimate of 3.5 billion and an annual increase of 2.0% or 70 million. Assuming constant fertility with declining mortality, it could reach 7.5 billion by 2000. The U. N. high forecast is 7 billion, their medium forecast is 6.2 billion and their low forecast is 5.4 billion. The most optimistic forecast was by demographer D. J. Bogue in 1967, who predicted a population of 4.5 billion for the year 2000. A 1969 report published by the National Academy of Sciences forecast 6.1 billion in the year 2000 and 10.3 billion for the year 2050.

## Long and Short Range Planning

Most individuals concerned with resource management espouse the policy of long range general planning and short range specific planning. In truth, almost all planning being done is merely catching up with the present. Rarely has man been involved with long range planning. At best he is willing to think only about 15 years ahead. Even today he is not ready to take adequate legislative steps to prevent our national population from reaching 304 million in 2000 or 470 million by 2050. He glibly goes along *talking* about the impending population problems in his own country. If he were the conscientious resource manager, he would insist that this country aim to achieve a zero annual population increase and that no resource be exploited if it will result in degradation of the environment.

In terms of energy, it would appear that man should concentrate on solar, tidal, fuel cell and nuclear energy and that he should terminate the burning of fossil fuels, saving them for their constructive chemical uses. In summary, there is virtually no long range planning under way in the United

States relative to people, resources and the quality of the future environment.

## Population Distribution

Through design and promotion, urban areas have become the population magnets of the world. Large cities dominate the economies of the nations. The major urbanization trend in the 20th century was in western Europe and North America and since the 1930's has been proceeding at a faster rate in the underdeveloped nations. A number of countries have recognized the undesirable consequences of unrestricted internal migration to urban areas and have attempted to control it unsuccessfully by various laws.

Unless there is a rapid and dramatic reversal of present trends, the bulk of the additional 100 million Americans who will be on the scene by the year 2000 will concentrate in existing metropolitan regions where they will blend with other millions migrating from rural America. A few new cities will be built. There is adequate evidence that the metropolitan city is most efficient "for utilizing resources in most types of production, distribution, consumption". Here "efficiency" in production is favored by low cost of assembly, low cost of distribution, economies through large plants or massing of small plants, and economies in combining the factors of production, three of which — labor, capital and management are more easily secured in urban concentrations. A key factor in accessibility is the focusing of transport on cities — "The metropolis, in its variety, affords a wider selection of economic opportunities to the individual than any other form of human settlement; an individual has his choice of many types of work without changing his residence or of many types of housing without changing his job". . . "The city is also a center of intellectual contacts stimulating cross-fertilization of ideas, recognition of opportunities and facilities for research — all conducive to progress in increasing future productivity."<sup>1</sup>

## Human Values

Against this mass of evidence, it seems inappropriate to challenge the logic. However, there do seem to be some questionable attributes to the city when viewed from a humanistic value system. Is the production, distribution, and consumption efficiency worth the built-in structural anonymity, alienation and indifference? Here in the nexus of transportation and communication there is little or no communication between individuals other than that required for daily needs. The sense of community is gone. Forced integration carries with it the heavy imprint of hate, antagonism and distrust. Does this price get cranked into the efficiency judgment? Have the cities been human-social successes?

## Tomorrow

What happens to the forests in America during the next 70 years will not be determined by professional foresters but by the chain of events that starts nightly in the bedrooms of urban and suburban America. One hundred million more Americans in 30 years seems inevitable and the possibility of 265 million more in 70 years seems likely.



**What the Future Should Be —  
Strong Medicine — One Man's View**

1. Full scale legal, legislative, religious, medical, social, and educational efforts to create a zero percent population increase by the year 2000.
2. Establish town houses or high-rise apartments using neighborhood heating, cooling and waste removal systems.
3. Create neighborhoods with a maximum population of 7000 focused on a cluster of schools, community buildings and neighborhood shopping.
4. Develop neighborhood parks.
5. Create high density pre-planned districts in satellite cities to justify rapid transit systems linking satellite cities to their metropolitan center.
6. Prohibit gasoline-driven cars, open burning and private incinerators.
7. Take legal steps to insure that newsprint and magazines be devoted to disseminating literature or information and not wasted for advertising.
8. Prohibit multiple packaging that wastes time and resources while it creates additional pollutants first in production and finally in the destruction of the waste material.

These proposals will result in a phasing out of the production ethic and its replacement with a new human-social ethic set against an awareness of an increasingly fragile and finite environment. We have been trapped by an obsession with economic growth and the Gross National Product. We should have geared our growth to the needs of our people — their skills and happiness and the quality of our land.

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**What This Means to Forests**

We need management by people primarily concerned with society and people, ecologic balance, esthetics and a sense of awareness that the earth and its resources are finite. In this frame of reference, some fragile forest lands will be managed mainly for looking, others primarily for watersheds or plant and animal habitats, and some of the best lands will be used for trees as a crop. To maximize production these forests will all be planted, using high-yield disease-resistant strains, irrigation, fertilizers, and biological control of insect pests. For the entire forest structure, the total environment would have a higher priority than short-term financial profit. Grazing would be permitted only under highly-controlled conditions.

What kind of training will best fit the land manager for this changing world? At the very least there will be a decreased emphasis on the production commitment and on the role of the trained forester specialist. A multi-discipline background and training in decision-making will be prime requisites.

**What Probably Will Be**

1. Failure to take necessary steps to stop the population explosion.
2. Failure to curb wasteful personal, communal, or industrial practices.
3. Focus on profits at the expense of society because a majority of the power elite are stockholders.
4. Retention of values and outlooks of the 19th and 20th century and their misapplication to the 21st century.
5. Perennial concern about irrelevant moral and political issues while ignoring the engulfing major environmental issues.
6. Unwillingness to undertake forced curtailment of consumption-oriented advertising, the waste of paper for advertising or the waste of excessive packaging.
7. Unwillingness to give up the traditional approach of the production-oriented forester.

**Immediate Consequences**

1. Steady increases in the allowable cut.
2. Annual battles between ecologists and production-oriented groups as to the use of each piece of forest land.

**What Went Wrong?**

Ours is a nation whose behavior has been trapped by economic, political and even religious slogans that we repeat with increasing fervor and conviction. They dominate our political selection process, our economic and personal philosophies and even the selection of our friends, neighbors, and ideas.

Once we bought the idea that **Bigger Is Better**, we used it to judge everything — basketball players, busts, production comparisons with the U.S.S.R., family size, sales volume, city comparisons, schools, lanes of traffic, family status based on income, bedrooms, bathrooms, and even lot sizes. From this has grown federal-state matching legislation and the Chamber of Commerce spirit. From the **Bigger Is Better** slogan alone we have become trapped into a logic geared to the perpetuation of that strange economic myth. When will we face up to the uncomfortable truths of our society and the challenging environmental problems? Time is running out.

<sup>1</sup> Quotes from Chauncy D. Harris "The Pressure of Residential-Industrial Land Use" in *Man's Role in Changing the Face of the Earth*, 1956, p. 885.



# “New Zealand—A Biological Battleground”

Dr. Kenneth E. Hungerford  
Professor of Wildlife Management  
University of Idaho

(Dr. Hungerford was on sabbatical leave in New Zealand from February to August, 1969 studying the impact of introduced mammals on native forest.)

Man is becoming increasingly concerned about the impact he creates on his environment. A series of conflicting biological forces beginning with evolution, accelerated by man, give New Zealand a unique set of land management problems.

## Forces of Evolution

New Zealand is particularly interesting because of the way in which its native fauna and flora have evolved. Being beyond the normal routes of travel via ancient land bridges, New Zealand escaped colonization by mammals migrating to most the rest of the world. New Zealand is about 1300 miles from Australia, a barrier too great for all but a few species of bats. A wide variety of birds, plant life and insect populations have developed in New Zealand, but it was originally without mammals or poisonous reptiles. As a consequence the trees, shrubs, grasses, and other plants developed without acquiring protection from grazing mammals such as undesirable taste, thorns, poisons, or the ability to continue growing under heavy grazing.

Many New Zealand birds have evolved to fill niches normally occupied by mammals. An example is the Kiwi which forages only at night on insects and grubs, much like a mole or a shrew. Long ago the Kiwi lost the power of flight. The Moa was another, a bird 6 to 8 feet tall, essentially a grazer. They occupied a niche more typical of deer or antelope.

## The Forces of Man

The earliest human migrants to New Zealand hunted the flightless Moa birds and eventually exterminated them. Later migrations from Polynesia brought the Maoris, the war-like natives who occupied New Zealand at the time of its discovery by Europeans. Two hundred years ago, Captain Cook, the famed British explorer, made the first comprehensive exploration of New Zealand. He continued the process of environmental impact by producing pigs, sheep, domestic fowl, and by planting garden vegetables and food plants hoping to have a food supply on his later trips. New Zealand rapidly became an important stop for whalers and a base for seal hunters. Then settlers began to arrive.

Both the Maoris and the early settlers commonly used fire to clear the land of its native timber and to make way for grass pastures and grazing management. Along with this development the Europeans brought not only their bands of sheep, but also many wild mammals. More than fifty species of mammals have been introduced into New Zealand. The resulting environmental impact is a notable feature of the New Zealand problem.

Sheep grazing in New Zealand is handled on an entirely different basis than in America. New Zealand sheep normally wander and graze pretty much at will. Large sheep runs average only two musters per year. The lack of poisonous



Part of the Avoca River Watershed, New Zealand. The Avoca River in the foreground is choked with the erosion products from the hills beyond. The wide gravel filled bed is typical of many New Zealand streams. The forests on the slopes in the area background originally went nearly to the snow line. Above that was a zone of scrub (dwarf trees and shrubs), above that was the alpine grassland. The fringe of trees remaining is made up primarily of Mountain Beech (*Nothofagus*) which is one of the species more resistant to grazing pressure. In this area there is still use by domestic sheep, there are smaller populations of red deer, and the Chamois are found in the rocky sites about halfway up the mountain slope.

plants and the absence of predatory animals eliminate the need for day to day herding. At the same time, the Marino sheep, well adapted to the high mountains, tend to go to the upper steep country where grazing and trampling can and does result in major damage to watersheds (see photo).

In addition to the sheep, more than thirty of the fifty species of mammals introduced into New Zealand have adapted successfully. Only a few have expanded their populations to the point where their impact is of major concern. These are the Opossum from Australia; the Thar from the Himalayas of Asia; the Red Deer, the Chamois and the Hare, all from Europe. The impact of these introduced wild mammals is often combined with the effects of sheep grazing but in some locations is proceeding independently of livestock use.



### Geological Limitations

Of great importance is the nature of the underlying geological formations and the context in which the land use and animal impact originates. My main experience was in the south island of New Zealand in the central part of the southern Alps. Here most problems are found on a rather sterile type of parent material classified as "greywacke." This material is easily shattered, and when broken down by weathering it erodes readily. It supports an excellent stand of native vegetation, but when the vegetation is removed and the soil mantle disturbed, severe watershed damage may result. Another problem location is in the north island where parent materials called "mudstones" are raised in steep mountainous sections. These are sedimentary materials quite easily shattered and subject to rapid erosion and consequent watershed damage. Both sections of New Zealand lie within a major fault line and are frequently subjected to rather violent earthquakes which intensify land management problems.

Past burning practices, sheep use in the high country, over-use by introduced mammals on native vegetation in sectors where the parent material is quite unstable—all these add up to major watershed problems in certain areas of New Zealand. These problem areas are in the steep country, generally in the region of timber-line which occurs near 3,000 ft.

### Pasture and Forest Management

A continuing battle has been waged against the "bush", or native forest. The Moa hunters, the Maoris, and the Europeans have all used fire, much as we have in North America, to clear the land and make way for domestic livestock. This has worked well in the lower elevations in New Zealand where pasture management is extremely effective. New Zealanders are among the world leaders in the use of fertilizers on pasture land. Generally both the fertilizer and the seed are applied from the air.

At lower elevations the planted Monterey pine, Scotch pine, and other introduced varieties of timber-producing trees make up the bulk of the New Zealand forest products industry. These species are better adapted than many of the native New Zealand trees because of the quality of the wood they produce as well as the fact that they are relatively immune to the pressure brought to bear by the introduced grazing mammals.

### The Wild Mammal Problem

While the battle against the New Zealand forest goes on, it is not so much carried out today by livestock and humans as it is by the introduced mammals. These introductions began about 100 years ago. The Opossum from Australia is particularly important in eliminating the old growth trees. Once the forests are opened up even slightly, Red Deer move in and begin working on tree reproduction and the understory vegetation. Finally, when the forest is fairly open, the European Hare joins the battle and continues to prevent re-establishment of the native forest which is so susceptible to the onslaughts of herbivorous mammals.

New Zealanders have mounted monumental efforts toward the control of their introduced mammal populations. Intensive control programs have been and still are being waged against the European Hare and the Australian Opossum. Also, intensive efforts to control the European Red Deer have been under way for many years, including shooting programs and, more recently, commercial hunting. Commercial hunting is of ever-growing importance and is quite effective in much of the high country where helicopters are used as both a shooting platform and as a means for transporting the carcasses to processing plants. They are then shipped to Europe and other markets in refrigerator ships.

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### Seeking Solutions

The livestock industry is the back-bone of the New Zealand economy. Their most important exports are wool and wool products, mutton, lamb and dairy products. Another important export is the timber produced in their planted forests. New Zealand desperately needs a diversification of industry and economy, but currently their economy is tied to these products of the land.

Many New Zealanders are well aware of their problems and there are action agencies and research agencies that are well on the way toward solutions. However, the solutions will cost money. With a tightly controlled livestock economy, these solutions are even more difficult.

One of the most promising programs to come from recent research activity is the fencing of the high country on sheep runs to allow the higher land to be managed strictly for watershed. Along with this goes a government subsidy to develop more productive pastures on the lower lands through fertilizing and other modern management approaches.

There are some enlightened New Zealanders who know specifically what is happening to their environment. They know much better than any foreign observer the specific mechanisms involved. On the other hand, they are limited by the constraints of their economic system, their governmental organizations, and even their political structures. Because the backbone of the New Zealand economy is sheep raising, it would be fruitless to suggest the introduction of predators to help in the battle against the introduced herbivores. It would also be fruitless to suggest banning the Marino sheep which damage steep land areas, since there is a special demand for their high-quality wool on the world market. Meanwhile, New Zealand remains a most interesting battleground of conflicting biological, economic and political forces.



# Industrial Forest Management — 1970

Russell Hudson, Block Forester  
St. Regis Paper Company, Libby, Montana

Industrial forest management has been regulated almost universally by the wood supply available. An abundance of God-given, old growth timber usually results in an extensive forest management program. Management activities under these conditions usually are directed toward an orderly development of access and salvage of as much timber mortality as possible. Intensive forest management is generally the result of identifying a future wood supply shortage. The foresight to see this in advance and be prepared for it may be the difference between failure and success in the business world.

The St. Regis Paper Company operation at Libby, Montana, manages some 200,000 acres of fee timberland in northwest Montana. This land provides 20% to 30% of annual log requirements of over 200 million board feet for our manufacturing complex. The Libby operation has two large sawmills, dry kilns and planer, a large studmill, plywood plant and a chemical extraction plant. The balance of the wood supply comes from sales on lands administered by the U.S. Forest Service, State of Montana, and private owners.

The present St. Regis operation was formerly the J. Neils Lumber Company which started operating in Libby in 1919 and merged with St. Regis in 1956. In the early years, most of the timberland was liquidated. In 1939, the concept of sustained yield was considered by the owners and selective logging was initiated in certain stands that could possibly respond. With the change from railroad logging to trucks, emphasis was placed on access road development and salvage logging.

With compilation of a good resource inventory in 1957, a management plan was developed and harvest cutting systems were initiated in 1958. During this past decade, the forest management program at Libby crossed the threshold into intensive forest management. The thesis of intensive forest management means spacing control in all operations dealing with the younger stands.

Natural timber stands are usually classified into one of the three following stand conditions for silvicultural treatment: (1) heavy volume, old growth saw timber needing conversion to reproduction; (2) light volume stands that are suitable for overstory removal and thinning; (3) small saw timber or poles suitable for thinning.

The three major species under management are ponderosa pine, western larch, and Douglas fir, with an admixture of associated species.

Conversion of old-growth stands into reproduction of desirable species with proper spacing may be accomplished by either artificial or natural means. Artificial restocking is employed after clear-cutting stands that are not suitable for natural regeneration. The clearcuts may be rather large to eliminate the invasion of an undesirable seed source and lower the unit costs of all treatments. Slash hazard reduction and site preparation are usually accomplished by broadcast burning or dozer piling, depending upon slash and terrain conditions. Sod areas must be scalped to assure any regeneration establishment. A variety of methods is used to establish the seedlings, depending upon the site conditions of each area.

Our own tree nursery provides over 100,000 seedlings each year for machine planting and hand planting. Many acres

are directly seeded, either by hand or by helicopter. All direct seeding operations must have a program of rodent control. Usually, the artificially established stands have a good spacing of desirable species but are rather costly to accomplish. Not all commercial forest land can bear the cost of artificial regeneration, nor is it necessary that it should.

Many areas can be regenerated by one of several silvicultural methods utilizing natural seed fall. On favorable sites, five to six seed trees per acre will suffice if they are some of the best trees from the original stand. Usually only ponderosa pine or western larch are used for seed trees. These two species are very fire resistant, wind firm on our soils, highest in value, and being intolerant, reproduce well in the open conditions created by logging.

On less favorable sites, a heavy seed tree or shelterwood system is used. Site preparation under these systems is accomplished by sawing or dozer lay-down of the undesirable advance reproduction, brush and cull trees. The better sites are usually broadcast burned by narrow strip headfires under the seed trees. The poorer sites usually are not burned. Dead slash and brush will provide shade and we try for more mechanical scarification.

Seed tree cuttings are usually 200 to 1,000 acres in size, to eliminate the unwanted seed source from untreated perimeters. Seed trees must be promptly removed once a desirable stocking of seedlings is established. This is usually done on a heavy snow cover. Four hundred well-spaced seedlings per acre are considered adequate; establishment usually takes about five years to accomplish. The low cost of utilizing these systems provides for the cheapest regeneration, but they may not be as prompt as the artificial methods.

Light volume saw timber stands with a good ingrowth understory are usually the result of old wildfires or early day logging. It is usually a simple matter to carefully log off all of the overstory without damaging the ingrowth stand. If some of





the younger stand is merchantable, a commercial thinning is also made. These stands and the pole-sized stands are going to produce the future log requirements when the present saw timber stands are depleted. Therefore, a considerable effort is expended to get them in good growing condition.

Thinning offers the greatest opportunity for a return on investment of any cultural operation. In general, the younger a stand is, the better the response of thinning will be. One cleaning-thinning operation in plantations and stands resulting from harvest cuts before age 20 should result in being able to start commercial thinnings at age 40 on the better sites. Natural pole-sized stands may be thinned to shorten the time necessary until commercial thinning may begin. Currently we are attempting to thin or clean 3,000 acres annually.

All cultural operations tend to favor a mixed stand of intolerant ponderosa pine and larch because they do not tend to develop an understory problem such as the tolerant species do. Many of the natural young stands contain a high proportion of tolerant Douglas fir because of man's effective effort to control wildfire.

In 1962 we collected seed from some of the finest ponderosa pine on our forest lands. The seedlings from these trees were outplanted in 1964 on a five-acre test site. This progeny test at present looks very promising. We are very active in the cooperative Inland Empire Ponderosa Pine Tree Improvement Program and have hopes of being able to increase the yields from our future forests.

Our management objectives should enable our forests to continue to contribute a good share of the raw materials needed to operate our manufacturing facilities. The benefits seem very large for the modest investments being made.

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# Range Management Overseas

Dr. Edwin W. Tisdale  
Professor of Range Management  
University of Idaho

Our ideas of a land resource are shaped by experience in our own country, or more likely, just one part of our country. For this reason, it is mind opening, and sometimes startling to see similar resources in other parts of the world, and to find how they are used. It can also be revealing to find how people are being educated to manage these resources.

Four years ago, I had the opportunity to spend about 7 months studying range resources and problems in 10 countries of the Middle East, North and East Africa and the Eastern Mediterranean. The countries were Iran, Syria, Lebanon, Kenya, Sudan, Egypt, Tunisia, Israel, Turkey and Greece. I made this trip while on sabbatical leave from the University of Idaho, and with additional financial support from the Drylands Research Institute of the University of California at Riverside.

While the time spent in each country was quite limited, this approach had the advantage of enabling me to make direct comparisons of resource conditions and problems.

The area chosen for study is not as diverse as the list of countries might suggest. First, grazing land constitutes an important natural resource, and in fact is the predominant land use category in many of these countries. Second, the whole region has long been occupied by man and his grazing animals. Civilizations have existed in much of the region for thousands of years, and land use has been intensive for most or all of this time. Third, all of the countries lie in relatively dry zones, and drought is a frequent problem in land use. Fourth, most of these countries are in the "developing" class, that is, they operate on a lower plane economically than countries of Western Europe or North America. Fifth, educationally, a high percentage of illiteracy exists in many countries. Education in land management, and especially in the management of grazing lands is just getting started.

What are some of the outstanding features, resource-wise, of the region visited? It is difficult to condense the great variety of impressions, but here are a few that seem most meaningful from a land manager's view point.

First, the overall menace of drought. The greater part of the study area averages less than 12 inches of precipitation annually. Most of this moisture comes in a few months of the year, in the winter or equivalent "rainy season". A dry and usually hot period of 4 to 6 months or more follows the moist period. In addition, the total amounts of precipitation vary greatly from year to year.

The effects of drought on grazing animals and rangelands are intensified by the fact that reserves of feed are rarely accumulated to help during the dry periods. The common practice is to sell large numbers of animals (at depressed prices) or to allow many to die. Either method helps the ranges somewhat, but creates poverty and great instability in the grazing enterprise. In those countries where wildlife is abundant (Kenya, part of Sudan) they too can be seriously affected by drought.

Second, the population explosion and overstocking. We are accustomed to hearing about the population explosion in humans and its dire consequences, but few people realize that

an even greater increase in livestock numbers has occurred during the past 3-4 decades. This increase results from a combination of factors, including increased demand for livestock products, increased political stability (barring occasional upsets) and control of diseases and pests. It is a sad fact that disease control measures, supposedly one of the greatest gifts brought by the advanced countries, have resulted in disastrous increases of both people and livestock. A further contributing factor to overstocking of the ranges is the fact that large areas have been converted to grain production. Most of this land is submarginal for cultivation, so the net effect is to destroy much grazing land in return for low and sporadic yields of grain, often accompanied by accelerated soil erosion.

Third, lack of control of grazing. Most of the rangeland in the countries studied is either government owned or the common property of a tribal or village group. Grazing and other uses of these lands are largely uncontrolled. In some cases, a reasonable pattern of use by one tribe or village has disintegrated under pressure from adjoining users. In the case of strictly government lands, laws governing use have been passed in some countries, but in most cases proper grazing plans and means for enforcing them do not exist. The situation

resembles that which existed in the western U.S.A. prior to passage of the Taylor Grazing Act, but intensified by a heavier rate of stocking and by the poverty of most livestock owners.

Four, lack of integrated land use. We know that here in the U.S.A. our efforts to achieve multiple use and a mutual understanding of different land uses are imperfect, but at least these are considered desirable goals. In most of the countries studied, such integration of uses is scarcely considered, except by a few professional land managers. For instance, there is little cooperation between stock raising and grain farming. As a result, livestock suffer from lack of supplemental feed that could be raised on cultivated lands, while these same lands deteriorate under a system of continued grain cropping alternating with periods of bare fallow.

Five, deficiencies in education for land management. University trained people make up only a tiny fraction of the population of most of the countries studied, and land management is a small and often neglected part of the academic establishment. In most cases higher education is moving ahead, helped by the international programs of more advanced countries and by private foundations such as Rockefeller and Ford, but the road ahead is a long one.

Research on land management problems is small in amount in most of these countries, and what exists is supported in large measure by outside agencies. There is a great lack of information about the extent, nature and present condition of wildlands generally, and especially of range lands.

Six, shortage of suitably trained land managers. One of the bottlenecks for both higher education and research in land management is a lack of well qualified personnel. Foreign staff often lack a suitable background for work in a developing country, while few qualified native professionals are available. The latter usually have to attend schools in more advanced countries for their graduate training, and often find conditions and salaries unattractive when they return home. In addition, the kind of graduate training offered in many American



universities is too specialized and remote from the realities of on-the-ground management to be suitable for students from developing countries.

A particular problem in the forestry and range fields is the dominance of European trained professionals in many of the countries studied. These people tend to be either strictly "tree foresters", or agronomists, both lacking an appreciation of the

multiple uses of wildlands. In addition, they have been raised and educated in relatively humid areas and generally lack an understanding of land management under arid or semi-arid conditions. In range, the most desirable foreign staff are considered to be those from North America and Australia, where dryland problems are a normal part of the resource scene.

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HOFFMAN HENRY C  
HOPPIN WILLIAM W  
JACKSON TOM  
JACOBSON IRA  
JENSEN RALPH  
JOHNSON ALFRED C  
JOHNSON DONALD G  
JOHNSON ROBERT C  
JOHNSON ROBERT HOLM  
KARSTAD OWEN F  
KEENE EDWARD L  
KESSLER JOHN A  
KEUCHMANN JAMES H  
KILER ALVARO R  
KINNAMAN DALE H  
KLEPINGER FRANKLIN  
KOWALSKY STEPHEN I  
KULW DAVID L  
LEE GEORGE E  
LEHT VILHO A  
LIGHT ELLIOT N  
LINDSAY DAVID O  
LOWNIK EDWARD C  
LUND JENS M

MAKI RICHARD L  
MALANY HERBERT S  
MARSH ALFRED H  
MARSHALL FREDERICK W  
MARTIN GERALD H  
MARTIN JAMES A  
MASTIN RICHARD J  
MATTHEWS PAUL C  
MCGEE JAMES B  
MCGILL THOMAS F  
MCGINNIS FRANK T  
MCKEE BILL E  
MCNAIR JOHN J  
MEARS JOHN S  
MELICK HARVEY I  
MENGES PHILIP E  
MENNELL RAYMOND  
MERRILL EDWARD H  
MICHELSON CHRISTIAN E  
MIDDENDORF JAMES F  
MILLER RAYMOND L  
MILLER SPENCER R  
MILLER WARREN G  
MONTGOMERY ALLAN C  
MOOMAW JAMES C  
MOORE JON E  
MOSS VIRGIL D  
NAGLE WILLIAM  
NEEL ROBERT W  
NELSON NORMAN T  
NELSON TERRY L  
NELSON WILLIAM E  
NISSBET ROBERT L  
NORDBLOM GEORGE F  
NOVAK CLYDE A  
OBERMEYER JACK W  
OEHMCKE BOB G  
OLIVER JOHN P  
OLNEY WARREN H

OLSON JACK D  
OLSON SCOTT W  
PAYNE CLOYD T  
PAYNE JOHN C  
PEAIRS ROY S  
PEDERSON GARY L  
PEKOVICH ANDREW W  
PERKINS KILBY V  
PETERMANN NELSE W  
PHELPS EUGENE V  
PHILLIPS JAMES E  
PIPER FRANK C  
PLUNGUAN MARK  
PORTER ROBERT M  
POTTER HOWARD L  
PRESTON PETER C  
PRICE WILLIAM L  
QUADRI EUGENE B  
RICE RICHARD T  
RIGGS CHARLES E  
RINARD JOHN E  
RITCHEY NORMAN C  
ROBERTS EARL C  
ROBERTSON GARNET A  
ROCKWOOD JERRY R  
ROGERS HAL L  
ROWE JOHN A  
RUCKWEED FRED J  
RUNBERG DONALD E  
SALINGER HERBERT E  
SCHALLER MAURICE R  
SCHRECK WILLIAM R  
SCHROEDER THOMAS W  
SCOTT DAVID W  
SEDOFF ARTHUR  
SETTLERS RAYMOND L  
SMART ROBERT A JR  
SMITH ALMOND W  
SMITH THOMAS W

SONNICHSEN ROBERT W  
SPEEDY ROBERT P  
STAHL MALCOLM K  
STAIRS WILLIAM D  
STEVENS ARTHUR W  
STORDAHL JAMES H  
STRAWN CHARLES C  
STYFFE HOHART H  
TAGAWA TOM K  
TAYLOR CYPRIAN D  
TAYLOR WILLIAM P  
THACKER DALE S  
TOFFLING JAMES J  
TOOLE ARLIE W  
TULLEY HARLAN N  
VAN CAMP RICHARD P  
VAN KLECK ROBERT  
VANDER POEL DENTON R  
VOLLAND LEONARD A  
WAHL JOSEPH D  
WALKER GUY S  
WALKER KEITH J  
WATSON HAL A  
WEBB JAMES L  
WEINEL WARREN G  
WENTWORTH IRVIN  
WHEELER JOE B  
WILLIAMS GEORGE J  
WILLIAMS GUY V  
WILLIAMS ROBERT E  
WILLIAMS TERRY L  
WILLOWS CLAUDF E  
WILSON DAVID G  
WOOD CHARLES  
WOOD ALAN H  
WOODLEY SAMUEL R  
WRAY SYDNEY E  
WRIGHT LOREN H  
YEARSLEY MAURICE C  
YODER VINCENT S  
ZORB GORDON



# Alumni Directory

ABULA SULE S	DEP NATURL RESOURCEJOS	NIGERIA		BOHNING JOHN W	107 N SECOND ST	WILLIAMS	ARIZONA	86046
ADAMS DAVID L	DEPT FOR CSU	FORT COLLINS	COLO	BOLAND THOMAS P	495 EAST 13TH ST	IDAHO FALLS	IDAHO	83401
ADLER LEE R	BLM FFD CTR RLD 50	DENVER	COLO	BOLICK ERI D	ROUTE #1	EPHWATA	WASH	98923
AGGERS LEE W	925 NW 23RD #46	CONVALLIS	OREG	BOLTON ELVIN L	BOX 503	SMELTERTVILLE	IDAHO	83868
AHLER ERNEST E	RT #2 BISHOP ROAD	KNOXVILLE	TENN	BONN STEFFEN A	RH 4230 S AGR BLDG	MONTPELIER	VT	56265
AHLSKOG HOWARD E	413 IDAHO	BOISE	IDAHO	BONNETT HOWBERT	710 NE HOLLADAY	PORTLAND 12	OREGON	97230
AHRENHOLZ FREDERICK W	PO BOX 1143	QUINCY	CALIF	BOOKER EDWARD C	NORTHERN REGION FOLAMPANG	THAILAND		
ALBEE LESLIE R	1621 N 60TH ST	LINCOLN	NEB	BOSWORTH DALE N	BOX 133 AVERY BGR STAVERY	IDAHO		81802
ALBERTA JAMES L	3104 ILY ST	MOSCOW	IDAHO	BOURASSA ARTHUR S	969 CRESCENT ST	PLACERVILLE	CALIF	95667
ALDRICH CECIL L	ST OF IGA FOR DEP	OROFINO	IDAHO	BOYER DAVID R	811 N WASHINGTON ST	CENTRALIA	WASH	98531
ALEXANDER DONALD G	520 N 19TH ST	COEUR D'ALENE	IDAHO	BOYES WILLIAM G	DEPT NAT RES BX 480FORKS	WASH		98331
ALLEN HERBERT R	BOX 5	MCCALL	IDAHO	BRACKERUSCH ARTHUR P	4310 GARRETT RT 3	MISSOULA	MONTANA	59901
ALLEY JACK R	FED BLDG USFS	MISSOULA	MONTANA	BRACKERUSCH HAHOUD M	BOX 62	GORDONSVILLE	TENNESSEE	38563
ALLGAH JOHN A JR	BOX 26	DONNELLY	IDAHO	BRADLEY GLEN S	BOX 4043	IDAHO CITY	IDAHO	83631
ALLISON DONALD T	FED FISH HATCHERY	JACKSON	WYOMING	BRADLEY GLENN S JR	BOX 4043	IDAHO CITY	IDAHO	83631
ALMAS DEWEY P	00X 122	HAYDEN LAKE	IDAHO	BRADD GLENN E	1182 E 3100 N	OGDEN	UTAH	84404
ALMQUIST DENNIS A	HDX 751	MULLAN	IDAHO	BRADY PAUL J	BOX 523	MILL CITY	OREGON	97360
AMES GEORGE F	YAKIMA AGENCY BX261	WHITE SWAN	WASH	BRANDBORG STEWART M	RT 3 BOX 157	GAITHERSBURG	MD	20760
AMOS ARTELL J	PO BOX 616	JOHN DAY	ORE	BRANDT CHARLES J	PO BOX 546	CUBA	N MEXICO	87013
ANDERSON ARTHUR W	HDX 104	EAGLE	IDAHO	BRATLIE NORMAN D	912 ELM AVENUE	COEUR D'ALENE	IDAHO	83814
ANDERSON BERNARD A	FAD UNITED NATIONS	ROME	ITALY	BRIGGS NORMAN J	806 PEKAN ST	CROSSETT	ARK	71635
ANDERSON BRUCE D	2002 E 28TH	TACOMA	WASH	BRIGHAM MORTON R	3519 13TH STREET	LEWISTON	IDAHO	83501
ANDERSON DALE V	2716 REDWAY ROAD	BOISE	IDAHO	BRIGHT DOUGLAS R	BOX 72	IDAHO		83802
ANDERSON EARL H	390 S WATER AVENUE	IDAHO FALLS	IDAHO	BRISCOE LLOYD E	114 NORTH IDAHO	GRANGEVILLE	IDAHO	83530
ANDERSON ERNEST W	1509 HEMLOCK ST	LAKE OSWEGO	OREG	BRITTON MERLE R	RANGE CONSERV SCS	POST	TEXAS	79356
ANDERSON OSCAR E	ILM	DILLON	MONTANA	BRIXEN ALLEN R	711 NORTH FOREST	SANDPOINT	IDAHO	83864
ANDERSON PAUL F	2830 FLORIDA NE	ALBUQUERQUE	N M	BRIZEE LTC HARRY A	605 G ST SW	WASHINGTON	DC	20024
ANDERSON PAUL L	RT 1 BOX 160	ORVILLE	WASH	BROCK CECIL E	PO BOX 3570	CASCADE	IDAHO	83611
ANDERSON RICHARD B	BOX 335	HAILLEY	IDAHO	BROCK ROBERT J	CLEAR CRK CIV CONS	CARSON CITY	NEV	89701
ANDERSON ROBERT G	ROUTE #1	RATHDRUM	IDAHO	BROOKS JAMES C	BOX 547	WARMSPRINGS	ORE	97761
ANDERSON SCOTT H	ROUTE 1	GOODING	IDAHO	BROOKS ALLEN L	37 ALGONQUIN WOOD	WEBSTER GROV	MISSOURI	63119
ANDERSON STANLEY A	DRIFTWOODS 125 W 2ND	MESA	ARIZ	BROOKWELCH WARD T	BLACKROCK RGR STA	MORAN	WYO	83013
ANDRAITIS MAJ I	MAG-SOG	APT SAN FRAN	CALIF	BROWN CHARLES G	1660 BROOKHURST ST	MEDFORD	OREG	97501
ANDREWS DAROLD	1210 N ELLIOTT	COVILLE	OREGON	BROWN CLARENCE W	BOX 143	MCCALL	IDAHO	83638
ANDREWS DUANE S	PLANT SCI DEPT U I	MOSCOW	IDAHO	BROWN CHARLES G	201 W 46TH ST	VANCOUVER	WASH	98665
ANDREWS MILTON D	8901 BRAEBURN DR	ANNANDALE	VIRGINIA	BROWN DAVID C	RT #1	MISSOULA	MONT	59801
ANDREWS RUPERT E	3920 BALCHURN DRIVE	ANCHORAGE	ALASKA	BROWN FRANK A	2784 GRIFFIN CK RD	MEDFORD	OREGON	97501
ANDRUS DALE	8901 BRAEBURN DR	ANNANDALE	VIRGINIA	BROWN ELLSWORTH R	888 S ORANGE GROVE	PASADENA	CALIF	91105
ANGELL HERBERT W	604 KANAHA STREET	LANIKAI OAHU	HAWAII	BROWN GENE S	WASH ST DEPT GAGE	MT VERNON	WASH	98273
ARGYLE JOSEPH D	IDAHO CITY HS	IDAHO CITY	IDAHO	BROWN JAMES P	725 EAST E ST	MOSCOW	IDAHO	83843
ARMOUR CARL	IDOL DEP UNION UNIV	JACKSON	TENN	BROWN LAWRENCE W	BOX 802	PITTSBORO	N C	27312
ARMSTRONG JAMES P	RT 4 BOX 417-2	PORT ORCHARD	WASH	BROWN RICHARD I	BOX 153	KENTON	MICH	49436
ARNASON ALLAN T	606 OAKLEY PLACE	ALEXANDRIA	VA	BROWN ROGER C	1435 GERALD AVE	OMAK	WASH	98841
ARNESON LAWRENCE N	BOX 175	HEADQUARTERS	IDAHO	BROWN STEWART E	RT 2	MISSOULA	MONT	59801
ARNOLD DALE L	12 E INDEP AVE USFS	WASH 25	D C	BROWN DAVID S	1625 HENRY LANE	MANCHESTER	IDAHO	52057
ARTHURS AUBREY J	U S F 5	SANGPOINT	IDAHO	BRYAN EUGENE L	1025 EAST F	MCKINLEYVILLE	CALIF	95521
AYERETT ROBERT C	2510 MULKEY	CONVALLIS	OREG	BUCHANAN T S	MOSCOW	IDAHO		83843
BACHMANN ROGER L	RR #3	AMES	IDAHO	BUCHERT GEORGE P	105 PRINCESS APTS	POCATELLO	IDAHO	83201
BAHR THOMAS G	2149 JACKSON STREET	LACROSSE	WISCONSIN	BUFFAT JACK L	ZOOLOGY DEPT USW	PULLMAN	WASH	99163
BAIR JAMES V	GALLATIN NAT FOR	STEVINGSTON	MONT	BULLOCK ARNOLD E	PO BOX 2785	SUSANVILLE	CALIF	96130
BAILEY EDWARD O	10803 KELMOR ST	CULVER CITY	CALIF	BURKHARDT JEROLD W	RT 2 BOX 63	RIGBY	IDAHO	83843
BAKER PERTRAM C	RT #1 BOX 8	DICKINSON	N DAKOTA	BURLISON VERNON	EXT FOR U OF I	NORTH WALES	PA	19454
BALKER GARY E	25 REDDING PLACC	OAKLAND	CALIF	BURR BENJAMIN	2519 COLLEGE AVE	BERKELEY	CALIF	94303
BALCH ALFORD P	C/O MONSANTO	SODA SPRINGS	IDAHO	BURROUGHS ISAAC C	518 N MAIN STREET	CLINTON	TENNESSEE	37716
BALL CLIFFORD M	251 S 3RD E	SODA SPRINGS	IDAHO	BURTON CARY L	735 N 3RD STREET	MONTROSE	COLORADO	81401
BALL VERNON C	FOR SP FISH BLDG	DENVER	COLO	BURTON JIM P	2036 THORNBURG DR	LARAMIE	WYOMING	82070
BALZER DONALD S	1507 HALFPOUR LANE	CINCINNATI	OHIO	BUSH BILLY	80 STEPHEN DRIVE	PLEASANTVILLE	Y	10570
BALUTH OTTO	PO BOX 35	CHAGI	ALASKA	BUTLER CPT STEPHEN D	2825 NW 35TH	OKLAHOMA	OKLAHOMA	73112
BARD GEORGE L	HX 243 BUR LAND	MANSHOSHONE	IDAHO	BYNUM HUBERT H	PO BOX 245	BERKELEY 1	CALIF	94704
BARDY LAWRENCE H	677 CHAUNTAUQUA BLVD	VALLEY CITY N DAKOTA		BYRNES JAMES B	330 ALTURAS DRIVE	TWIN FALLS	IDAHO	83301
BARIBEAU WILLIAM T	BOX 206	CLARK CGR	IDAHO	CAIN DWIGHT R	BOX 4460	TUCSON	ARIZONA	85717
BARKER PAUL F	615 VISTA AVE #10	BOISE	IDAHO	CALLAWAY GEORGE R	ST REGIS R D	ST REGIS	MONTANA	59866
BARNARD DARRELL R	4525 REBERTSON DR	BOISE	IDAHO	CAMAROTA MICHAEL J	1800 SHEPARD AVE	MT CARMEL	CONN	06518
BARNETT STEELE	BOX 323	MEDORA	N DAKOTA	CAMERON ROBERT L	ROUTE 1 BOX 201	HAYDEN LAKE	IDAHO	83835
BARNETT LARRY D	RD #1 BOX 69	G BARRINGTON	MASS	CAMMACK FRANK H	324 MOBLEY DRIVE	BOISE	IDAHO	83706
BARTLET KENNETH H	STAR ROUTE	DIXON	MONTANA	CAMPANA RICHARD J	DEPT BOTANY U OF M	ORONO	MAINE	04473
BASFORD DOUGLAS D	BOX 396	PARMA	IDAHO	CAMPBELL DONALD P	6914 SIESTA DRIVE	MISSOULA	MONT	59801
BASILE JOSEPH V	FOREST SCIENCES LAB	BOZEMAN	MONT	CAMPBELL DUNCAN	C/O SOIL CONS SERV	TOWNER	N DAKOTA	58788
BATES KYLE C	ROUTE 1 BOX 13	ATHOL	IDAHO	CAMPBELL JESSE L	5230 140TH ST SW	EDMONDS	WASH	98020
BATES ROBERT W	BOX 21	EAGAR	ARIZ	CAMPBELL JOHN D	CHALLIS NAT FOR	MACKAY	IDAHO	
BATTEN CHARLES R	332 S MICH RM 1836	CHICAGO	ILL	CAMPBELL OMAR M	330 FIRST AVE	MONTPELIER	VT	81144
BAUGH GRANT	BLM BOX 1867	IDAHO FALLS	IDAHO	CANADY MICHAEL L	6916 SUNSET TERRACES	DES MOINES	IA	50311
BAUMANN HERMAN	225 HILLSIDE AVE	PIEDMONT	CALIF	CANFIELD ELMER E	COL OF FOR U OF I	MOSCOW	IDAHO	83843
HAY ROGER R	LAKE ST FOR EXP	STAGRANO RAPIDS	MINN	CAPLEN JIM E	DEPT OF NAT RES	CATHLAMET	WASH	98612
REALS WILFRED F	FOREST RANGER	COLLBRAN	COLORADO	CAPLES JAMES W	C/O COLERA MINING	NORTH FORK	IDAHO	83466
BEAN CLARENCE D	DEPT NAT RES SW	REGVANCOUVER	WASH	CAPORASO ALESSIO P	1631-27TH ST	OGDEN	UTAH	84403
BEARD JESSE A	1614 ALISO DR NE	ALBUQUERQUE	N M	CARD ANDREW J	DEPT NAT RES	VANCOUVER	WASH	98020
BEASTER ERVIN J	DEP NATURL RESOURCE	SULTAN	WASH	CARLSON CHARLES E M	2512 REDWAY RD	BOISE	IDAHO	83704
BECK BRYCE	525 AVILA RD	SAN MATEO	CALIF	CARLSON MELVIN R	451 CASSELLMAN GS	CHULA VISTA	CALIF	92010
BEDELL JESSE L	1929 NE SCHUYLER	PORTLAND 12	OREGON	CARMICHAEL JAMES E	FOREST RES LAR OSU	CORVALLIS	OREGON	97331
BEIER RICHARD J	DNR BOX 381	SHAWANA	WISC	CARMICHAEL RALPH L	DEPT OF FOR MSU	EAST LANSINGWICH	MI	48823
BEITIA FRANK G	RT #2 BOX 130	POCATELLO	IDAHO	CARRERON STANLEY B	363 PARK AVENUE	E HARTFORD	CONN	06106
BELL JEROME L	HARRALD APTS BOX	BIFRANKLINTON	PENN	CARRINGER WILMER D	PO BLDG USFS	PRVO	UTAH	84601
BENNETT CAREY H	4918 GUFFER R NW	ALBUQUERQUE	N MEXICO	CARY ORVILLE B	PO BLDG FIRE STAFF	BAKER	OREGON	97814
BENSON RUDOLPH J	#11-733D AVE NW	NEW BRIGHTON	MINN	CASEY OSBORNE E	1045 ENCINO ST	POCATELLO	IDAHO	83201
BERGQUIST JON R CAPT	217 LAKEVIEW	AMERY	WISC	CASZIER SAMUEL E	APARTADOPOSTAL 4851	GUAYAOUIL	EQUADOR	
BERKEY DONALD E	BUREAU LAND MGMT	FAIRBANKS	ALASKA	CHANDLER DEAN B	BOX 2111	POCATELLO	IDAHO	83201
BERNSTEN DR CARL M	240 W PROSPECT ST	FORT COLLINS	COLO	CHATTERTON CLEVE E	CAMPUS COURT 26	USOCORVALLIS	OREGON	97330
BERRIGAN WILLIAM C	RT 4 BOX 17	SEDRO WOODLE	WASH	CHEN CHUNG-HSIEN	NATL TAIWAN UNIV	TAIPEI	TAIWAN	CHINA
BERSCHEID GEORGE H	US FOR-STR SERVICE	WALLA WALLA	WASH	CHERRY PARLEY E	PO BOX 5767	DENVER 17	COLO	80217
BETHKE JOHN A	45 VALENTINE RD	BRIARCLIFF	NY	CHICKEN ROBERT B	209 FERRY ST	WENATCHEE	WASH	98801
BETTS JAMES W	WIND RIVER NURSERY	CARSON	WASH	CHOLIS JOHN	1800 AVE OF STARS	LOS ANGELES	CALIF	90067
BEUS ELOON C	BOX 511	SHOSHONE	IDAHO	CHOJINARD MARVIN B	103 E 3RD ST	COSMOPOLIS	WASH	98537
RHANDHABURANA VINAI	KASFTSART UNIV	HANKOK	THAILAND	CHRISTENSEN DAVID L	301 SOUTH MAIN ST	FREMONT	NEBRASKA	68025
BICKFORD CHARLES A	N Y COL OF FORESTRY	SYRACUSE	N Y	CHRISTENSEN GENE L	ROUTE 4	SPARTA	WISCONSIN	54656
BICKFORD RICHARD	DEP ASSES LEWIS	CTYCHEHALIS	WASH	CHRISTIANSEN HEILS B	RT 1 BOX 772	QUINCY	CALIF	95971
BIGLEW CHARLES A	MT 2 BOX 20	BEND	ORE	CHRISTY DAVID A	RT 3 BOX 38	DEER PARK	WASH	99006
BIGLER ROBERT L	POX 463	DARRY	MONT	CHUGG FREDERICK M	BOX 123	AVERY	IDAHO	83802
BIKER JOHN B	1100 RITCHIE AVENUE	TRAIL	B C	CHUPP NORMAN R	9029 FASHION DR	SACRAMENTO	CALIF	95826
BILADEAU JAY G	2802 W BANNOCK	BOISE	IDAHO	CLACK JAMES H	PO BOX 8669	ENSLY	BIRMINGHAM	ALA 35218
BILLINGS WILLIAM E	207 W GREENWOOD	LANARNA	CALIF	CLARK BURTON O	PO BOX 245	REKLEY	CALIF	94701
BINGHAM RICHARD T	612 MOORE	MOSCOW	IDAHO	CLARK DEWEY E	604 JEFFERSON	NICHLAND	WASH	99352
BIRKMEYER ARTHUR R	75 NIGHTINGALE #216	GULF BREEZE	FLA	CLARK JAMES P	B L W	MEDFORD	ORE	97501
BISHOP DOUGLAS A	SOIL CONSERVA SERV	ANDERDEEN	IDAHO	CLAUSEN MELVIN D	9409 BURNETT DR	BOISE	IDAHO	83705
RIZEAU ELWOOD G	ROUTE 2	MOSCOW	IDAHO	CLEAVLAND ELBERT C	BOX 63 PINE GROV	INNWINCHESTER	IDAHO	83555
BJORNN THODDOR C	FORESTRY U OF IDAHO	MOSCOW	IDAHO					
BLAISDELL J P	USFS RING & WILDLIFE	WASH	D C					
BLAKE GEORGE M JR	FORESTRY U OF MONT	MISSOULA	MONT					
BLAZ ROY T	2619 GN MARSHALL	NEALBUQUERQUE	NEW MEX					
BLEDSOE JON B	US FOR SERVICE	GRANGEVILLE	IDAHO					
BLOVEN JERRY R	1133 W HIGHLAND	REDMOND	OREGON					
BLOOM JAMES A	RT 1 3RD & MANSELL	QUINCY	CALIF					
BOHMAN WILLIS A	1021 VIRGINIA AVE	MOSCOW	IDAHO					



CLONINGER RUSSELL T 5724 S 3RD ST ARLINGTON VA 22204  
CLOSNER FORREST H 242 S MCKINNEY BOISE IDAHO 83704  
CLUBB WILLIAM F HOX 25 JEROME IDAHO 83338  
COATS DUREDOD F INXD NATL FOREST MAMMOTH LAKECALIF 93546  
COATS ROBERT T 1016 N 29TH ROISE IDAHO 83706  
COCHRAN ALLAN R 3626 GREENLAND AVE ROANOKE VIRGINIA 24012  
COCHRANE ROBERT B LOWER TRIN RGR DISTCALIF 95563  
COLE GENE F KRASSER RANGER STATMCCALL IDAHO 83638  
COLLINS BENJAMIN F 909 WEST NYE LANE CARSON CITY NEVADA 89701  
COLWELL BRUCE E 1040 N 23RD ST COEUR DALENEIDAHO 83814  
COLWELL JOSEPH A 204 E N CENTRAL TUSCOLA ILLINOIS 61953  
COMPAGNONI PANFILO 812 W 4TH STREET WEOFORD OREGON 97501  
CONSTOCK DONALD E USFS SALMON RIV RD RIGGINS IDAHO 83549  
CONNAUGHTON CHARLES A PO BOX 3623 USFS PORTLAND ORE 97232  
COOK FREDERICK T 15 WIGWAM AVENUE WORCESTER MASS 01604  
COOK LEROY L 210 JACKSON ST BX92PRIEST RIVERIDAHO 84401  
COONROD MELVIN A FOREST SERVICE BLDGGODDEN UTAH 98660  
COOPER BRUCE 312 W 28TH VANCOUVER WASH 97330  
COPES DONALD L FOREST SCIENCES LARCORVALLIS OREGON 97015  
COPPICK SYDNEY SCOTT PAPER CO CHESTER PENN 19015  
CORAY EDWARD A 1220 SOUTH 3RD RENO OREGON 97701  
CORNEILL BLAINE L 50 S VIRGINIA ST RENO NEV 89504  
COSSITT FLOYD N 5911 HILDERBRAND NEATLANTA GEORGIA 30328  
COSTALES PATRICK C PO BOX 363 WAIMEA KAUAIHAWAII 96796  
COSTA JOSEPH JR USFS 50 7TH ST NE ATLANTA GA 30308  
COVER JACK E PRIEST LAKE RS RT SPIRIEST RIVIDAHO 83856  
COX DAVID R WESTOUE PK APT 1400URHAM N C 27701  
CRANSTON WILLIAM V BOX 731 LAKE CITY FLORIDA 32055  
CRAWFORD FRANK R 2310 CONANT DR BURLEY IDAHO 83318  
CRAWFORD JAMES R BEAR SPRINGS RGR STMAUPIN OREGON 97037  
CRAWFORD JOHN E JR RLM 300 N CENTER STCASPER WYOMING 82601  
CRAWFORD KENNETH J 3370 EIGHTH DRIVE BAKER OREGON 97814  
CRANKOVICH DAVID C 239 EAST 11TH IDAHO FALLS IDAHO 83401  
CRONEY THOMAS J 2960 PEARL ST EUGENE OREGON 97405  
CROOKS JAMES R 3190 N ATLANTIC AVECOCOA BEACH FLORIDA 32931  
CROSSO ROBERT G BOX 622 KINGS BEACH CALIF 95719  
CROUCH GLENN L 225 EAST 17TH AVE OLYMPIA WASH 98501  
CRUZ EUGENIO DE LA PO BOX 2121 MANILA PHIL 98840  
CULP TRYGVE H BOX 686 OKANGAN WASH 98840  
CUNNINGHAM RUSSELL N SAN ISABEL NAT FOR LAVETA COLORADO 81055  
CURNES GERALD L 1465 N CLEVELAND ST PAUL MINN 55108  
CURRIER WILBUR F 1821 DIXON AVE MISSOULA MONT 59801  
CURTIS ALAN B FED BLD 517 GOLD SWALRUOUFRUE N M 87105  
CURTIS HARRY J III 1408 EMERSON ST NW WASHINGTON D C 20011  
CZERWINSKI MICHAEL H PO BOX 656 N BEND WASH 98045  
DAML BILLIE E 11040 14TH AVE NE SEATTLE WASH 98125  
DAMMEN HAROLD TROUT CRK RGR STA TROUT CREEK MONTANA 59874  
DANIELS JESS D RING MGT TEXAS TECHUBBOCK TEXAS 79406  
DANIELS KENNETH M 926 L STREET MOSCOW IDAHO 83843  
DANIELS LARRY L CENTRALIA WASH 98531  
DANIELS WILEY W 240 NOWELL AVENUE JUNEAU ALASKA 99801  
DARST EDWARD J BOX 475 RIGGINS IDAHO 83549  
DAVIDSON WILLIAM J BOX 932 SALMON IDAHO 83467  
DAVIDSON WILLIAM J 403 SECOND BOX 471 PINEHURST IDAHO 83850  
DAVIS BRENNAN J 3311 COUNTY CLUB LNSACRAMENTO CALIF 95821  
DAVIS JERRY A OKANGAN NAT FORESTWINTHROP WASH 98862  
DAVIS MERRILL S KANIKUS NAT FOREST TROUT CREEK MONTANA 59827  
DAVIS ROBERT L 5165 CARLINGFORD RIVERSIDE CALIF 92504  
DAVIS STERLING P SOILS UNIV OF CALIFRIVERSIDE CALIF 92507  
DAY STANLEY G 140 NORTH 18TH AVE POCATELLO IDAHO 83201  
DEAN DANIEL L GENERAL DELIVERY HINES OREGON 97738  
DEAN RONALD E ANIMAL SCIENCE OSU CORVALLIS OREGON 97330  
DECKER IVAN C 128 NORTH 14TH ST POCATELLO IDAHO 83201  
DEMAYER JOHN R WASHUGOAL HONOR CMPWASHUGOAL WASH 98671  
DEMPREE JAMES W 1394 WALENTA DRIVE MOSCOW IDAHO 83843  
DESHLER WILLIAM O FOREST SERV BLDG KFMWEAVER WYO 83101  
DEWEY LYNN M 1605 N INDIANA NE ALBUQUERQUE N M 87110  
DEWEY MICHAEL L N 218 LIEUALLEN MOSCOW IDAHO 83843  
DICK JAMES JR 411 REYNOLDS AVE CENTRALIA WASH 98531  
DICKINSON JAMES R R 4 1 BONNER FERRYIDAHO 83805  
DIFFENDAFFER JAMES D 1714 ABHS EOISE IDAHO 83705  
DILLON COL FRANCIS H 9204 MARIA AVE GREAT FALLS VA 22066  
DINGMAN THEODORE E 981 ELIZABETH APT ISAN FRAN CALIF 94114  
DISSELBRETT DAVID A 1239 CHESTNUT #13 CLARKSTON WASH 60505  
DITMAN CLARENCE P 766 LIBERTY ST AURORA ILL 60505  
DIXON GERALD E ENTIAT RANGER STA ENTIAT WASH 98822  
DODD JACK B BOX 816 WHITEFISH MONT 59937  
DOLL GILBERT B 3034 CIRCLE WAY OGDEN UTAH 84403  
DOTY ROBERT D ROUTE 1 ENDICOTT WASH 99125  
DOUGLAS DONOVAN L 6822 NORTHVIEW BOISE IDAHO 83704  
DOUGLAS JOHN F 655 CODY COURT DEWEY OREGON 98021  
DOUPE WOODROW W USFS 210 MAIN ST ROISE IDAHO 83702  
DOWNING JOSEPH C MANTI RANGER DIST MANTI UTAH 84642  
DREW LARRY A BOX 22613 ROBBINSDALE MINN 55422  
DRIVER WILLIAM R 305 E STORY BOZEMAN MONTANA 59715  
DUDLEY ROBERT R 928 E D ST MOSCOW IDAHO 83843  
DUFFY JERRY L 37C COLBERT WASH 99005  
DUNGAN JAMES L 5552-39TH NE SEATTLE WASH 98105  
DUNN CHARLES A PO BOX 122 ST JOHN WASH 99171  
DUTTON LAWRENCE A PO BOX 1992 ANCHORAGE ALASKA 99501  
EASTERBROOK PAUL W RT 2 BOX 271-A EMMETT IDAHO 83617  
EASTMAN EUGENE A SUNSHINE STAR RTE KELLOGG IDAHO 83837  
EBERHARD MILTON K ROUTE 2 BLACKFOOT IDAHO 83221  
EDGINGTON JOHN RICHARD 315 E 8TH HOLDEVILLE OKLA 74848  
EDLEFSEN JIM 1202 LONGMONT AVE BOISE IDAHO 83706  
EDMONDSON ELDON H JR 45C N FAIRWAY PULLMAN WASH 99163  
EDWARDS CHARLES H 5818 CLOVER DR OAKLAND CALIF 94618  
EDWARDS DOUGLAS F 822 ST MARIES AVE COEUR DALENEIDAHO 83814  
EDWARDS JOHN R DEEP NATURAL RESOURCE OLYMPIA WASH 98501  
EDWARDS WILTON B 186 ORR ST AUBURN CALIF 95603  
EGGER BRUCE W BOX 1154 POMEROY WASH 99347  
EGGLESTON JAMES EUGENE 714 N 10 31ST ST BILLINGS MONT 59101  
EIJJE JOHNSON O N A COURT YANGEODE OTURKPO BP NIGERIA 83401  
ELG HAROLD CARL 341 LAVA STREET IDAHO FALLS IDAHO 83250  
ELLER DOUGLAS D RT 1 BOX 1-A MILTON FLA 32505  
ELLER NANCY K 739 N CITRUS ST PENSACOLA FLA 32505  
ELLIS FRANCIS G 739 N CITRUS ST PENSACOLA FLA 32505  
ELLIS IRVIN D COPELAND IDAHO 83822  
ELLISON LAURENCE N RR 1 BOX 146 CHEHALIS WASH 98532  
EMERSON RAYMOND R BOX 63 STERLING ALASKA 99672  
EMMINGHAM WILLIAM H 1387 1/2 SUNSET AVEARCATO CALIF 95521  
EMMONS ROBERT H JR 727 NW 35TH ST CORVALLIS ORE 97330  
EMORY DONALD MILES 7410 CLOVERNOOK CINCINNATI OHIO 45231  
ENDRESS WILLIAM C RT 5 CRASER DR BOISE IDAHO 83705  
ENGLAND ALAN G W 3009 ROSEWOOD AVE SPOKANE WASH 99209  
ENGLER GEORGE N BUR OF LAND MGMT COOS BAY OREGON 97420  
ENGLSTROM LOUIS A 2412-5TH AVE SO GREAT FALLS MONT 59401  
ENGWER JOHN CLIFFORD 612 BEECH KEMMERER WYO 83101  
ENIGN WILLIAM W 213 W FOSTER COEUR DALENEIDAHO 83814  
ERHART DENNIS R 635 SOUTH 4TH WEST MISSOULA MONTANA 59801  
ERICKSON DAVID J 14446 SE 16TH BELLEVUE WASH 98004  
ERICKSON DAVID J NATL FISH HATCHERY COOKS WASH 98615  
ERICKSON DAVID L 816 GREENFIELD DR COLUMBUS OHIO 43223  
ESTES KENNETH ESTHEIMER CARMON R SUSANVILLE CALIF 96130  
EUBANKS JAMES O 360 SE SPRUCE AVE GRESHAM ORE 97030  
EUBANKS THOMAS R INST OF PAPER CHEM APPLETON WISCONSIN54911  
EVANS GARY R 4805 SPRING CR RD KNOXVILLE TENN 37920  
EVANS GEORGE H 123 IMPERIAL PLACE POCATELLO IDAHO 83201  
EVANS THOMAS C BOX 344 KETCHUM IDAHO 83340  
EVEREST FRED H 320 W FILLMORE COLO SPRINGSCOLO 80907  
EVERSON AXEL C 160 SLEEPY HOLLOW GRANTS PASS OREGON 97526  
EYRAUD EUGENE E FORESTRY COLO STATEFORT COLLINSOLO 80521  
EZEH IGNATIUS O P O BOX 88 LOVELOCK NEVADA 89419  
FALLINI JOE T AGRICULT FORESTRY ENUGU NIGERIA  
FALZER DONALD M RM 33A FEDERAL BLDGBOISE IDAHO 83702  
FANDRY CONRAD D 904 WEST A MOSCOW IDAHO 83843  
FARMER LOVELL J WATER RES UTAH ST ULOGAN UTAH 84321  
FARNSWORTH DENNIS I 1442 CHICAGO AVE RIVERSIDE CALIF 92501  
FAULKNER DAVID R 1442 CHICAGO RD COLO SPRINGSCOLO 80909  
FAVOR FRANK J WALLACE RANGER STA WALLACE IDAHO 83873  
FEE MAX W 1036 N 23RD COEUR DALENEIDAHO 83814  
FELLIN DAVID G FEDERAL OFFICE BLDGODDEN UTAH 84401  
FERGENDER MONTE E USFS FEDERAL BLDG MISSOULA MONT 59801  
FERGUSON ROBERT M BOX 181 COOS BAY OREGON 97420  
FICKE HERMAN O US FOREST SERVICE SANDPOINT IDAHO 83864  
FICKES EARL M METALINE FLSWASH 99153  
FIELD WALTER D PO BOX 1428 PROVO UTAH 84601  
FIELD CHARLES E 3405-5TH ST E LEWISTON IDAHO 83501  
FIELDER JOHN E CIVILN CONSERVA CTRCURLWE WASH 99118  
FINN LAWRENCE E 1004 FAIRWAYTERRACEABERDEEN WASH 98520  
FINN RALPH A BOX 374 COUNCIL IDAHO 83467  
FINNEY DONALD L COBALT RANGER DIST SALMON IDAHO 83467  
FISHBURN JAMES R 4003 DARANOF KETCHIKAN ALASKA 99901  
FISHER JEAN E LGC NF BELT CR RD NEIHART MONTANA 59465  
FISHER LESTER C JR NY RANGER SCHOOL WANAKENA NEW YORK 13695  
FLANIK GERALD R 2257 GAILS AVENUE CHEHALIS WASH 99532  
FLICKINGER DAVID L US FS IDAHO CITY IDAHO 83631  
FOLDSOM LEWIS L CASILLA 588 TALCA CHILE  
FOLTZ WAYNE G USFS FEDERAL BLDG MISSOULA MONT 59801  
FORBES ROBERT H US FOREST SERVICE COUNCIL IDAHO 83612  
6620 NW MARINE DR VANCOUVER B R C  
FOSTER WILLIAM L PO BOX 397 TROY KANS 66081  
FOWLER LAURIE GARTH 3042 LOUISIANA LONGVIEW WASH 98632  
FOX CHARLES E 232 N CALVADOS AVE AZUSA CALIF 91702  
FRANCE THOMAS J 319 W 27TH TACOMA WASH 98407  
FRANCIS JOHN K BOX 3277 UNIV STA MOSCOW IDAHO 83843  
FRAYER HUME C 25 EAST WALNUT ST JEFFERSON OHIO 44047  
FRAZIER GEORGE D 1612 POWANER RD BOISE IDAHO 83705  
FRAZIER JOE L US FOREST SERVICE CIRCLEVILLE UTAH 84723  
FRAZIER ROBERT A 2705 GAITHER ST SE WASHINGTON D C 20031  
FREDERIC JACK L E 1217 W EMPIRE SPOKANE WASH 99207  
FRENCH LARRY W 816 W MAIN SOUTH VALE ORE 97918  
FRENCH LARRY C HR1 80X 48 POTLATCH IDAHO 83855  
FRIER JAMES C 2921 HOLLY ROAD SANTA BARBARCALIF 93155  
FROEMING DENNIS K 609 EAST E MOSCOW IDAHO 83843  
FROST RAYMOND N RANGER STA STAR RT LEAVENWORTH WASH 98826  
FULCHER GLEN D 5003 WENRUTH PL ANNANDALE VA 22003  
FULLER JAMES R ROUTE #3 CALDWELL IDAHO 83605  
FULTON LESTER R 1612 W SUSSEX MISSOULA MONTANA 59801  
FURNISS ALAN B 294 E 50 N SMITHFIELD UTAH 84335  
GAFFNEY WILLIAM S 811 THIRD ST LEWISTON IDAHO 83501  
GALBRAITH ALAN W 13409 SE CLATSOP PORTLAND ORE 97236  
GALBRAITH MARLIN C 3082 CIRCLE WAY DR OGDEN UTAH 84403  
GALE LEE R 427-11TH AVE ST MARIES IDAHO 83861  
GANSEL CHARLES R 119 RODGEWOOD DR LAKE CITY FLORIDA 32055  
GARDNER GEORGE R BOX 125 GALESVILLE WISCONSIN54630  
GARDNER RAYMOND C 635 3RD AVE W KALISPELL MONT 59901  
GARIN GEORGE I DEPT FOR AUBURN U AUBURN ALABAMA 36830  
GARRETT ALLEN E 2232 18TH STREET CHEHALIS WASH 98532  
GARTNER ROBERT G 611 REDD LANE ABERDEEN WASH 98520  
GARTNER WILBUR V BOX 1275 OROFINO IDAHO 83544  
GARTHE GERALD M STATE U COL SYRACUSE NEW YORK 10310  
GENAUX CHARLES M COLLINS PINE CO WARREN PENN 16365  
GHEEN EDWARD C 200 DORIAN DRIVE ONTARIO OREGON 97914  
GIBBONS CHARLES W RED ROCK LN NW REF MONIDA MONTANA 59744  
GIBBS THOMAS E 304 LAUREL AVE LIBERTYVILLEILLINOIS 60048  
GIFFORD JERRY L SOUTHWICK IDAHO 83550  
GILBERT RUFUS S RT 1 BOX 15 DORSET VERMONT 05251  
GILBERTSON HENRY W JR DAVEY TREE EXPERT KENT OHIO 44240  
GILES THOMAS F BOX 1728 SANTA FE N MEXICO 87501  
GILLETTE JACK E 1911 N BEACH BOISE IDAHO 83704  
GILLMAN NORMAN F 909A PINE ST BENTON KENTUCKY 42025  
GISSEL HARVEY W PAYETTE IDAHO 83665  
GLAZEBROOK THOMAS B 7809 BRISTOW DR ANNANDALE VIR 22003  
GLEAVE WILLIAM W 2353 BAKWY TERRACEEUGENE ORE 97401  
GLEICROSS HAROLD J BOX 1030 COEUR D'ALIDAHO 83814  
GLOVER ROBERT K MURPHY LK RANGE STAFORTLINE MONT 59918  
GODDARD MILTON E RR #1 NELSON BC  
GOEBEL CARL J PO BOX F LAGRANDE ORE 97850  
GOLDBLUM RUDOLPH BOX 37C HAYDEN LAKE IDAHO 83835  
GOLDING EDWARD J III CASILLA 57 CAUQUENES CHILE  
GOLDSMITH WARREN H 741 N DAVIS WEED CALIF 96094  
GOLLAHER JOHN R 669 CATLINA WAY LOS ALTOS CALIF 94022  
GOOD VERNON A 414 ALDERWAY BLDG PORTLAND ORE 97222  
GORSUCH HOWARD L RT 1 BOX 278 COLVILLE WASH 99114  
GORSUCH ROBERT V USFS KALISPELL MONT 59901  
GOSLING KENNETH R 210 WELINGTON RD MINEOLA NEW YORK 11501  
GOSZ JAMES R R10 SC CT DARTMOUTH UMANOVER N HMPSHRE03755  
GOULD VIRGIL A ASPEN COLO 81611  
GOYER RICHARD A 6120 CENTURY AVE MIDDLETON WISCONSIN53567  
GRABAN JAMES R 600 S WALNUT BOISE IDAHO 83706  
GRAHAM DONALD P 6809 GILLINGS ROAD SPRINGFIELD VIRGINIA 22150  
GRAHAM GUY C BOX 155 LEWISTON IDAHO 83501  
GRAVELLE PAUL J USFS TILLAMUK ATA-192LAN FRAN CALIF 96601  
GRAY DALLAS N STOK CASSELBERRY W SAN DIEGO CALIF 92119  
GRAY GENE W ROUTE #2 HANSEN IDAHO 83334  
GRAY JOHN W 4641 WESTON ROAD LAMESA CALIF 92041  
GRECO VERNELDO PO BOX 194 TAYLOR ARIZ 85939  
GREEN HAROLD S 515 SHORE PINES AVECOOS BAY OREGON 97420  
GREEN ROBERT L 2530 GRANDVIEW BLVDWAUKESHA WISCONSIN53186  
GREENE EDWIN G RT 1 PLUMMER IDAHO 83851  
GREENFIELD SAMUEL F SOIL CONSERVAT SER BEND OREGON 97701  
GREENWAY GORDON H 4703 BRAND STREET BOISE IDAHO 83705  
GREGG JAMES B SEATTLE GUN CLUB REDMOND WASH 98052  
GREICHUS ALGIRDAS 5 DAKOTA STATE COL BROOKINGS S DAK 57006  
GROOM JACK I RT 2 BOX 16 SHERWOOD OREGON 97140  
GROSVOLD HALLVARD BOX 4 USFS COUNCIL IDAHO 83612  
GROVE GERALD H 802 BONANZA LANE THORNE BAYALASKA 99950  
GROVER ERNEST T 3227 BONANZA LANE CARSON CITY NEVADA 89701  
GROVES BRUCE V 6908 ASHLAND DR BOISE IDAHO 83705  
GUERNSEY ROGER L 341R MT VIEW DRIVE BOISE IDAHO 83704  
GUERNSEY WILLIAM G 1806 HARRISON BLVD BOISE IDAHO 83702  
GUSTAFSON JOHN R RUSSELL NATL RANGE LEWISTON MONTANA 59457  
GUSTAFSON PHIL S RT 1 BOX 38 OKANGAN WASH 98840  
GUTZMAN WILSON C 402 JULIE DRIVE GALLUP N MEXICO 87301



LACHER THEODORE V	2482 JOINER COURT	DECATUR GA	30033	MCELWAIN KAYE F	3330 STOCKBRIDGE	LOS ANGELES CALIF	90032
LACY THOMAS F	1832 VINEWOOD BLVD	ANN ARBOR MICH	48104	MCEVEN HAROLD R	BOX 248	NEW MEADOWS IDAHO	83654
LADLE JOSEPH M	BOX 292	SALMON IDAHO	83467	MCFREDERICK JACK W		SALMON IDAHO	83467
LAFFERTY GEORGE E	USFS 1ST NAT BANK	GOLDEN COLO	80401	MCGRATH CHAD L		MIDDLETON IDAHO	83464
LAGE CLARENCE L JR	RT 2 BOX 135	KAMIAH IDAHO	83536	MCGRATH PATRICK J	27 QUEENSTON CRES	LONDON ONTARIO	
LANCE GILBERT W	RR #3	PONOKA ALBERTA		MCILVAIN BILLY G	BOX 195	RURLEY IDAHO	83318
LAND HENRY C JR	RT #1 BOX 536	FORT BRAGG CALIF	95437	MCKAHAN JAMES H	722 EMPIRE AVENUE	COEUR DALENE IDAHO	83141
LANGDON OWEN G	PO BOX 334	CHARLESTON S C	29402	MCKENDRICK JAY D	1034 QUIVERA CIRCLE	MANHATTAN KANSAS	66502
LANGE KEITH D	1269 LENEVAR DR	CHARLESTON S C	29407	MCLAUGHLIN RAYMOND F	USFS BOX 1A2R	JUNEAU ALASKA	99801
LANNAN ROBERT J JR	312 E SPRUCE ST	SLT ST MARIEMICH	49783	MCLAUGHLIN ROBERT P	60630 LATHEM TRAIL	JCSHUA TREE CALIF	92252
LARSEN ALBERT T	4898 CARMEN AVE N	SALEM ORE	97303	MCMANAMON DONALD W	ROUTE #1	DROFINO IDAHO	83544
LARSON DONALD S		CUSICK WASH	99119	MCILLIAN WILLIAM J	N 3916 CANNON	SPOKANE WASH	99205
LARSON LESLIE L	PO BOX 122	WESTMINSTER WASH	01473	MCMANAMON WILLIAM S	UNIV OF MASS	AMHERST MASS	01002
LASAN ABU H	PMB 12	BAUCHI NIGERIA		MCMANAGRA FINLEY H	3816 HOWARD ST	ANNADALE VA	22003
LATHEN CLIFFORD F	524 RIDGE ROAD	MOSCOW IDAHO	83843	MCNEILL GARY R	707 BLAINE ST	NAMPA IDAHO	83651
LATHROP ROBERT G	1210 RYAN	WALLA WALLA WASH	99362	MEDFORD RULON L	BOX 393	TONASKET WASH	98585
LAURENT THOMAS H	PO BOX 740	JUNEAU ALASKA	99801	MEISNER GARY E	145 J THAIN RD	LEWISTON IDAHO	83501
LAVEN EDWARD E	104 LEGGET	DILLON MONT	59725	MENEELY JAMES F	1241 8TH AVE E	KANSPELL MONT	59901
LAVEN EDWARD E	2159 ARTHUR	KLAMATH FLSORE	97601	MERRICK CONRAD G	345 MIDDLEFIELD RD	WENLO PARK CALIF	94025
LEA GEORGE D JR	4515 QUALITY ST	FAIRFAX VA	22030	MESKE THEODORE A		KENDRICK IDAHO	83537
LEACH HOMER P	PO BOX 247	DEATH VALLEY CALIF	92328	METLEN ROBERT	00X 112	UNITY OREGON	97084
LEACH TED	EMORY HALL LOGGING	ELK RIVER IDAHO	83827	MEUHLTHALER CHARLIE J	90X 42	DAVENPORT IOWA	52808
LEAVELL WILLIAM G	1241 EL SUR WAY	SACRAMENTO CALIF	95824	MEYER RALPH D	NEZ PERCE NF	GRANGEVILLE IDAHO	83530
LEBARRON RUSSELL K	=1001 1415 VICTORIA	HONOLULU HAWAII	96822	MILES JOSEPH R	BOX 127	HINES OREGON	97738
LEE BRUCE R	101 POSHARD ST	PLEASANT HILCALIF	94523	MILLER CHARLES I	1321 SUNSET LANE	W LAFAYETTE IOWA	47306
LEECE THOMAS A	RT 1 BOX 3	KAMIAH IDAHO	83536	MILLER DANIEL L	E 3134 16TH	SPOKANE WASH	99203
LEFEVRE JOHN P	MEYERHAEUSER	SNOQUALM FALWASH	98066	MILLER DOUGLAS R	107 NOVA DRIVE	PIEDMONT 10 CALIF	94611
LEHRBAS MARK M	704 LOWICH BUILDING	NEW ORLEANS LA	70130	MILLER LONNIE P	C/O W C POST	BUHL IDAHO	83216
LEHRER WILLIAM P JR	CARNATION BUILDING	LOS ANGELES CALIF		MILLER LORNE E	72 LAKE FLOWER AVE	SARANAC LAKEN Y	12983
LENN JON D	12915 63 AVENUE	EDMONTON ALBERTA		MILLER RAY A	STATE FORESTRY DEPT	BOISE IDAHO	83702
LENY L	ROUTE #2	BLACKFOOT IDAHO	83221	MILLER WILLIAM D	BOX 308	SILVER CITY N MEXICO	88061
LENZ BERNARD L	3778 SCHNEIDER ROAD	TOLEDO OHIO	43614	MINTER ROBERT F	706 1/2 HARRISON	MOSCOW IDAHO	83843
LEONARD CECIL E	322 MARION AVENUE	SANDPOINT IDAHO	83864	MITCHELL ROBERT C	BOX 786	MARSING IDAHO	83639
LETON CLAIRE E	122 W 4TH AVE	CHEYENNE WYO	82001	MITCHELL WALTER P	RT 1 PO BOX 152-C	WILLOWS CALIF	95988
LEVY SEYMOUR H	RR #9 BOX 960	TUCSON ARIZONA	85702	MIZUKI JAMES H	5414 23RD AVE SO	SEATTLE WASH	98108
LEYMASTER GARY M	4332 PROSPECT DRIVE	CARMICHAEL CALIF	95608	MOE LARRY G		HURDSFIELD N DAKOTA	58451
LIBSTAFF ELDON D	EVERGREEN TRLR PARK	MUSCOV IDAHO	83843	MOLAN JOSEPH M	645 SO ELM	PRINEVILLE OREGON	97754
LIEURANCE MAXWELL T JR	BUR LAND MANAGEMENT	OREGON	97018	MOLBERG JOHN M	809 BANDLER ST	PORTLAND ORE	97208
LIEURANCE ROBERT E	BUR LAND MANAGEMENT	OREGON	97018	MONDICH PETER L	BOX 51	METALINE FL WASH	99153
LIEVSAY LARRY R	2822 N 32ND ST	BOISE IDAHO	83703	MONDILL BRUCE H	DEP NATURAL RESOURCE	FOKRS WASH	98331
LIGHT JEROME T JR	10228 GAUL WAY	SPRING VALLEY CALIF	92077	MONTGOMERY WILLIAM C	405 BELMONT	CALDWELL IDAHO	83605
LINCOLN JAMES P	ST JOE NATL FOREST	ST MARIES IDAHO	83861	MOONEY JOHN A	FISH C GAME STAR	RIWACKAY IDAHO	83251
LINDBERG RALPH D	6416 COVINGTON	=205 FORT WAYNE IND	46804	MOORE DAVID H	3008 AJMADA ST	PT COQUILTAMB C	
LINDSAY CLIVE J	1550 CONANT AVE	BURLEY IDAHO	83318	MOORE RUSSELL T	ROUTE 2	WENDELL IDAHO	83355
LINDSTROM THOMAS C	105 N ENGLAND	=G-2 SUMMIT N J	07901	MORGANOTHO EARL S	1627 SUNSET	SEATTLE 16 WASH	98116
LITTLE DAVID L	1700 SOUTH LATAH	BOISE IDAHO	83705	MORROW WILLIAM J	RT 2 BOX 4A	COEUR DALENE IDAHO	83814
LLOYD DR RUSSELL D	1201 GREEN ST	FT COLLINS COLORADO	80521	MURSE RICHARD N	CAL WESTERN UNIV	SAN DIEGO CALIF	92106
LLOYD JOSEPH D JR	PO BOX 3141	PORTLAND OREG	97208	MORTON ALLEN U	USFS	WMLNS WYO	82301
LLOYD WILLIAM J	304 LANGFORD RD	BROOMALL PENN	19008	MOUNTJOY JAMES T	811 RENTON AVE S	RENTON WASH	98055
LOBDELL CHARLES H	9330 CHERRY HILL	RD COLLEGE PARK MD	20740	MUEGLER WALTER F	INT FERES MSC	BOZEMAN MONT	59715
LOCKARD GORDON R	1804 MILO WAY	EUGENE OREGON	97401	MUELLER WALTER MAR	BOX 164	GUBDIS IDAHO	83423
LOGGE ROBERT W	BOX 780 EXPT STA	SWIFT CURRNTS SASKATCHN		MUNTHE BERT P	FORREST PROD LAB	IDAHO FALLS IDAHO	83401
LOGAN ERNEST R		TROY IDAHO	83871	MUNTHE GREG L	625 EAST 17TH	IDAHO FALLS IDAHO	83401
LOHMAN RICHARD G	MEYERHAEUSER	COOS BAY OREGON	97420	MURPHY BERNARD C	RT 3 BOX 176A	DEER PARK WASH	99006
LOONEY RICHARD E	1916 CHERRY	BAKER ORE	97814	MYERS EDWARD D	PO BOX 154	MINIER ILLINOIS	61759
LORAIN GARWIN	501 E RANCHO DR	=97 SPARKS NEVADA	89431	MYERS ROBERT L	302 S HWY 88DR	CHITTENANGO NEW YORK	13037
LORD PHILIP B	STAR ROUTE	JANESVILLE CALIF	96111	MYSTER THOMAS W	517 NORTH 6TH ST	BISSMACKS WASH	98005
LORENZ CHARLES W	BOX 480	FORKS WASH	98331	NADEAU LEON R	14309 SE ALDER ST	PORTLAND OREGON	97233
LORENZ JERRY W	ST REGIS PAPER CO	GLENWOOD WASH	98619	NAUGHTON VINCENT J	BOX 663	CASCADE IDAHO	83611
LORTS JACK G	710 NE HOLLADAY ST	PORTLAND 12 OREGON	97232	NEAL RICHARD H	CROWN ZELLERBACH	CATHLAMET WA	98612
LOW WILLIAM W	109 NEW CASTLE ROAD	SYRACUSE NEW YORK	13212	NEEF THEODORE O	1101 N 16TH ST	ROISE IDAHO	83702
LOWDER MICHAEL D	ROUTE 5	RUPERT IDAHO	83350	NEGLAY STANFORD B	3003 SUNSET AVE	BOISE IDAHO	83703
LUCAS WILLIAM J	11512 DEBORAH DRIVE	POTOMAC MD	20854	NEGUS FREDERICK L	STAR ROUTE	OKARIDGE OREGON	97463
LUND ROBERT H	555 CORDOVA RM 504	ANCHORAGE ALASKA	99501	NELLIS CARL H	C/O D M MOHNEY	HAVILAND KANSAS	67059
LUSCHER CHARLES W	7016 VAGABOND DR	FALLS CHURCH VA	22042	NELSON ARTHUR W	170 MAGNOLIA AVE	GLENDALE OHIO	45246
LYNCH WAYNE R		MELROSE WISCONSIN	54642	NELSON DEVON O	413 IDAHO ST	BOISE IDAHO	83702
LYNCH JAMES	8351 GRIDLEY AVENUE	WAUKATOSA 13 WISCONSIN	53213	NELSON HARVEY F	143 S KELSEY ST	MONROE WA	98272
LYNGSTAD JOHN O	608 SO 12TH ST	COEUR D'ALIE IDAHO	83814	NELSON JACK R	708 E 6TH	MOSCOW IDAHO	83843
LYONS RAYMOND D	1222 S DUDLEY ST	DENVER COLO	80226	NELSON TIL JG D G	1016 E 9TH ST	SHELDON IOWA	51201
MAC GREGOR WARREN S	RT 2 BOX 980	CAMAS WASH	98607	NELSON WILBUR T	37 N 3RD WEST	REXBURG IDAHO	83440
MACLEOD DOUGLAS W	EDGEWOOD ROAD	OXFORD CONN	06483	NERMOE PALMER J		UPHAM N DAKOTA	58789
MAGNUSON GERALD F	702 E 4TH AVE	KENNEWICK WASH	99336	NERO EDWARD T	1193 RALEIGH	SUNNYSIDE WASH	98944
MAKARA FRANK R	29 ORANGE DRIVE	JERICKO NEW YORK	11753	NESS DARWIN D	326 PARK AVENUE	ST PAUL MINN	55108
MALHOTRA DES R	MALHATRS ST JAMMU	IKASHMIN INDIA		NEW DOUGLAS W	101 DARTMOUTH AVE	MULLAN IDAHO	83845
MALLET JERRY L	600 S WALNUT	DOISE IDAHO	83703	NEWCOMB LAWRENCE S	USFS	AVON EST GEORGIA	30022
MALLORY WALTER A	PO BOX 284	KAMIAH IDAHO	83536	NEWCOMB RUSSELL L	1760 OVERLOOK CIR	NEW MEADOWS IDAHO	83654
MALONEY RALPH B	4401 N HUBY ST	SCHILLER PK ILL	93116	NEWELL HARVIN E	ROUTE 2	LAKE OSWEGO ORE	97034
MALSED DAVID E	105 WATER STREET	PALOUSE WASH	97161	NEWMAN RULON J	USFS	GARDEN VAL IDAHO	83622
MANN PAUL T	4M 4092 STATE BLDG	FRESNO CALIF	93700	NICKLE DR WILLIAM R	USDA ARS CRTD	BELTSVILLE MD	20705
MANNING JOHN E	353 CRESCENT DRIVE	SYCAMORE ILLINOIS	60178	NIELSEN EUGENE P	7810 MARLIN WAY	OLYMPIA WASH	98501
MARPLE DR ROBERT	10A STATE OFFICE	BLMDOISE IDAHO	83702	NIETZOLD GEORGE E	13600 W GRAHAM ST	NEW BERLIN WISC	53151
MARCH MAURICE W		LINCOLNVILLE	04849	NIGH JOHN W	ROUTE 1	WORLDY IDAHO	83876
MARCH RICHARD M	45 BAYSHORE DR	=11 OTTAWA 14 ONTARIO		NOBIS ROBERT S	916 FOSTER AVENUE	COEUR DALENE IDAHO	83814
MARCHAND LEONARD S	MONT FISH & GAME	RED LODGE MONT	59068	NOBLE CLARK R	1181 ALMOND AVE	REDDING CALIF	96001
MARCUSON PATRICK E	BOX 104	WHISKEYTON CALIF	96095	NOBLE EDWARD L	2425 FILLMORE AVE	OGDEN UTAH	84401
MARR GALEN R	1430 BRYDEN DRIVE	LEWISTON IDAHO	83501	NOKES DR HERALD S	MCCALL MED CLINIC	MCCALL IDAHO	83638
MARRON JAMES B	1800 SECOND ST	SUSANVILLE CALIF	96130	NORD DR EAMOR C	USFS PD BOX 5007	RIVERSIDE CALIF	92507
MARSHALL MARVIN M	USFS PD BLDG	ESCANABA MICHIGAN	49829	NORMAN DENNIS E	7950 LEAK DRIVE	CAPE GIRARDEMO	63701
MARTIN DONALD R	BLM PD BOX 1139	COOS BAY ORE	97420	NUGUES BERNARD W	1 AVENUE DU CHATEAU	MEUDON FRANCE	
MARTIN DOUGLAS M	RUR OF LAND MGMT	COOS BAY ORE	97420	OBLOCK LOUIS H	620 DURANT STREET	ASPEN COLORADO	81611
MARTIN GLENN F	BUREAU OF LAND MGMT	SAFFORD ARIZ	85546	ODDONNER GERALD W	536 N HARLEM	RIVER FOR ILL	60305
MARTIN JACK M	3470 10TH	BAKER OREGON	97814	ODONNELL JAMES F	5615 PAGANTAY ST	LONG BEACH CALIF	90808
MARTIN LEO J	190 WAE ST	UKIAH CALIF	95489	OGLE RICHARD A	AM PLYWOOD ASSOC	TACOMA WASH	98400
MARTIN RONALD G	322 12TH	ST MARIES IDAHO	83861	OHS CHARLES A	UTAH STATE UNIV	LOGAN UTAH	84321
MARTIN WARREN L	1255 SO OGDEN	DENVER COLORADO	80210	OLSON RICHARD J	USFS	GARDEN VAL IDAHO	83622
MARTINSEN CHARLES F	C/O BOX 477	BLAINE WASH	98230	OLSON RICHARD J	N 2410 BRADLEY RD	SPOKANE WASH	99206
MARYOTT GLENN A	706 S ELM	COLVILLE WASH	99114	OLSON RICHARD J	BOX 391	GLENS FERRY IDAHO	83673
MATHIS DAVID O	USFS	NEW MEADOWS IDAHO	83654	OLLIEU MAX M	823 N FAIRVIEW	BURRANK CALIF	91505
MATTHEWS DARREL I	BLM	VALE OREGON	97918	OLSON RICHARD J	907 A PINEDELL	MANLUFKIN TEXAS	75901
MATTHEWS FRED W	345 S BRIDGE ST	ST ANTHONY IDAHO	83445	OLSON RICHARD J	60R BLUE ST	RICHLAND WASH	99352
MATTOX JAMES E	CO COMMUN COLLEGE	BEND ORE	97701	OLSON ROBERT W	BOX 861	COEUR DALENE IDAHO	83814
MATZKE VANCE G	5111 B WALNUT	GREAT FALLS MONT	59401	OPIE ROBERT S	201 STONE STREET	WALLA WALLA WA	99362
MATZNER FRED T	1744 PETERSON AVE	MISSOULA MONT	59801	ORMISTON JOHN H	643 UTAH AVE	BUTTE MONT	59701
MAUL DAVID C	630 SANSOME ST	SAN FRAN CALIF	94111	OSBORN FORREST G	721 IOWA ST	BOISE IDAHO	83706
MAUPIN LARRY S	1640 WILLOW LANE	TWIN FALLS IDAHO	83301	OTTENFELD BRUCE B	BOX 76	WINCHESTER ORE	97495
MAUSER GREGG R	FORESTRY U OF IDAHO	MOSCOW IDAHO	83843	OTTER FLOYD L	15 E DAYTON AVE	FRESNO CALIF	93705
MC ALISTER ROBERT H	FORESTRY SCI LAB	ATHENS GA	30601	OWEN ROBERT C	15478 WARWICK BLVD	NEWPORT NEWS VA	23602
MC CONNELL BURT R	PAC NW FOR EXP STA	WENATCHEE WASH	98801	PACHOTIKARN SOMPHONG	ROYAL FOR DEPT	BANGKOK THAILAND	
MC CULLOCH CLAY Y JR	712 TYLER ST	TEMPE ARIZONA	85281	PAGELER DONALD T	3200 LENOX AVE	YOUNGSTOWN OHIO	44502
MC MAHON ROBERT O	PO BOX 571	CORVALLIS OREGON	97330	PAINE LEE A	BOX 245	BERKELEY 1 CALIF	94701
MCCARTHY ORVILLE B	12880 W 121ST	TIGARD OREGON	97223	PALISIN JAMES J	291 EAST 195 STREET	CLEVELAND OHIO	44119
MCCARTHY JOSEPH	U WASH GRAD SCHOOL	SEATTLE WASH	98105	PALMER JAMES N	3904 VAN BUREN NE	ALBUQUERQUE N M	87110
MCCARTHY RICHARD	SCOTT PAPER CO	EVERETT WASH	98201	PARKER JAMES W	BOX 499	SITKA ALASKA	99835
MCCLELLAN NORMAN R	1915 SHELBY	MOSCOW WASH	99155	PARKER JOHN W	204 S STOUT	BLACKFOOT IDAHO	83221
MCCONNELL LEE P	RT 1 BOX 307M	COEUR DALENE IDAHO	83841	PARKER RICHARD D	1119-37TH	OGDEN UTAH	84403
MCCONNELL ARTHUR J	US FOREST SERVICE	MCCALL IDAHO	83638	PARKER RICHARD D	BOX 95	CLARKIA IDAHO	83812
MCCOOL STEPHEN F	13672 HEWES AVENUE	SANTA ANA CALIF	92705	PARKIN KENNETH F	18 CLOVERHILL PARK	BELFAST 4 N IRELAND	
MCCORMICK CHESTER A	POX 626	LEWISTON IDAHO	83501	PARKS HOMER W	USFS	NEW MEADOWS IDAHO	83654
MCCORMICK HENRY F	107 ST HELENS PLACE	END ORE	97701	PARR WILLIAM J JR	ROUTE 3 BOX 237	MOSCOW IDAHO	83843
MCCRILLUS CARL P	BLM DIV RANGE USOI	WASHINGTON D C		PARSON WILLIAM J	RT 1 BOX 38	PRIEST RIDGE IDAHO	83854
MCCULLOUGH DEARL E	821 MAINE AVE WEST	TWIN FALLS IDAHO	83301	PARSONS DAVID E	ROUTE 1	DALLAS PENN	18612
MCDONALD STEPHEN E	410 VISTA AVENUE	LEWISTON IDAHO	83501				



HAAG WILLIAM S 1409 BIRCH AVE COEUR D'ALIDAHO 83814  
HABIB PHILIP C FOREIGN SER MAIL RHWASHINGTON D C  
HAGEDORN CHESTER L 28 NORTH WALNUT ST DILLON MONTANA 59725  
HAGSTEN JOHN E TALMUD RURAL STA DEER RIVER MINNESOTA56637  
HANN HERBERT D GROVELAND RANGER STGROVELAND CALIF 95321  
HAIGHT WILLIAM R 624 WYILDWOOD ALAMEDA IDAHO 83201  
HAMILTON WILBUR R BOX 7111 MTN HOME IDAHO 83647  
HAMM HORLEY H USFS IRONWOOD WICH 49938  
HAMMILL ALTON W 162 SW 5TH ST PENDELTON OREGON 97801  
HAMNER BERT M LK WENATCHEE RG STALAWENWORTH WASH 98826  
HAMPF FREDERICK E 221 N NORWINDEN DR SPRINGFIELD PENN 19064  
HANKS DAVID L 520 MCBRYDE W MONTESANO WASH 98407  
HANKS LEW E PO BOX 787 PALMER ALASKA 99645  
HANNA PAUL L 410 S LILLY APT 11 MOSCOW IDAHO 83843  
HANSEN EDWARD D 126 SE 5TH AVENUE M-FREEWATER OREGON 97862  
HARDY WILLIAM E VALHALLA MARINE RT COEUR DALENEIDAHO 83814  
HARLAN GEORGE W 1303 11TH ST LEWISTON IDAHO 83501  
HARLAN PAUL M 1155 LINDA VISTA AVPASADENA CALIF 91103  
HARMS DARWIN S ROUTE #3 NAMPA IDAHO 83651  
HARMS JAN C BOX 4962 DUKE STA DURHAM N C 27706  
HARRIS CHALON A RURAL ROUTE 3 FAIRFIELD ILLINOIS 62837  
HARRIS GRANT A 1401 UPPER DRIVE PULLMAN WASH 99163  
HARRIS HAROLD L BOX 415 ABERDEEN IDAHO 83210  
HARRIS ROBERT W 4107 SW VERMONT PORTLAND OREGON 97219  
HARRIS RODNEY BLM BURLEY IDAHO 83318  
HARRIS THOMAS H 45 RALSTON AVE MILL VALLEY CALIF 94941  
HARRISON DARROL L BOX 361 TOWNSHED MONTANA 59644  
HARRISON KENNETH E BOX 653 SHOSHONE IDAHO 83352  
HARSHMAN EDMUND P 879 TAWARACK ST EUGENE ORE 97401  
HART GARY D BOX 342 WALLACE IDAHO 84873  
HARTLEY RICHARD F 4624 GAGE STREET BOISE IDAHO 83704  
HATCH ALDEN B PETERSBRO NEW YORK 13134  
HATCH M T 303 N JEFFERSON ST MOSCOW IDAHO 83843  
HATCH ROGER C 2231 S OAK GROVE SPRINGFIELD MO 65804  
HAUFF RICHARD T 320 W DILLMORE ST COLO SPRINGSCOLO 80907  
HAUMONT THOMAS W PO BOX 4097 PORTLAND OREGON 97208  
HAUPT HAROLO F FOR SCIENCES LAB MOSCOW IDAHO 83843  
HAUKWELL DONALD L PO BOX 252 BLUE LAKE CALIF 95252  
HAWKSWORTH FRANCIS G DIV FOR DIS RES CSUFORT COLLINSCOLO 80521  
HAY JOHN A 1802 S 82ND ST TACOMA WASH 98408  
HAYES GEORGE L 1601 CRESTMERE PL FT COLLINS COLO 80521  
HAYES JOHN F 607 W 109 TERRACE KANSAS CITY MO 64114  
HAZELBAKER DON RT 1 BONNERS FRY IDAHO 83805  
HEADY HAROLO F PROF OF FOR UOC BERKELEY CALIF 94707  
HECK DAVID W 12 TOWER RD HINGHAM MASS 02043  
HECKATHORN BUEHL R SCS ELKO NEVADA 89801  
HEEBNER GORDON C PO BOX #5 CANBY CALIF 96015  
HEEZEN KEITH L RT 1 8252 CLARK RD E LANSING MICH 48823  
HEFFNER PHILLIP W SEELY LAKE MONT 59668  
HEIMER JOHN T C/O AL J HEIMER MENTOR KANSAS 67465  
HEINRICH RICHARD PO BOX 209 FRUITLAND IDAHO 83619  
HEINZ THOMAS A 568B QUEEN ANNE CT DAYTON OHIO 45424  
HEISER FLOYD B BOX 56 NEWPORT WASH 99156  
HEITMANN ALEXANDER JR PO BOX 152 SUNDL CALIF 94586  
HELLE JOE T BOX 461 DILLON WYOM 59725  
HELLE JOHN H BIOLOGICAL LAB AUKE BAY ALASKA 99821  
HELLER THOMAS H BLM DENVER SER CEN DENVER COLO 80225  
HENDERSON CLIFFORD J RR 3 LACOMBE ALBERTA  
HERNIGES ROBERT J N CASCADES NAT PARKMANBLEUMONT WASH 98247  
HERBERT JOHN M JR BTTY B 1 UN 7TH ARTAPO SAN FRANCISCO CALIF 94345  
HERBST JOHN R U OF I COL OF FOR MOSCOW IDAHO 83843  
HERMAN KENNETH E WASH ST DEPT NA RESVANCOUVER WASH 98661  
HERRNVAL RONALD D BOX 451 NORDMAN IDAHO 83848  
HERRON JOHN O JR 3363 L ST EUREKA CALIF 95501  
HERTEL JAMES P BOX 123 POTLATCH IDAHO 83855  
HESS DENNIS E 4308 FORTUNE AVE LAS VEGAS NEVADA 89107  
HICKS GEORGE W BOX 4 FERNWOOD IDAHO 83830  
HIGGINS RICHARD R RT 1 BOX 950 ASTORIA OREGON 97103  
HIGGINSON LELAND C 1037 E JACKSON COLO SPRINGSCOLO 80907  
HILL EDWARD B 620 S MONTANA AVE MILCS CITY MONTANA 59301  
HILL ROBERT B 200 DAVEY GLEN ROADRELMONT CALIF 94002  
HIRONAKA MINORU 921 MAYBELLE MOSCOW IDAHO 83843  
HIRSCHBERG SAUL B RT 2 BOX 322A M-FREEWATER OREGON 97862  
HITT WRIGHT 121 POWERSVILLE RD MT LAKES N JERSEY 07046  
HJORT GEORGE V 111 CRESTLINE DR ROISE IDAHO 83705  
HOBBA ROBERT L USFS USDA S BLDG WASHINGTON D C 20250  
HOBBS BENNIE C 116 MURRAY STREET BOISE IDAHO 83704  
HOCH FRANCIS E 763 CHURCH ST NE SALEM OREGON 97301  
HOCKADAY JAMES M PAYETTE NATL FORESTMCCALL IDAHO 83638  
HODDER RICHARD L PORCUPINE RANCH GALLATIN GTYMONT 59730  
HODGE RICHARD S RT 5 PRIEST LAKE RSPRIEST RIVIDAHO 83856  
HODGES CHARLES S BOX 5397 ST COL STARALEIGH N C 27607  
HOLBEK ROY H 615 S BUCKNELL AVE CLAREMONT CALIF 91711  
HOFSTRAND ARLAND D COL OF FOR U OF I MOSCOW IDAHO 83843  
HOODS RODNEY R H 8718 CROWWELL DRIVE SPRINGFIELD ILL 62292  
HOLL ROYALE C BLM FEDERAL BLDG DENVER COLO 80202  
HOLLET GEORGE K 229 BENTLY DR E FAIRBANKS ALASKA 99701  
HOLMER LEE M 3342 WASHBURN AVE MNMINNEAPCLIS MINN 55412  
HOLT BURTON W MYRTLE CREEKOREGON 97457  
HOLTY RALPH B 503 HUNTER ST MOSCOW IDAHO 83843  
HOLDEN CARL L 7028 STANLEY AVE ST LOUIS MISSOURI 63143  
HOLL JOHN R 235 HIGH ST QUINCY CALIF 95971  
HOOKER LARRY L ROUTE 1 BOX 880A MTN HOME IDAHO 83647  
HOOTS THOMAS A C/O USFS BOX 1295 SONORA CALIF 95370  
HOPPER ROBERT E 2474 AUHUHU ST PEARL CITYHAWAII 96782  
HORN FREDERICK W PO BOX 357 COLUMBIA S CAR 29202  
HORN RICHARD L BOX 88 COOLIN IDAHO 83821  
HORN WILLIAM J BOX 313 PALOUSE WASH 99161  
HORNING DONALD JR 1402 POTTER RICHLAND WASH 99352  
HOSKINS LEONARD W 1342 CEDAR STREET ELKO NEVADA 89801  
HOSKINS PAUL A USFS DEER LODGE MONT 59722  
HOSS STEVEN A BOX 145 HOPE IDAHO 83863  
HOSFELD RALPH L U OF M WOOD CHEW ST PAUL MINN 55101  
HOUSE GERALD O SYLVANITE RG ST RTIDOT MONT 59935  
HOWARD DAVID R RT 2 BOX 1351 LIBBY MONT 59923  
HOWARD HARRY W JR PO BOX 800 ONTARIO CALIF 91761  
HOWARD VERNY JR BX 3044 U PARK STA LAS CRUCES NEW MEX 88001  
HOWLAND JAMES R HOX 723 PLYMOUTH N C 27962  
HOWSE NORMAN R 2321 VALLEY VIEW MISSOULA MONT 59801  
HOYE JOHN 217 SALEHND RD FORT ORD CALIF 93941  
HRONEK BRUCE B 1358 LEWIS DRIVE OGDEN UTAH 84404  
HSIEM KUO-TSING PO BOX 126 MT CARROLL ILL 61053  
HUBBELL EARL J FORESTRY U OF I MOSCOW IDAHO 83843  
HUBER DEAN W 1314 N PUGET ST OLYMPIA WASH 98501  
HUBERT JEFFREY J 10418-24TH AVE E TACOMA WASH 98445  
HUCKINS EDDIE O U OF A PL PATH DEPTTUCSON ARIZONA 85721  
HUDSON RUSSELL H BOX 229 BROADUS MONTANA 59317  
HUFF WALLACE W STAR ROUTE 1 LIBBY MONT 59923  
HUGHES JOHN M KOTENAI NATL FOR TROY MONT 59935  
HULTMAN ANDERS B GLIDE RANGER STA GLIDE ORE 97443  
HUNE JOHN F JR VERADALE WASH 99037  
HUNGERFORD CHARLES R 141 NINTH ST LEWISTON IDAHO 83501  
200L DEPT U OF ARIZTUCSON ARIZ 85721



PARSONS DONALD D	BOX 666	PORT ORFORD	OREGON	97465	SAMSON ROGER R	4703 KOOTENAI #39	ROISE	IDAHO	83705
PARSONS PATRICK J		DEARY	IDAHO	83823	SANDMEYER JOHN D	2608 LEWIS AVE	BILLINGS	MONT	59102
PASSMORE ROBERT W	418 SONNY ST	BLACKFOOT	IDAHO	83221	SARGEANT HOWARD J	BOX 3737	PORTLAND	ORE	97209
PATRIE CARTHON R	7806 6TH AVE NW	SEATTLE	WASH	98107	SAUSELEN HENRY G	SOIL CONS SERVICE	MULLICA HILL N J		
PATTON ROBERT F	UNIV OF WISCONSIN	MADISON	WISC	53706	SAVARIA EDWARD D	PO BOX 433	SHOSHONE	IDAHO	83252
PAULSON ANTON H	620 FIRST ST	HOOQUIAM	WASH	98550	SAXMAN DONALD R JR	POST OFFICE	FAIRFIELD	IDAHO	83327
PAYNE GENE F	ANIMAL SCIENCE MSU	BOZEMAN	MONTANA	59715	SCHAEFER RICHARD M	1331 RIPON	LEWISTON	IDAHO	83501
PEARSON DAVID B	4321 FORTUNA WAY	SALT LAKE	CYUTAH	84117	SCHLEDT ROBERT S	ROUTE 3	BUHL	IDAHO	83316
PEARSON MARSHALL P	SWAN LK RANGER STA	RIGFORK	MONT	59911	SCHMERHORN H B		AUSABLE CHSMNEW YORK		12911
PECHANEC JOSEPH F	3129 POLK AVE	OGDEN	UTAH	84403	SCHMATTERER EDWARD F	PO BOX 1084	LEWISTON	MONT	59457
PECK CHARLES S	BOX 236	FAIRFIELD	NEBRASKA	68938	SCHMIDT ROBERT S	250 JANNEY LANE	MEDFORD	OREGON	97501
PEDESON WILLIAM L	BOX 223	CLARK FORK	IDAHO	83811	SCHMIDT WILLIAM T JR	C/O A TULLOUS PT 1	MARLOW	OKLAHOMA	73055
PENCE DAN T	U S FOREST SERVICE	SALMON	IDAHO	83467	SCHMITT DAVID W	924 37TH	SPOKANE 36	WASH	99203
PENCE FRED C	DRIDGEPORT R S	PRIDGEPORT	CALIF	93515	SCHMITT ROBERT M	MESA RANGER DIST	MESA	ARIZ	85201
PENCE LEWIS L	501L CONSERV SER	POCATELLO	IDAHO	83201	SCHMITT WILLIAM E	318 MARCY AVE	MONTESANO	WASH	98563
PENCE NED N	420 MADLE	EMMETT	IDAHO	83617	SCHNEIDER TERRY W	1955 172 FRACKLETONSHERIDAN	MOSCOW	IDAHO	83843
PENNEY JOHN G	FOX 187 ROUTE 1	OMAK	WASH	98841	SCHOFFER FRANKLIN A	ROUTE 3 BOX 126	WYOMING		82801
PEREIRA RONALDO A	50J05412PIRACICABASAO PAULC	BOZEMAN	MONT	59715	SCHOFFIELD WILLIAM	915 NELSON ST	ALBANY	CALIF	94706
PEREZ GERALD S	1NT FOR EXP STA	BOZEMAN	MONT	59715	SCHOLTES JOHN R	505 E FRANKLIN AVE	BEND	ORE	97701
PEREZ RONALD C	41 PLYMOUTH ST	MONTCLAIR	N J	07042	SCHRENK ROBERT L	U S FOREST SERVICE	WELLINGTON	NEVADA	89444
PETERSEN ARTHUR J	5811 OBERLIN	SEATTLE	WASH	98105	SCHROEDER HERBERT A	OREGON FOR RES CTR	CORVALLIS	ORE	97330
PETERSEN CHARLES H	1405 LAUREL STREET	BOISE	IDAHO	83704	SCHULTZ ALDEN T	BOX 207	JACKSON	WYO	83001
PETERSEN LEROY R	2301 HWY 41	STURTEVANT	WISC	53177	SCHULTZ EDWARD L	ROUTE #2	COLFAX	WASH	99111
PETERSEN THEODORE R	U S FOREST SERVICE	NEW MEADOWS	IDAHO	83654	SCHULTZ HENRY W	2819 NORMAN DR	ROISE	IDAHO	83704
PETZAK WILLIAM J	502 N ROYER	SANDPOINT	IDAHO	83864	SCHULZE VERNON R	BLM PO BOX 37	PRINEVILLE	OREGON	97754
PFLIF RICHARD	IDA DEPT PUB LOS	SANDPOINT	IDAHO	83864	SCHUMAKER JOHN R	110 ZACKERMAN AVE	FT RENNINGGA		31905
PHILLIPS THOMAS V	CLEARWATER NAT FOR	OROFINO	IDAHO	83544	SCHUSTER KENNETH H	1587 WOODLAND AVE	PALO ALTO CALIF		94303
PICKELL WILLIAM L	BOX 37 STAR RT	SUPERIOR	MONT	59872	SCHUTTE JACK	1145 NORTH 5TH	COOS BAY	OREGON	97420
PIEPER REX D	ROUTE 4 BOX 53	HOOQUIAM	WASH	98550	SCHWAB JOHN R	201 N SUMMIT ST	TENKWA	OKLAHOMA	74653
PIERSON WALTER W	N M STATE UNIV	LAS CRUCES	N MEXICO	88001	SCHWABEL WARREN M	2709 ALLVIEW DR	BELMONT	CALIF	94002
PINNEIRO JAYME V	GENL DEL	COUNCIL	IDAHO	83612	SCRIBNER WILLIAM A	6907 HUMMEL DRIVE	BOISE	IDAHO	83705
PINNOCK JOHN H	MOATO FLOR RIOCLAROEST S PAULO	BRAZIL		83442	SEABERG DAVID R	4522 N 71ST	MILWAUKEE	WISC	53218
PISTORIUS DARREL G	1024 BANCROFT	COEUR DALENE	IDAHO	83814	SEALE ROBERT W	904 E 37TH ST	MOSCOW	IDAHO	83843
PITKIN FRANKLIN H	UNIV OF IDAHO	MOSCOW	IDAHO	83843	SELLE DEWEY D	ROUTE 2	SANDPOINT	IDAHO	83864
PIZEL ROBERT E	CREEDE RGR DIST	CREEDE	COLORADO	81130	SELLERS VICTOR D	140 AQUILA COURT	OMAHA	NEB	68102
PLATZ BOBBIE J	902 INDIAN DRIVE	OLYMPIA	WASH	98501	SHARMA PARMESHURI D	179 CIVIL LINES	PUNJAB	INDIA	
PLAYFAIR ROBERT L	BOX 248	LAME DEER	MONTANA	59043	SHARP ANDREW G	1640 PALISADES DR	APPLETON	WISC	54111
PLYMALE GARVIN V	34052 51ST AVE S	AUBURN	WN	98002	SHARNACK DAVID A	71H SOUTH SCOVILLE	OAK PARK	ILLINOIS	60304
POLLARD HERBERT A	6521 BUTTE	HOISE	INDIANA	47977	SHAW HARLEY G	RT 1 BOX 910R	FLAGSTAFF	ARIZ	86001
PORTER DONALD R	10445 RAINIER AVE	SEATTLE	WASH	98178	SHAW WILLIAM H	960 VAN BUREN	OGDEN	UTAH	84404
POTTER DALE R	785 SAGINAW	DINURA	CALIF	93618	SHELD ROBERT L	RD 2 MUMFORD RD	HARPUSSVILLE Y		13787
POTTER GRANT B	629 N SHERIDAN	WAUKEGAN	ILL	60091	SHELLEY WILLIAM D	BOX 355	EUREKA	MONTANA	59917
POTTER JOSEPH A	OREGON STATE UNIV	CORVALLIS	OREGON	97331	SHERO JACK W	105 HEADQUARTERS	ROKELSO	WASH	98626
POULTON CHARLES	SULA RANGER STATIONSULA	MONTANA		59871	SHERO RICHARD P	WN ST FOR SERV	KELSO	WASH	98626
POWERS RICHARD L	CROWN ZELLER CORP	CATHLAMET	WA	98612	SHERRETT HAROLD D	RT 1	WAKARUSA	KAN	66546
PRATER JAMES D	ROUTE 1	VIOLA	IDAHO	83872	SHIELDS MICHAEL D	PO BOX 115	MOAB	UTAH	84532
PRESBY RICHARD C	BUREAU OF LAND MGMTFLKC	NEVADA		89401	SHIVELY ROBERT L	4283 PENN AVE	COEUR DALENE	IDAHO	83864
PRICE ELWIN H	1119 S HAYES	MOSCOW	IDAHO	83843	SHOEMAKER NEIL L	438 S ELLA AVE	SANDPOINT	IDAHO	83864
PRICE GORDON J	BOX 22	RICHFIELD	IDAHO	83349	SHRINER DAVID S	211 BUCKHOUT LAD	UNIV PARK	PENN	16202
PRIDMORE DONALD C	CANADA EXPT STATIONREAVERLOGGE	ALTA		83442	SILVERBERG SAVEL B	NYS COLLEGE OF FOR	SYRACUSE 10 N Y		13210
PRINGLE WILLIAM L	ROUTE 1 BOX 173	MOSCOW	IDAHO	83843	SIM JACK R	231 NE OUTLOOK AVE	GRANTS PASS	OREGON	97526
PRITCHETT JOHN A	BOX 319	SUPERIOR	MONT	59872	SIMONS CHARLES F	PO BOX 3737	PORTLAND	ORE	97208
PROCOPIUS RICHARD D	831 COLLEGE AVE	ST MARIES	IDAHO	83861	SIMONS CLAIRE A	926 EMMA AVENUE	COEUR DALENE	IDAHO	83814
PUGH LAMAR C	1959 DIAMOND ST	SAN DIEGO	CALIF	92109	SINDELAR BRIAN W		BALLENFINE	MONTANA	
PYKE RONALD W	BOX 292	LEWISTON	MONT	59497	SINGLY JAMES A	1235 ALLISON ST	WHEAT RIDGE	COLORADO	80033
PYRAN DUANE B	2716 NE 97TH	SEATTLE	WASH	98115	SIPCO ERIC T	27 N WESTVIEW AVE	EASTERVILLE	PENN	19047
QUEEN MARVIN R	ROUTE 1 BOX 75	MOSCOW	IDAHO	83843	SKAR ROLF G	403 LAMOND DR	BAKERSFIELD	CALIF	93304
QUEENER GERRY	130 BIRCH RD	SALMON	IDAHO	83467	SKJEIE ELMER	345 MIDDLEFIELD RD	MENLO PARK	CALIF	94025
QUESNEL CLINTON C	130 BIRCH RD	KALISPELL	MONT	59901	SKOGLAND TRJR J	P O BOX 372	HAUGSFUND	NORWAY	
RAGAN REED E	IDAHO DRUG COMPANY	RIGBY	IDAHO	83442	SKOVLIN JON	PO BOX F	LA GRANDE	ORE	97850
RALEIGH ROBERT F	5809 226TH PLACE	SEATTLE	WASH	98403	SLUSHER EDWARD C	4005 MOUNT AVE	MISSOULA	MONT	59801
RANDOLPH TERRY R	HEBER RANGER DIST	HEBER	UTAH	84032	SMITH CLPT HENRY R	3605 STANFORD CIP	DECATUR	GA	30034
RANKINER RICHARD W	109 WEST MAIN ROAD	CONNEAUT	OHIO	44030	PANSPECT RANGER	STAPROSPPECT	OREGON		97536
RATHBUN JAMES F	1112 LINCOLN ST	WATERLOO	IOWA	50703	SMITH DOWNT R	1301 STOVER	FORT COLLINS	COLORADO	80521
RATLIFF DONALD E	ROUTE 1 BOX 333	CORVALLIS	ORE	97330	SMITH JERRY L	151 EAST BOISE AVE	HOISE	IDAHO	83706
RAUBACH ROBERT T	324 CHENAULT AVE	HOOQUIAM	WASH	98550	SMITH LARALLE R	RT 2 BOX 296A	COEUR DALENE	IDAHO	83814
RAVENSCROFT VERNON	BOX 5	TUTTLE	IDAHO	83354	SMITH LAWRENCE O	KANIKSU NF BOX 29	SANDPOINT	IDAHO	83864
RAWSON LILAS L	637 S GRANT	POCATELLO	IDAHO	83201	SMITH LAWRENCE R	SUNSHINE STAR RT	KELLOGG	IDAHO	83837
REAY DAVID B	BOX 274	YACHATS	ORE	97498	SMITH MERLIN	1215 JASPER AVE	CLYMPIA	WASH	98501
REBEZKE KEITH A	BOX 131	HORSESHOE	IDAHO	83629	SMITH ROBERT LESLIE	BOX 404	GARFIELD	WASH	99130
REED ELLIOTT E	R 2	GRANITE FALLS	MINN	56241	SMITH ROBERT M	810 MOTTIFF LANE	HELINA	MONT	59601
REED MICHAEL C	COLVILLE NF	COLVILLE	WASH	99114	SMITH RUSSELL E	705 LINDEEN AVE	LEWISTON	IDAHO	83501
REED ROBERT B	3738 DAKWOOD	RIVERSIDE	CALIF	92506	SMITH STANLEY G	3816 FRANKLIN ST	OMAHA	NEBASKA	68111
REESE JERRY B	BOX 347	HYDRO PARK	UTAH	84318	SMITH GARY G	SANTOOTH NAT FOR	FAIRFIELD	IDAHO	83327
REID RALPH R	115 W 24TH AVE	SPOKANE	WASH	99203	SNOW ELVA A	815 FOSTER AVE	COEUR DALENE	IDAHO	83814
RENSHAW EMERA W	1022 S LYNN	MOSCOW	IDAHO	83843	SNYDER FREEMAN W	1209 CEDARHILL DR	EAST LANSING	MICH	48823
RETTIG EDWIN C	1309 8TH AVE	LEWISTON	IDAHO	83501	SODERBLOM JON E	621 OLAN	ROISE	IDAHO	83707
REVELEY THOMAS L	1914 WAVERLY ST	PHILADELPHIA		19146	SODIETH JAMES R	3215 BONA STREET	DANLAND	CALIF	94601
REYNOLDS GRAY D	CARIROU NF	POCATELLO	IDAHO	83201	SOLBERG TERRY G	STEVENSVILLE RGR	STEVENSVILLE	MONT	59670
RICHARDS HORACE JR	S 35R COEUR DALENE	SPOKANE	WASH	99204	SOLT KENNETH E	1119 SPRINGER ROAD	OLYMPIA	WASH	98501
RICHELSON PAUL N	PO BOX 39	MONTPELIER	IDAHO	83254	SONNICHSEN RICHARD C	GPO BOX RT	SAN JUAN P RICO		00936
RICHMOND ROBERT W	USFS	LIBSON	N D	58054	SOWDER ARTHUR M	1811 BENTLEY RD	SANDY SPRINGMUD		20860
RICKERD JAMES W	2114 ELLIOTT ST	TOLEDO	OHIO	43606	SOWDER JAMES E	PO BOX 245	BERKELEY	CALIF	94701
RIECKEN HUGO W	2800 COTTAGE WAY	SACRAMENTO	CALIF	95825	SPACE JACKSON W	SANTA FE NATL FOR	GLORIFETA N M		87535
RIEDEMAN HENRY W	BLM	DURLEY	IDAHO	83311	SPACE JAMES C	ROUTE #1	CROFIND	IDAHO	83544
RINGDAHL JOHN N	9610 S 240TH	KENT	WASH	98031	SPACE RALPH S	RIVERSIDE TRACTS	OROFIND	IDAHO	83544
RINGE RUDY R	BOX 61	AMERICAN FLSDAHO		83211	SPANGLER BERNARD	BOX 593	PALISADES	IDAHO	83437
RISCH JAMES E	COUNTY COURTHOUSE	BOISE	IDAHO	83702	SPECHT JOHN R	HDX 21	OSPUHRN	IDAHO	83849
RISSE WALTER M	SCS	KLAMATH FALLORE		97601	SPENCER MARSHALL E	2507 KORUALE LANE	HOWIE	MD	20715
RITCHIE BRENT W	ROUTE 2	MERIDIAN	IDAHO	83642	SPENCER ROBERT W	BOX 502	OROFIND	IDAHO	83544
ROBERT ROBERT J	KANSAS ST UNIV	MANHATTEN	KAN	66502	SPINCK LOUIS S	4460 DURER PKW	SACRAMENTO	CALIF	95823
ROBERTS MADLEY R	745 80ND ST	BEND	ORE	97701	SPINNEY CARLETON H	511 12TH AVE	NAMPA	IDAHO	83651
ROBERTS RALPH B	PO BOX 386	COUNCIL	IDAHO	83612	SPORES DAVID W	5 USHER ROAD	MEDFORD	WASH	97505
ROBERTSON DALE F	1803 AVENUE F	HILLINGS	MONT	59102	SPORES WILLIAM R	POX 605	HAMILTON	MONT	59840
ROBERTSON HAROLD F	BLM	RIVERSIDE	CALIF	92502	SPRINGER DONALD E	HDX 432	BONNERS FRY	IDAHO	83805
ROBINETTE WILLARD L	MEXKA PO BOX 3031	MOSHI TANZANAFRICA		94530	STAB THOMAS L	BOX 627	GENESE	IDAHO	83832
ROBINS CHARLES M	40256 DAVIS ST	FREMONT	CALIF	94530	STANER WILLIAM H	478 CRAIG DR	FT BENNING	GA	31905
ROBINSON LOREN E	E 12721 12TH AVE	SPOKANE	WASH	99216	STANLEY LT COL WILFHED	15430 PIUMA AVE	CERRITOS	CALIF	90701
ROBINSON WALTER L	102 DIXIE LANE	LONGVIEW	WASH	98632	STANTON DON C	11 CHENEY ST	SPRINGVALE	ME	04083
ROCHE REN F	WSU RANGE MGMT	PULLMAN	WASH	99163	STAUBER ARTHUR E	1239 WICKS LANE	BILLINGS	MONTANA	59101
RODDERS JAMES G	BOX 35	CASTLE ROCK	WASH	98611	STAUBER GERALD A	960 PATSY DRIVE	POCATELLO	IDAHO	83201
ROGERS GEORGE L	1223 CULBERHOUSE	JONESBORO	ARK	72401	STAUBER RICHARD L	3074 N 550 EAST	NO DGUEN	UTAH	84403
ROMANS DOYLE M	PO BOX 343	W YELLOWSTONE	MONT	59758	STEARNS GORDON R	246 LACUESTA DRIVE	MENLO PARK	CALIF	94025
ROOT GEORGE A	2981 LAUREL RD	LONGVIEW	WASH	98632	STEEL PAUL E	PO BOX 1306	ALBUQUERQUE N MEXICO		87103
ROSENKRANCE LESTER	2000 CURLEW DRIVE	IDAHO FALLS	IDAHO	83401	STEELE ROBERT W	P O BOX 552	MOSCOW	IDAHO	83843
ROSENTHAL JAMES J	24 COUCHMAN AVE	ROCHESTER 17N Y		14617	STEFFENSEN LESLIE K	2515 N 31ST	SPRINGFIELD	ORE	97477
ROSS PHILIP E	ROUTE 3	GALESBURG	ILLINOIS	61401	STEINHOPF RAUHAEL J	FOR SCI LAP BOX 463	MOSCOW	IDAHO	83843
ROSS CULVER D	1383 3RD	OGDEN	UTAH	84404	STEINMUND DOUGLAS M	PO BOX 1197	COEUR DALENE	IDAHO	83814
ROWEN ROBERT A	USFS FOR SUPERVISORELKO	NEVADA		89801	STEMPER FOREST E	HDX 193	MT HOME	IDAHO	83647
ROWLAND HARVEY C	3111 KEOKUK	RUTTE	MONTANA	59701	STEPHENSON GLOUEN	530 SOUTH STATE	CLEARFIELD	UTAH	84015
ROWLES JAMES L	916 E 8TH	ELLENBURGWASH		98926	STERE DAVID H	127-EAST RAY DR	NORTH BEND	OREGON	97450

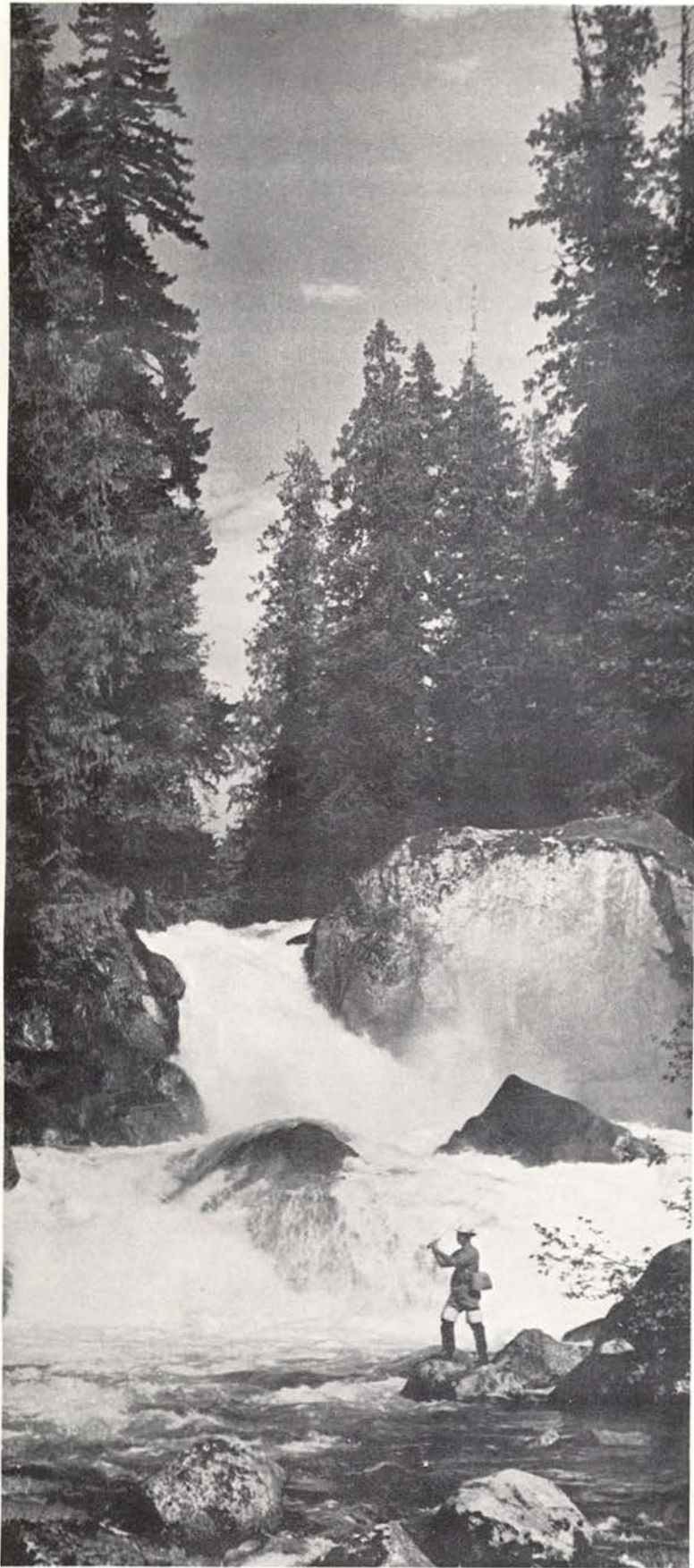


STROSS RAYMOND	909 CLAY	ST CHARLES MISSOURI	63301	VON BARGEN JOHN H	CHIPPewa NF	CASS LAKE MINN	56054
STROUP STANLEY W	BLUE RIDGE R S	HAPPY JACK ARIZ	86024	VOSEN HAROLD C	STAR ROUTE	CLARK FORK IDAHO	83511
SULLIVAN JOHN D	4318 GRANADA ST	ALEXANDRIA VA	22309	WALDRON HARVEY M	PO BOX 468	BEND ORE	97701
SUMMERSIDE GEORGE W	KOOTENAI NAT FOREST	LIBBY MONTANA	59923	WALKER ALFRED	404 W 24TH	SPOKANE WASH	99203
SUNDOQUIST CARL L	925 YORK AVE	RENO NEV	89502	WALKER ROBERT B	USFS	TWIN FALLS IDAHO	83301
SUOMINEN ROY A	CONSOL WATER P & P	PHILLIPS WIS	54555	WALL HAROLD G	510 FIFTH STREET	NELSON B C	
SUTHERLAND CHARLES F	221 N 6TH ST	CORVALLIS ORE	97330	WALLACE HOWARD A	USFS	CEDAR CITY UTAH	84720
SUTRICK JOHN S	703 E THOMPSON	SAPULPA OKLAHOMA	74066	WALLACE WILLIAM B	1426 E BOWMAN ST	SOUTH BEND INDIANA	46613
SUTTON VERNON C	BOX 43	OLA IDAHO	83657	WALTER JOHN S	7009 INDIANA	VANCOUVER WASH	98664
SWANSON ROBERT E	PAYNE ROAD	IDAHO FALLS IDAHO	83401	WAMBOLT CARL L	BOX 764	BONNERS FRY IDAHO	83805
SWAYNE ALLEN P	430 PENN AVE	FTOWAH TENN	37331	WARD RAY L	ROUTE 1	TWIN FALLS IDAHO	83301
SWEEP DONALD H	BOX 428 BLM	COEUR DALENEIDAHO	83814	WARD WALTER M	ROUTE 1512	ALTURAS CALIF	96101
TALBOY DEAN W	738 HILLCREST WAY	REDWOOD CITYCALIF	94062	WEATHERHEAD DONALD J	6541 28TH NE	SEATTLE WASH	98155
TANAKA RICHARD M	BOX 673	SHOSHONE IDAHO	83352	WEBB ORRIN F	701 E TACOMA	ELLENSBURG WASH	98926
TANK ROBERT E	FIRE CONTROL BLM	IDAHO FALLS IDAHO	83401	WEDDLE ARTHUR J JR		GRANGEVILLE IDAHO	83510
TANNER DALE L	2017 POWERS	LEWISTON IDAHO	83501	WEGELEREN HARRY	707 N OAK	UKIAH CALIF	95482
TANUBAN JAMES H	FOREST SERVICE	WALHALLA N D	58282	WELKER LORIN J	5608 RICKEY RD	YAKIMA WA	98907
TAYLOR ABB H	145 NE ASH ST	SHERIDAN ORE	97378	WELLNER CHARLES A	DIST MGR ULM	PRICE UTAH	84501
TAYLOR BRYAN E	BOX 343	NEWPORT WASH	99156	WELLS WADE G II	1370 LARK CIR	OGDEN UTAH	84403
TAYLOR ERNEST H	3119 CAROLINA NE	ALBUQUERQUE N M	87110	WELSH THOMAS L	117 PEASLEY ST	BOISE IDAHO	83705
TAYLOR HARRY J JR	PO BOX 432	YREKA CALIF	96097	WEMHOFF LESLIE S	BOX 647	MCCALL IDAHO	83638
TAYLOR JOHN L	1316 WILDER	HELENA MONT	59601	WENZEL OTIS G	MRS RONALD WEMHOFF	COTTONWOOD IDAHO	83522
TAYLOR LAURENT	511 E CLIFF DRIVE	EL PASO TEXAS	79902	WEST WAYNE W	12505 E WELLSLEY	SPOKANE WA	99216
TAYLOR PETER W	2533 INGLEWOOD DR	BOISE IDAHO	83705	WESTHAVER BARRY L	630 SANDSOME ST	SAN FRAN CALIF	94111
TAYLOR ROBERT E	STAR ROUTE	GRANITE FALLWASH	98252	WETZEL BARTON D	815 EAST 16TH ST	N VANCOUVER H C	
TAYLOR WILLIAM D	MARINE CORPS BASE	CMP PENDLETCALIF	92055	WHEATON RODGERS G	FLATHEAD AGENCY	GILSON MONTANA	59831
TAYLOR WILLIAM R	BOX 738	BROOKINGS OREGON	97415	MEYERWANN GEORGE F	13320 NW NDRTHRUP	PORTLAND ORE	97229
TEYNTON ROGER	578 E 1700 N	OGDEN UTAH	84404	WHEATLEY THOMAS J	2580 BOWMAN ROAD	HEEDSPCHT ORE	97467
TELMANN HARRY A	305 SE 6TH	ENTERPRISE ORE	97828	WHITE HENRY A	6609 N LAKF DR	MILWAUKEE WISC	53217
TEMPLE DONALD J	US FOREST SERVICE	HUNGRY HORSEMONT	59919	WHITNEY CLARIGUN D	60 SANTA HITA DRIVE	ALANUT CREEKCALIF	94596
TERRILL ROBERT B	MONTI-TA SAL N FOR	PRICE UTAH	84501	WHITT CHARLES R	655 NORTH 8TH ST	PAVETTE IDAHO	83661
THACKABERRY JOSEPH J	6713 ASHLAND DRIVE	BOISE IDAHO	83705	WHITTIG JERRY F	2313 GARLAND DR	MISSOULA MONT	59801
THALDORF LYNN H	BOX 114	BOISE IDAHO	83701	WIEGAND DAVID R	RT 12 BOX 729	OLYMPIA WASH	98501
THIEMENS JIM D	WEYERHAEUSER CO	NORTH BEND OREGON	97459	WIESHUEGL ERWIN G	4200 GR AVE APT	BIODESPOINES IA	50312
THILENIUS JOHN F	US FOR RGR EXPT STA	ARMADILLO CITY S D	57701	WILKER CARL W	BOX 196	NORRIS ILL	37878
THOMAS GERALD W	3805 37TH	LUBBOCK TEXAS	79409	WILKINSON LYLE A	64 E MINOR	WINNEMUCCA NEV	89445
THOMAS HAROLD E	RT 1 WEST HIWAY 20	BOISE IDAHO	83702	WILLIAMS EDGAR L	165 E 3RD S	MANTI UTAH	84642
THOMAS JAMES L	THORNE BAY ALASKA	KETCHIKAN ALASKA	99501	WILLIAMS ROGER M	707 E PINE RT 3	MERIDIAN IDAHO	83642
THOMPSON ALLEN R	2906 MADISON	BOISE IDAHO	83703	WILLIAMS THOMAS R	80X 253	ROSCOV IDAHO	83843
THOMPSON ERNEST L	3124 CAROLINA NE	ALBUQUERQUE N M	87110	WILLIAMSON DARRELL L	814 MAYHELE	MOUSE IDAHO	83700
THOMPSON JAMES M	401 S WASHINGTON	CENTRALIA WASH	98551	WILLIAMSON REX P	2824 GRANDEE ST	BOISE IDAHO	83700
THOMPSON WILLIAM L	C/O ATLANTA STAGE	BOISE IDAHO	83701	WILSON CARL C	550 W FORT ST RM435	BOISE IDAHO	83702
THOMSON HAROLD K	15 EAST 4TH AVENUE	EMPORIA KANSAS	66801	WILSON DENNIS C	RT 1 BOX 9024	REAMOUNT TEXAS	77706
THORNBER MERRILL S	RTE 1 BOX 121	PARKER COLO	80134	WILSON DONALD D	4142 ROUND TOP DR	HONOLULU HAWAII	96822
THRAPP HILTON	ROUTE 2 BOX 725	INDEPENDENCEMO	64054	WILSON LOUIS R	779 APACHE TRAIL	RIVERSIDE CALIF	92507
THRUPP ADRIAN C	4032 NE 57TH ST	SEATTLE WASH	98105	WILSON LOUIS R	84 MODEL AVE	HOPWELL N J	08525
TIDD ROBERT L	BOX 126	SAN CARLOS ARIZ	85550	US FOREST SERVICE	COEUR DALENEIDAHO	OGDEN UTAH	84400
TIEDEMANN ROLAND K	134 DRAKE AVENUE	STATEN IS LAN Y	10314	COEUR DALENEIDAHO	ROUTE 1 RIVERVIEW	COEUR DALENEIDAHO	83814
TILTON WILLIAM M	506 N GARFIELD	MOSCOW IDAHO	83843	HOFF LUMBER CO	ROUTE 1 RIVERVIEW	ROFRINO IDAHO	83544
TINSLEY SELDEN L	SCS	UPPER DARBY PA	19084	WILSON THOMAS I	WINDLE JOHN C	HORSESHO BNDIDAHO	83629
TIPPETTS VAUGHN	PO BOX 338	AFTON WYOMING	83110	WINDLE LEAFORD C	1607 F01TH DR	SANDPOINT IDAHO	83864
TIPPLE NICHOLAS E	RD #1	GHEENT N Y	12075	WINDY LARRY D	COL OF FOR U ICA	BELEA W	87052
TISDALE ELDON D	712 SHAYNE DRIVE	BOISE IDAHO	83705	WISDOM HAROLD W	172 TAJUIL URB	MILARIO PIEDROS P RICO	52440
TKACH JOHN G	8906 WILLIA BR LA	ANNANDALE VA	22003	WITTERS RANDALL L	2826 EAST WAY	REDDING CALIF	96001
TOLINSON NORMAN E	SILVER LAKE ROAD	NEWTOWN PENN	18940	WOLFE WINSTON C	BOX 403	HUNGRY HORSEMONTANA	59919
TOMSETH HENRY W	USFS	DENO ORE	97701	WOOD JOHN Y	RFD 2 BOX 5	PULLMAN WASH	99163
TOWN SHERMAN D	RD BOX 411	WALE ORE	97718	WOOD DONALD K	MED BOW NATL FOR	ENCAMPMENT WYO	82325
TOWNS WILLIAM L	100 PEACHTREE	ATLANTA GA	30323	WOOD ROBERT E	12372 74TH PLACE	NEKIKHLAND WASH	98100
TOWNSEND LAURENCE G	IDA DEPT OF PARKS	BOISE IDAHO	83707	WOOD ROBERT E	COL OF FOR U OF W	SEATTLE WASH	98100
TRAWEEK DAVID E	FU321368 BOX 8407	GOODFELLOWTEXAS	76501	WOODRUFF SAMUEL A	587 FOX LANE	WORTHINGTON OHIO	43085
TROJANOWSKI CAPT JAMES	106 WOOD ST	PORTAGE WISCONSIN	53501	WOODS PAUL T	92646 PALAICAI ST	EWA BEACH HAWAII	96706
TURNER GEORGE T	105 WOOD	SHERIDAN ORE	97378	WOOLWINE PHIL C	20 RUCHANAN DR	SAUSALITO CALIF	94965
TURNIPSEED RUSSELL D	BOX 217	MEADOWBROOK DRPORT COLLINS	COLO	WREN CHARLES C	3687 RICHBIART CIR	NASHVILLE TENN	37211
TWITCHELL L T	1411 SWISHER ROAD	POCATELLO IDAHO	83201	WRIGHT JONATHAN W	2034 YUMA TRAIL	OKEMOS MICHIGAN	48864
UD-DIN ZAFAR	81FC ROUTE 3	BOISE IDAHO	83705	WYKERT PAUL V	PO BOX 124P	ESTES PARK COLO	80157
ULLEVAALSETER REIDAR D	BHAKHAR FOR DIV	MIANEVAH W PAKISTN		WYLLIE JOSEPH A	1403 FRANKLIN	BOISE IDAHO	83702
UNDERWOOD ALAN B	NORDMARKA	OSLO NORWAY		YAKOVAC CARL S	BOX 871	SALMON IDAHO	83467
UNDERWOOD JOHN F	DANIEL BOONE NF	WINCHESTER NT	40931	YATES DONALD H	4827 FOREST AVE	MERCER ISLE WA	98040
UNDERWOOD VERNON L	301 BOULDER ST	NEVADA CITY CALIF	95959	YEARY GLENN A	BOX 166	TWIN FALLS IDAHO	83301
UPSON U LAYTON	1707 SUNSET DRIVE	PACIFIC GROVICALIF	93950	YINGLING GLENN H	ROUTE 1	UNION BRIDGEMO	21791
VAIL DAVID B	632 BASSWOOD	RICHILAND WASH	99352	YINGST DONOVAN	9110 SW PINEBROOK	TIGARD ORE	97223
VAIL DELMAR D	5224 STATE ST	POISE IDAHO	83703	YOGERT NORMAN W	1412 ALMOND ST	ST PAUL MINN	55108
VAN LEAR DAVID H	BOX 135	CEDAR CITY UTAH	84720	YOST NATHAN L	ROUTE 1	BOISE IDAHO	83702
VANCE EDWARD P	525 COMMERCIAL ST	CLIFTON FORGVIRGINIA	24422	YOUNG JOHN L	EDW HINES LUMBER	COHINES OREGON	97738
VANDEBURG JOHN S JR	SCS	MOSES LAKE WASH	98837	YOUNG LARRY	HLW	BOISE IDAHO	83702
VANIER STEPHEN C	BOX 292	RONNERS FRY IDAHO	83805	YOUNGBLOOD GLEN B	2508 REDWAY ROAD	BOISE IDAHO	83704
VANSANT RUSSELL H	13660 SW PAC HY	RIFIGARD OREGON	97223	YOUNG BARNARD R	415 S 7TH	POCATELLO IDAHO	83201
VARS HARRY T	SHERWIN WILLIAMS	CHICAGO ILL	60601	ZAPPETTINI GEORGE	200 ARROWHEAD DR	CAHSON CITY NEV	89701
VARSVELD FRANK R	ROUTE 1	WHITTFISH MONT	59937	ZIELINSKI EDWARD C	3905 VAN VRANKEN	SCHENECTADY N Y	12308
VARNISHNICK JOSEPH C	473 GALE DRIVE	LADNER B C		ZIMMERMANN JACK F	533 W WISCONSIN	AVEMILWAUKEE WISC	53203
VERDAL GUSTAV A	902 S OYER	SANDPOINT IDAHO	83864	ZOBELL REX	3520 4TH ST SO	WISC RAPIDWISC	54494
VERNER ROY S	USFS	COEUR DALENEIDAHO	83814	ZOGHEH MOUINE F	2613 CHESTNUT DR	CHEYENNE WYO	82001
VILKITTIS JAMES R	USFS	REXBURG IDAHO	83440	ZUBERBUNLER RUODLPH U	WATKESHOD DEPT-CSU	FT COLLINS COLO	80521
VINCENT DWAIN W	4942 MARTIN	DETROIT MICH	48210	ZWIRTZ ROBERT J	324-25TH ST	OGDEN UTAH	84401
VITOLINS AUGUSTS	3417 CRESTFNT RIM	BOISE IDAHO	83704		9345 CEDAR	HELLFLOWER CAL	90706
VOGT HARRY A	RT 1	SALMON IDAHO	83467				
	SCS	MOSCOW IDAHO	83843				

## Deceased

AHLSSKOG RALPH H	CLARKE STANLEY C	FRITCHMAN MOLT	KNOBLOCK JACK R	PARSONS RUSSELL H	SLIPP ALBERT W
ALLEGHETTI JOSEPH	CRAWFORD CHARLES R	GALUSHA CHARLES	KRUEGER KENNETH W	PIERSON ROYALE K	SNYDER ERNEST P
AUST PAUL W	CURTIS FLOYD C	GERRARD PAUL H	LANGER CHARLEY J	PIKE GALEN W	SPENCE LITER E
BAILEY WILLIAM E	DANIELS ALBERT S	GILL TYLER S	LANSOON WILLIAM H	POLZ ERNEST A	SPENCER BEN O
BAKER LOREN K	DAY NEIL J	GIRARD JAMES W	LEONARD RODNEY B	PRAFKE VERLON E	STANTON EDGAR W
BARNETT JAMES W	DECKER ARLIE D	GIRARD JAMES W	LILLICO KEITH R	RANDALL WARREN R	STAPLES HOWARD W
BAUMERT BRENT J	DOYLE IVAN	GOODEN FLOYD W	LUNDSTRUM F J	READ WILLIAM W	STOFFER DAVID J
BOY GLENN L	DRISSEN JOHN P	GRAFILLER JAY T	LYNSTEN HARRY E	RICHARDSON KENNETH F	TUMELSON FLOYD O
BRANDT JOHN C	EASTMAN VIRGIL H	GUSTAFSON CARL A	MCKEEVER DONALD G	RITZHEIMER EARL	WADSWORTH H A
BREON EUGENE E	ERPPERSON PAUL L	HALLETT NOEL L	MITCHELL WILLIAM W	ROWE PERCY B	WALRATH FAIRLY
BROCK JOHN E	ERICKSON EDWARD JR	HEPHER WILLIAM S	MOODY VIRGIL C	RUTLEDGE R H	WHITE HAROLD Z
CALL ELWOOD C	EVANS JEROME	HERMAN CHARLES H	MUNSON OSCAR	RYAN CECIL C	WIGGINS EDWARD
CALLENDER WILLIAM	FAVRE CLARENCE E	HOPKINS JESSE C	NETTLETON HARRY I	SAASTAD HAROLD L	WILSON ALLAN S
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## LET'S TAKE A HARD LOOK AT PRODUCTIVE FOREST LANDS

The professional forester in the next few decades will not have an easy job. Right now, America has only 508 million acres of productive timberland left. The number of useful forest acres is not increasing, but the number of people making demands upon these acres is. More people want the opportunity to enjoy nature—to picnic in a quiet grove—to ski, sightsee, camp, hike, hunt and fish. And each year our society takes more land for city expansion, airports, super highways, power lines, reservoirs, housing, schools and shopping centers. Yet more people need the products these limited timberlands provide. More and better homes, thousands of other wooden products, paper products and chemicals. The same land must also provide grazing for cattle and sheep to feed and clothe America; watershed control, and still replenish itself on a sustained yield basis.

It is unreasonable to permit a small emotional segment of the population to lock up timberlands in endless wilderness parks limited to a single use. The answer lies in establishing a working balance of commercial and recreational needs—a multiple use of the forest.

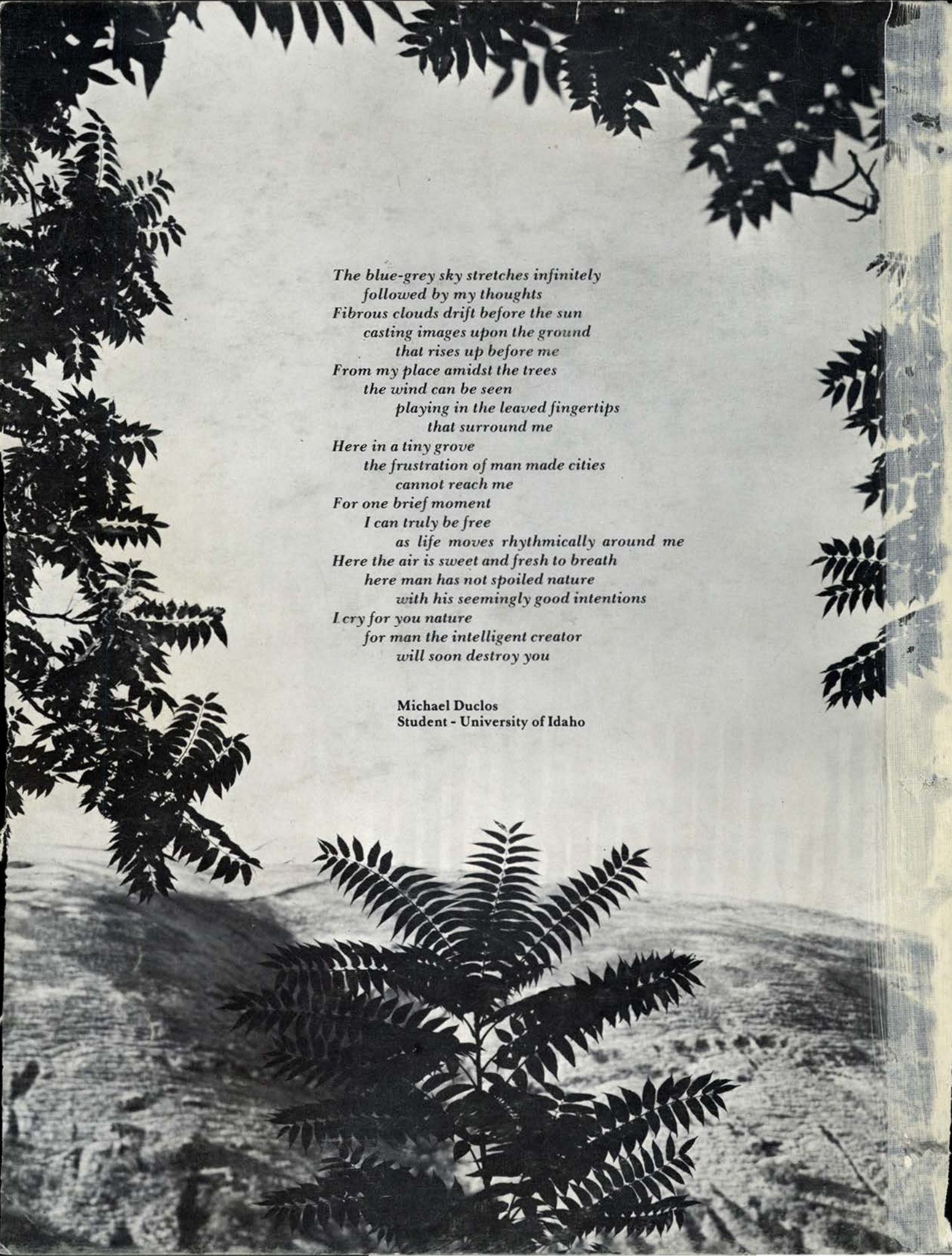
Tomorrow's professional forester will have the responsibility of making unpopular decisions and will need skill and courage to carry them out. It won't be an easy job. But then, nothing that is reasonable and far reaching is ever easy.

At Georgia-Pacific, we have done a lot about multiple use of our timberlands. **If you would like an opportunity to evaluate our ideas for yourself, please write to the Public Relations Department, Georgia-Pacific Corporation, P.O. Box 311, Portland, Oregon 97207.**



**GEORGIA-PACIFIC**  
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*The blue-grey sky stretches infinitely  
followed by my thoughts  
Fibrous clouds drift before the sun  
casting images upon the ground  
that rises up before me  
From my place amidst the trees  
the wind can be seen  
playing in the leaved fingertips  
that surround me  
Here in a tiny grove  
the frustration of man made cities  
cannot reach me  
For one brief moment  
I can truly be free  
as life moves rhythmically around me  
Here the air is sweet and fresh to breath  
here man has not spoiled nature  
with his seemingly good intentions  
I cry for you nature  
for man the intelligent creator  
will soon destroy you*

**Michael Duclos**  
Student - University of Idaho