1011
93-1-4
Ap 6/1
In 8/6
93-1-pt.3

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR 1975

GOVERNMENT
Storage
CUMENTS
JUN 4 1974
THE LIBRARY
KANSAS STATE UNIVERSITY

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

NINETY-THIRD CONGRESS

SECOND SESSION

KSU LIBRARIES
A11900 223907

SUBCOMMITTEE ON DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES

JULIA BUTLER HANSEN, Washington, *Chairman*

SIDNEY R. YATES, Illinois
GUNN McKAY, Utah
CLARENCE D. LONG, Maryland
FRANK E. EVANS, Colorado
JOSEPH M. McDADE, Pennsylvania
WENDELL WYATT, Oregon
VICTOR V. VEYSEY, California

J. DAVID WILLSON and BYRON S. NIELSON, *Staff Assistants*

PART 3

Forest Service 1
Bureau of Land Management 412
Federal Metal and Nonmetallic Mine Safety Board of Review 632
Mining Enforcement and Safety Administration 640
Joint Federal-State Land Use Planning Commission for Alaska 746
Office of Water Resources Research 767
Saline Water Research 848

AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR 1975

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

NINETY-THIRD CONGRESS

SECOND SESSION

SUBCOMMITTEE ON DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES

JULIA BUTLER HANSEN, Washington, *Chairman*

SIDNEY R. YATES, Illinois
GUNN McKAY, Utah
CLARENCE D. LONG, Maryland
FRANK E. EVANS, Colorado
JOSEPH M. McDADE, Pennsylvania
WENDELL WYATT, Oregon
VICTOR V. VEYSEY, California

J. DAVID WILLSON and BYRON S. NIELSON, *Staff Assistants*

PART 3

Forest Service	1
Bureau of Land Management	412
Federal Metal and Nonmetallic Mine Safety Board of Review	632
Mining Enforcement and Safety Administration	640
Joint Federal-State Land Use Planning Commission for Alaska	746
Office of Water Resources Research	767
Saline Water Research	848

U.S. GOVERNMENT PRINTING OFFICE

32-043 O WASHINGTON : 1974

COMMITTEE ON APPROPRIATIONS

GEORGE H. MAHON, Texas, *Chairman*

JAMIE L. WHITTEN, Mississippi
JOHN J. ROONEY, New York
ROBERT L. F. SIKES, Florida
OTTO E. PASSMAN, Louisiana
JOE L. EVINS, Tennessee
EDWARD P. BOLAND, Massachusetts
WILLIAM H. NATCHER, Kentucky
DANIEL J. FLOOD, Pennsylvania
TOM STEED, Oklahoma
GEORGE E. SHIPLEY, Illinois
JOHN M. SLACK, West Virginia
JOHN J. FLYNT, Jr., Georgia
NEAL SMITH, Iowa
ROBERT N. GIAIMO, Connecticut
JULIA BUTLER HANSEN, Washington
JOSEPH P. ADDABBO, New York
JOHN J. McFALL, California
EDWARD J. PATTEN, New Jersey
CLARENCE D. LONG, Maryland
SIDNEY R. YATES, Illinois
BOB CASEY, Texas
FRANK E. EVANS, Colorado
DAVID R. OBEY, Wisconsin
EDWARD R. ROYBAL, California
LOUIS STOKES, Ohio
J. EDWARD ROUSH, Indiana
GUNN McKAY, Utah
TOM BEVILL, Alabama
EDITH GREEN, Oregon
ROBERT O. TIERNAN, Rhode Island
BILL CHAPPELL, Florida
BILL D. BURLISON, Missouri

ELFORD A. CEDERBERG, Michigan
WILLIAM E. MINSHALL, Ohio
ROBERT H. MICHEL, Illinois
SILVIO O. CONTE, Massachusetts
GLENN R. DAVIS, Wisconsin
HOWARD W. ROBISON, New York
GARNER E. SHRIVER, Kansas
JOSEPH M. McDADE, Pennsylvania
MARK ANDREWS, North Dakota
LOUIS C. WYMAN, New Hampshire
BURT L. TALCOTT, California
WENDELL WYATT, Oregon
JACK EDWARDS, Alabama
WILLIAM J. SCHERLE, Iowa
ROBERT C. McEWEN, New York
JOHN T. MYERS, Indiana
J. KENNETH ROBINSON, Virginia
CLARENCE E. MILLER, Ohio
EARL B. RUTH, North Carolina
VICTOR V. VEYSEY, California
LAWRENCE COUGHLIN, Pennsylvania
C. W. BILL YOUNG, Florida

KEITH F. MAINLAND, *Clerk and Staff Director*

STAFF ASSISTANTS

GORDON E. CASEY
NICHOLAS G. CAVAROCCHI
GEORGE E. EVANS
ROBERT B. FOSTER
JOHN M. GARRITY
AUBREY A. GUNNELS
CHARLES G. HARDIN
F. MICHAEL HUGO
THOMAS J. KINGFIELD
ROBERT L. KNISELY
EDWARD E. LOMBARD
RICHARD N. MALOW
MILTON B. MEREDITH
AMERICO S. MICONI
DEMPSEY B. MIZELLE
ENID MORRISON
PETER J. MURPHY, Jr.
HENRY A. NEIL, Jr.
ROBERT C. NICHOLAS III
BYRON S. NIELSON
JOHN G. OSTHAUS
FREDERICK F. PFLUGER
JOHN G. PLASHAL
EDWIN F. POWERS
SAMUEL R. PRESTON
DONALD E. RICHBOURG
KAREN J. SCHUBECK
EARL C. SILSBY
G. HOMER SKARIN
C. WILLIAM SMITH
CHARLES W. SNODGRASS
HUNTER L. SPILLAN
PAUL E. THOMSON
GEORGE A. URIAN
DEREK J. VANDER SCHAAF
EUGENE B. WILHELM
J. DAVID WILLSON

SURVEYS AND INVESTIGATIONS

C. R. ANDERSON, *Chief*
DAVID B. SCHMIDT, *Director*
DENNIS F. CREEDON, *First Assistant*
MARION S. RAMEY, *Second Assistant*

NOTE.—This Surveys and Investigations supervisory staff is supplemented by selected personnel borrowed on a reimbursable basis for varying lengths of time from various agencies to staff up specific studies and investigations. The current average annual full-time personnel equivalent is approximately 42.

ADMINISTRATIVE SUPPORT

GERARD J. CHOUINARD
PAUL V. FARMER
JANE A. MEREDITH
SANDRA A. GILBERT
EVA K. HARRIS
PATRICIA A. KEMP
VIRGINIA MAY KEYSER
MARCIA L. MATTS
FRANCES MAY
GENEVIEVE A. MEALY
LAWRENCE C. MILLER
DALE M. SHULAW
AUSTIN G. SMITH
CHRISTINE STOCKMAN
ANN M. STULL
RANDOLPH THOMAS
GEMMA M. WEIBLINGER

DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1975

THURSDAY, FEBRUARY 7, 1974.

FOREST SERVICE

LONG-RANGE PLAN: "ENVIRONMENTAL PROGRAM FOR THE FUTURE"

WITNESSES

REXFORD A. RESLER, ASSOCIATE CHIEF
PHILIP L. THORNTON, DEPUTY CHIEF, STATE AND PRIVATE FORESTRY
ROBERT L. YOUNGS, ASSOCIATE DEPUTY CHIEF, RESEARCH
ADRIAN M. GILBERT, DIVISION DIRECTOR, PROGRAM AND POLICY ANALYSIS

OPENING REMARKS

Mrs. HANSEN. The committee will come to order. We are very happy to have the Forest Service present this morning. The reason we scheduled this hearing today is to discuss with you this morning the long range forest plan.

Of course I note that the plan is deficient, because OMB apparently didn't allow you to include the budget recommendations. There are great plans, there are great forests, there are great programs, but OMB never seems to request adequate funding for the Forest Service.

COMMITTEE DIRECTIVE

Our committee report of last year stated:

The committee directs that funds included in this appropriation be used for more intensive management of those forest areas which are amenable to high-yield timber production without serious environmental damage. The committee further directs that the Forest Service provide the committee with a long-range multiyear budget and management plan to bring the management of Forest Service lands up to standards consistent with multiuse objectives.

Didn't the people at OMB read this language?

Mr. RESLER. I think I can explain that.

Mrs. HANSEN. I hope you can.

INTRODUCTION OF STAFF

Mr. RESLER. May I say at the outset we are extremely pleased for an opportunity to visit with you on this subject. I would like to start off,

if I may, introducing people I have with me. My name is Rex Resler, Associate Chief of the Service. I am sorry that Chief McGuire is not available today.

Mrs. HANSEN. Is he in Mexico?

Mr. RESLER. He happens to be out of the country, Mrs. Hansen. He regrets not being here, because this is very much of vital interest to him. On my left is Philip Thorton, Deputy Chief of two program activities at the moment. He has been in charge of our programs and legislation activity and has recently moved to Deputy Chief of the State and private forestry cooperation activity.

Adjacent is Dr. Andy Gilbert, Director of our Program and Policy Analysis group who has been instrumental in developing this long range program. Next to him is Dr. Bob Youngs, Associate Deputy Chief for Research. He has also been much involved in this. Of course I am sure you all know Mr. Campbell.

Mrs. HANSEN. He has appeared here many times.

Since this is a very informal session, I have very few questions. We are going to let you explain to the committee what you have done to comply with the request of the committee. I may say as a prelude that I believe the members of this committee share with me the great feeling of responsibility at this particular time, as we look at the problems that we have inherited in energy. The failure to look ahead to do the necessary energy planning, programing, and research is what has caused the crisis in the energy field. The committee has become concerned that this same thing could happen to the U.S. forests, certainly by the year 2000. This is the reason we have directed the Forest Service to develop a long range plan and at the same time to bring you the committee's concern and its continuing interest in the environment.

This is one committee that is not going to disassociate itself with water, air, and the environment that people live in.

TRIBUTES TO MRS. HANSEN

Mr. MCDADE. Madam Chairman, would you yield before we do that.

Mrs. HANSEN. Surely.

Mr. MCDADE. I just think it would be highly appropriate at this juncture to offer a comment, based upon a story in the morning Post which became public knowledge to most Members of the Congress yesterday, that the Chairman of this committee has decided to end her distinguished career in public service at the end of this term.

This hearing I think is symptomatic of the approach that the gentlelady from Washington has taken in running this committee for the past many years, and that is to look at the problems of the Nation and its resources, and the problem of this Nation from all its aspects, from a long range point of view that reflects beneficially on the people of the United States.

I know that the members on this side of the aisle, and all members of the committee, have benefited from our association with your foresight, with your knowledge, with your courage and willingness to make the hard decisions that benefit the people of the United States. We are eternally grateful to you, for the leadership you have shown, but deeply saddened but understanding of the decision that you have made.

Mr. YATES. Will you yield, Mr. McDade?

Mr. McDade. If I still have the floor.

Mr. Yates. I want to associate myself with your remarks, and I want to say in addition that I think the people of the country should be very much indebted to the Chairman of this committee for all the advances in protecting the resources of this country, and in protecting the people of this country who need help who are within the jurisdiction of this committee I believe the Indians particularly owe a great debt of gratitude to the Chairman for the very keen interest that she has had in them. Many of the great advances that have been made in protecting and conserving the resources of this country will be a testimonial to the care that Mrs. Hansen has given through this Committee to the country.

Mr. Wyatt. Would you yield, Mr. McDade? As the closest neighbor to Mrs. Hansen, living in a district right across the Columbia River, almost the length of the river in both of our districts, I have seen in great detail what our Chairman has done in the area of renewable natural resources in the face of continuing budgetary disasters as far as each administration that I have served under is concerned.

The real benefit of the forward looking and far sightedness of our Chairman will not be really apparent for a number of years, because you can't plant trees today and harvest them tomorrow. The fish and wildlife activity is certainly in that category also. This country does owe a very deep debt of gratitude for Mrs. Hansen's expertise and her leadership during some very, very difficult years. Mrs. Hansen, I am sure that you will live happily to reap the benefits of the gratitude that will become very, very apparent as the years go by.

Mrs. Hansen. I want to thank the very distinguished members of this subcommittee. May I say that the saddest part of leaving Congress is the sorrow of leaving your colleagues. They are such nice people. This has been an exceptionally wonderful committee to Chair. Every member here is a delight because they have been so cooperative. They have all had the interests of the country at heart. The best part is that we have a group from such a varied geographical area. I think you have been extremely generous, and I know one thing, you have been extremely cooperative and extremely kind and I shall never forget you as colleagues.

I shall never forget the American people. Sometimes it is better to be just plain Julia Hansen, citizen of the United States of America, instead of eternally having somebody accuse you of doing something for a political purpose. I think maybe we need some voices that are just going to be free to say what they please. It is with great pleasure that I serve and I shall continue to serve my country just as Julia Hansen, citizen, United States of America.

Again my thanks to my wonderful colleagues, and to my staff. I would be very remiss if I didn't thank the staff. They have been tremendous.

Mr. Resler, what is the status of the plan, when will it be available to the committee, and what role did OMB play in the development of the plan?

Mr. Resler. Thank you, Madam Chairman.

I would like to start off by adding our sincere appreciation to you and your leadership in this committee, along with many other agencies, whom I am sure feel as we do about our close connections with you

and members of this committee over the years. I say that because of your very close familiarity with our activities, not just because you happen to hold the purse strings.

LONG-RANGE PLAN

First I would like to suggest to this committee that this is an extension of a long-range planning process that was first presented in fiscal year 1962 in a 10-year program for the National Forest System. This latest effort is aimed at trying to pull together various elements of the Forest Service's total program responsibilities, namely for administration to the National Forest System, for the State and private forestry activities, for the human resource development activities and of course, for the very important research arm in the field of forestry.

Almost 4 years ago we began doing some preliminary work on the concept. In the last year or year and a half we have been actively involved in direct negotiations with our field units, pulling together some of the data that we would need to prepare the basic program. I would want to add at this time, as I am sure you have noticed, that we have attempted to cast this out in terms of a range of alternatives of management levels, for the simple reason that, depending upon national priorities and the priorities of many individuals, one can design a program such as the Forest Service's to meet changing needs and changing opinions of those needs.

Our 10-year program is designed to do just that, to array a series of management strategists, if you will. The status of the plan is this. This is a preliminary draft, as you have seen. In fact, we are recasting it up now, hoping to have it in a more readable format, so that we can go to the printers in late February or early March. I would hope that some time in March it will be sufficiently far enough along so that we could make copies available at that time.

Mrs. HANSEN. I think the committee would particularly enjoy having the copies of this before we conclude our hearings on the budget for this year.

Mr. RESLER. Mrs. Hansen, we will make every effort to do so. Because a program of this nature obviously must be tied to dollars it is imperative that we go through a strenuous process of review both by the Department and by the administration, namely Office of Management and Budget. At this stage we have not had an opportunity, because of the state of this planning process, to do more than familiarize them with our general format.

Our next major effort, of course, will be to work directly with the Department in more detail, and with the Office of Management and Budget, to make them aware of what this planning process entails. It is a planning process that can be adjusted on an annual basis, and, of course, those decisions will be made a part of our annual budgetary process, but at the same time it gives both the administration and Congress a better opportunity to assess what the opportunities are, what some of the foregone costs are, and questions of that type.

As we develop this plan, it also identifies a broad range of significant policy questions that really must be addressed. We are hoping that these policy issues will be highlighted and there will be ample opportunities for open discussion on those issues.

PUBLIC INVOLVEMENT IN THE PLAN

Because of its significance to the Nation as a whole, and because also of our dedication to following the National Environmental Policy Act in the review process of this plan, we do anticipate, and have followed thus far, a program of involving the public in its preliminary form. We have had one such meeting on August 15 with a group of some 60 representatives of conservation and industry groups. The record for this meeting was held open until October 1 for additional comments or suggestions.

At this time we are revising the draft, incorporating as much of the input as we have been able to agree on thus far. We will again issue it in the form of a draft of an environmental impact statement. It will then be open again for further comment for a 90- to 120-day review period.

This process is aimed at permitting a broad public awareness of what is entailed. At the same time the preliminary work that we have done on it suggests also that it has a great deal of useful data in it in short range application as well.

Mrs. Hansen, that is approximately where we stand at the moment with the planning process. We have not completed the detailed review within the agency that we intend to do but we shall very quickly. It is a draft in character. As I read through it, I find, and I am sure members of the committee have or will find, numerous places that will be smoothed out, and no doubt many of the assumptions will be modified as we develop the next draft.

Because of your request, and our desire to get this plan completed as early as possible, we made a special effort to get clearance for release of this document. Mr. Long, Secretary Butz, and OMB have all been involved in seeing to it that these copies are available. We will attempt to get the rest of them to you as early as we can.

Mrs. HANSEN. I think the committee understands the necessity to hold many public hearings. The committee also feels that we should have some discussion of the preliminary plan, because the committee has been so deeply interested in the programs of the forests in the United States, not only Forest Service lands, but BLM and BIA lands. This hearing is to share with you our thinking before we get into the subject of the current budget, because the current budget is going to be based, as you are aware, upon the need to recognize the long-range aspect of forestry, as should have been done many, many years ago.

We completely understand. We do appreciate the release of the material for the purposes of review, exploration, and questioning this morning. I am certain that the other committee members join me in sharing that pleased feeling that we have a chance to hold this overview hearing, even before you have finished your environmental impact discussions with the conservationists as well as the forest users.

PROPOSED ON-GOING PROCESS

Mr. RESLER. Thank you. We would also like to point out that we visualize this long-range programing effort to be a part of an on-going process. It will allow for annual or at least periodic updates. I don't know that we are thinking at the moment that we can do it on an

annual basis except as a part of the regular budget development process, which will tie it to the strategies developed in this plan, but certainly it is contemplated that we would update it at least somewhere in the 5- to 10-year range, preferably the 5-year range. Based on immediate trends in the past, that frequency would seem to be necessary.

Mr. YATES. Madam Chairman, may I ask a question?

Mrs. HANSEN. Yes.

LAND USE PLANNING

Mr. YATES. When I was out West this last year, and going through some of the national forests, I spoke not only to your people out there, but also as well to some of the Bureau of Land Management people. At the same time it was indicated that you, the Park Service, the Bureau of Land Management and other offices of the Department of Interior, and Agriculture of course, were engaged in trying to fashion a program for better cooperation in land use. The possible use of the oil shale deposits presented certain problems with respect to grazing, cutting timber, mining and other kinds of activities on the public lands. Where do you stand on that survey and overall land use now?

Mr. RESLER. I think what they were referring to was a series of efforts that have been undertaken for quite some time now, working toward a joint approach to coordination of land-use planning in general, both at the State level and at the more localized level as Interior Agency cooperation exists between the various entities as they develop the land-use plan.

PROJECT SEAM

They may have also been referring to a broader area of cooperation that we have underway this year having to do with research, development and applications of Project SEAM aimed at better approaches to managing the surface environment related to extraction processes, primarily strip mining. Those are two efforts currently underway that do relate very closely.

Mr. YATES. What is its status?

Mr. RESLER. Project SEAM is funded this year at the $1.7 million level. It is a Department of Agriculture program, but tied in closely with the activities of other departments, particularly Interior, and, of course, the States.

We are currently exploring, since the President's message was put forward, the possibility of the need for a rather substantial expansion of Project SEAM, mainly because if we accelerate over the next 5 or 10 years the development of mineral resources, we must also sharply expand our attention to the techniques and the methods of restoring the surface, and protecting it in the first place, to the extent that we can. This is fundamentally the thrust of the SEAM Project.

Mr. YATES. Where is it? Are you anywhere near completed with it or is it just beginning?

Mr. RESLER. It is just beginning. It was initiated last year, and this is the first year which we have programed.

Mr. YATES. How long will it be?

Mr. RESLER. It is aimed at a 5-year program.

Mr. YATES. A 5-year program to bring out the plan, to complete the plan?

Mr. RESLER. No, sir, to do the actual development of research and establish a series of demonstration areas that would show how coal, for instance, can be strip mined and the surface environment maintained at acceptable levels. It will also demonstrate the costs as well as the technology.

Mr. YATES. Hasn't this been done in the past?

Mr. RESLER. It has been but in other areas. We are really addressing the question now of expanding that effort substantially, and working with other departments to show how it can be accomplished. There are a lot of unknowns yet.

Mrs. HANSEN. Will the gentleman yield? Aren't you trying to approach this effort in the same manner as you approached the development of bidding methods with the BIA and the BLM?

Mr. RESLER. Yes, Mrs. Hansen, that is correct, except that this ties more clearly to the research side.

Mrs. HANSEN. That is correct.

Mr. RESLER. And carries from the research through the applications and the demonstration of those techniques.

Mrs. HANSEN. But it is the same type of a joint approach.

Mr. RESLER. The same joint approach.

Mrs. HANSEN. The various agencies resources are all relatively the same.

Mr. RESLER. Correct.

Mrs. HANSEN. The results you obtain on a piece of Forest Service land have similar effects on other forest lands.

Mr. RESLER. That is correct.

Mr. YATES. Were the leases that were given by the Department of the Interior for oil shale exploitation on any of the national forest lands?

Mr. RESLER. No, none to my knowledge. I think they were all on public domain lands.

Mrs. HANSEN. Mr. McKay.

PUBLIC INPUT

Mr. MCKAY. You indicated that you are proceeding with public hearings and your intent was to involve the public as you go along with your hearings, and make them aware. When you talk about involving the public, do you just want them to get it off their chests, or do you intend to take what they have to say and take it seriously? The reason I say this, I have been out in the West recently, and we have had a little meeting which maybe you know about already in my State, in which the public was invited, but nothing ever came of what the public had to say. The ideas as exposed from the Forest Service, BLM and the Park Service in their classification of lands and so forth proceeded without inhibition or change, and the public felt that they were just being patted on the head saying, "Well, we will let you say what you want to but we will go on doing as we please."

Is there a real attempt to have input of some significance, or just to say well, we had a chance to say something?

Mr. RESLER. Mr. McKay, I want to assure you that our objective is to have meaningful public input. That is an awful easy term to use, but we are dead serious about it.

We have made a special effort to secure the ideas as far as program levels are concerned in here by working very closely over a period of time with the various organizations that represent a broad area of public interest. The American Forestry Association has been instrumental in developing an areas-of-agreement group, in which major conservation organizations have had an opportunity for input.

I can understand, however, that there are circumstances in which local hearings may not be well represented in the eyes of the local people because we are talking about national programs in many respects.

In this effort here we are trying to listen and use the public's input as well as we can.

NATIONAL VERSUS STATE AND LOCAL INPUT

Mr. McKay. Where are you getting this input? You talk about national versus State and local. You talk about holding alleged public hearings in Washington for the national land use program or are you talking about going out to regional locations? What do you mean by this?

Mr. Resler. This program will be largely national in character, in terms of its representation, but the exposure and the final draft of the environmental impact statement will be broad enough so that people from all areas will have a very real input. Mr. Thornton, would you like to add to that?

Mr. Thornton. I would like to elaborate on the point of the August 15 meeting we held last year. We had 60 organizations coming in to comment specifically on the formative status of the draft.

Mr. McKay. Where did you have it?

Mr. Thornton. Here in Washington.

Mr. McKay. Everyone who came had to come to Washington to do it.

Mr. Thornton. It was primarily oriented toward Washington representatives of conservation groups.

Mr. McKay. It is really national organizations who had input into that, rather than local regional people.

Mr. Thornton. To date.

Mr. Resler. Thus far.

Mr. Thornton. These comments have been reflected in the draft material already, and of course the National Environmental Protection Agency process will continue and that, as Mr. Resler says, will go nationwide for opportunities for input into it.

Mr. McKay. Don't you feel that becomes a little bit narrowed to lobbyist groups, rather than the local people's interests?

Mr. Thornton. I would say that is a function of how well the Washington representatives represent the people in other States.

Mr. McKay. I think generally speaking those who become Washington representatives have a pretty funded clientele that they represent in order to get here, isn't that true?

Mr. Thornton. In some cases.

Mr. McKay. In most cases I find that that is true.

Mr. Resler. Mr. McKay, even after we publish this next draft of the environmental impact statement it will still be preliminary in its character, and susceptible to change. It is at this level that we will be able

to go to regional, and at least the State inputs and local responses from the public, to the extent that they can understand it and wish to take the time to take advantage of that opportunity. It is a cumbersome process for the individual to attempt to savvy this broad a program. It has been difficult for us to put it together, and we work with that program constantly.

Our first steps were aimed basically at developing a framework, and getting together the kinds of information that people could then begin to digest. I would hope that people in State and local areas would recognize the significance of this kind of planning effort, and make a very real input into it.

Mr. McKAY. I would hope that is true too, but I had a little experience this last fall with the Indians which may illustrate. I went out to an Indian school out there and met with people who were disgruntled and upset. When we got in the meeting one little Indian girl stood up with tears rolling down her face. She said, "Who cares about me? You talk about the Indian Chief, the Indian Council, the Bureau of Indian Affairs, but who cares about me? My mother can't understand English language. She doesn't know what is going on at this school, and who is going to tell her? You don't care. All you care about is the Chief and the Bureau. Who gets down to what I care about and what is happening to me."

Mr. RESLER. It is an important question. I think it will become a little clearer as we get into this plan how there will be more direct opportunities at the field level.

Mr. McKAY. I think the fear here is that you have a whole bunch of theorists who are running around Harvard, Yale or wherever, and they haven't really hit down here, where they are dealing with the bugs in the forests.

MINERAL LEGISLATION

Let me ask another question here. You are presently working, and the Bureau of Land Management is too, generally I think on land classifications. Is that related to this thrust or not?

Mr. RESLER. I think the basic point there is working first on mineral regulations which we have issued in draft stage, and secondly, mineral legislation proposals are being worked on jointly. That probably will come forth from the administration fairly soon, but there is a joint effort.

Mr. McKAY. Is that related to this overall planning you are talking about here?

Mr. RESLER. Not directly. It will have an effect on it because what comes out of that type of a program will tie into the minerals, the watershed and various related activities that are spelled out in here, but we have to make certain assumptions. Some of those assumptions are that this is the point of time that establishes the ground rules. Obviously this will be changed if new mineral leasing legislation comes into being.

LAND USE PLANNING LEGISLATION

Mr. McKAY. How would this relate, land classifications and that function related to what may come out of land use planning, the Interior Committee, and whatever may be done in the agency? How are

they going to phase that, or are you? You get one ahead of the other, and you have to go back and you can't because you have already preempted.

Mr. RESLER. There again we will not be talking of it in terms of a specific program level. It will be susceptible to change. If land use planning legislation comes into being, or even if it doesn't, it will have a strong influence on our land use planning activities within the State, and the coordination between other departments in the land use planning activity.

As we develop this program, the opportunities for program activity flows up from the field, and is actually controlled in good measure by the land use plans, and the capability of those lands to produce certain outputs, so in that sense they will flow upward and become a part of this planning process later on.

Then the next step, of course, is the question of how much money we as a society are willing to invest. When that decision is made, then we can sharpen our focus, and flow back the program direction to field units based on their capability to do certain things. I am trying to say that the land use planning process is really the cornerstone which demonstrates the capability not only on the national forests but also makes an assessment of what is needed on private lands in the forest and related rangeland areas.

FEDERAL-STATE COOPERATION

Mr. MCKAY. Right now you are putting great stress, at least in my State they are, in the region out there, to classify lands for minerals, forests, wilderness, and so on, so there is apparently a real drive to get it ready. It would almost appear that you are trying to get it all lined up ahead of time before the State has a chance to enact their land use planning, so that any effect in a cooperative effort of land use planning may be preempted.

Mrs. HANSEN. I don't think that is true in our State.

Mr. MCKAY. I am just trying to find out.

Mrs. HANSEN. The State and the Federal Government are trying to work together.

Mr. MCKAY. Our State would like to, but there is some indication that the Federal agencies are moving so rapidly in their classification of wilderness versus whatever area that it may be preempted for any cooperative effort for the State.

Mr. RESLER. Mr. McKay, I am sure you know that any kind of land use studies that we would conduct would be done in a manner in which the States' ideas and recommendations would be specifically sought out. It is true that we are proceeding of necessity to develop land use plans, and in some cases this will involve the alternative of wilderness management for areas. I guess I am trying to say that we can't necessarily wait until the State gets its planning all accomplished.

Mr. MCKAY. And I don't think you should.

Mr. RESLER. It is certainly not being done.

Mr. MCKAY. The national policy in administration was that this was to be a joint effort and a cooperative effort, because one affects the other.

Mr. RESLER. That is correct. The only difference is the manner in which we will cooperate. If we get national land use planning legisla-

tion, there will be further assistance to the States available. It won't change our basic concept of wanting to work directly with the States and make our land use plans for the public lands compatible with the States' needs.

Mrs. HANSEN. Will the gentleman yield?

Mr. MCKAY. I yield.

Mrs. HANSEN. Shouldn't it be the goal of the Forest Service to work with the States, counties, and local units that are involved to develop the plans jointly? As you are well aware, there is a great deal of controversy in land use planning.

Mr. RESLER. Very definitely.

Mrs. HANSEN. In the first place, you don't have adequate funds at the Federal level for the management of your own lands, so it would be very ill advised for you to try to manage the States.

Mr. MCKAY. I don't think it was my point to manage the States but just a matter of what proceedings are going on.

Mr. RESLER. Our specific directions to all field units is to work closely with the States, counties, and other local planning entities, in the development of land use plans, not in any superficial way, but in a very real sense working with them.

It has to be recognized also that these are national properties when we are talking about the national forests. The public in total obviously has something to say about what the end product of the land use planning looks like, but our basic objective is to accommodate the local needs as well as we can.

ALLOCATION OF SCHOOL SECTIONS

Mr. MCKAY. We are very sensitive to this in our State, as 72 to 75 percent of our State is Federal lands; and since the enabling act in 1896, we have never even been given our school sections. We haven't gotten our total allocation of school sections yet. We have had applications in to the Bureau of Land Management for alternate sections which should have been granted under the rule, and that has never happened yet, so we are a little sensitive about what is going to be locked up in a plan. We ought to have our allocation. Are you going to give us a corner out here and say you can have it? A few of the Western States haven't received theirs either. We are one of the few States that has never received their allocation.

Mrs. HANSEN. Didn't your State constitution provide for the allocations?

Mr. MCKAY. The State constitution provided for it. You see, our State constitution was not approved except under the Federal rule, and under it we were allocated so many school sections, but because of the slowness of the survey, one, and the preemption of Indian lands and others, the allocation of school sections was not granted. We have had an application in for over 10 years, and for what grounds we have got, down in the potash lands in Moab, we had to sue the Federal Government to get that. You can see why we are a little sensitive about this situation out there.

Mr. RESLER. Certainly.

[Discussion off the record.]

Mrs. HANSEN. Dr. Long.

NEED FOR BALANCED PROGRAM

Mr. LONG. There is a widespread feeling that the shortages of energy, lumber, paper, and what not are going to be used as an excuse, in the years ahead, for allowing the rape of the public domain; that is, the studies and plans are going to be developed with the principal aim of keeping the environmentalists quiet for 5 years, all the while permits are going to be granted in the name of urgency and realism, that will gradually whittle away much of our natural resources, so that 5 years from now we will be presented with a fait accompli. By the time you get your plan completed, much of the reason for developing it will be gone. Would you like to comment on that?

Mr. RESLER. Only the area I would feel competent to comment on, Dr. Long, would be in the relationship to our program direction which we regard as a very important question. It is absolutely essential to maintain a dual approach, namely, to be equally concerned with maintaining the quality of the environment as we are the productivity of our natural environment. I would say the central thrust behind this whole process is aimed at just that, trying to achieve an acceptable order of balance between protection of the environment and its productivity. We don't see this as being an either-or circumstance. We must have them going simultaneously.

We are very well aware of the fact that the energy crisis in total is going to shade policy decisions at the national level and in the Congress—it is bound to have some influence. But we are determined from the agency standpoint. We see no indications to the contrary but what this basic philosophy will be followed as far as our areas of responsibility are concerned.

When you think in terms of having to move ahead on such areas as developing strippable coal, for instance, obviously there is going to be an environmental impact. This is one of the reasons why we are trying to move ahead with activities such as Project Seam, where we will seek and demonstrate answers to achieve both reasonable production and at the same time maintain acceptable quality of the environment.

I would hope that we will be successful not only in this agency but in the Nation as a whole, in doing just that.

Mr. LONG. Of course, different people are going to have different views about what is required.

Mr. RESLER. Certainly.

ENERGY SHORTAGES VS. GLUTS

Mr. LONG. There is a very interesting article in the London Economist, which I recommend to you; in fact, I would like to have it inserted in the record if I may, Madam Chairman, which indicates in the opinion of the author that far from being energy shortages, we are going to be confronted in the not-too-distant future with vast energy gluts, because there are so many different agencies and interests that will be moving ahead to try to provide energy, each one without knowing what the other is doing, and each one duplicating the other's efforts so that we may be over-reaching our goal. For example, he indicates that probably the entire attempt of the British to spend $1 billion to get their coal out will probably turn out to be totally redundant,

and many other things we are doing. I would like to put that in the record.

[The information follows:]

[From THE ECONOMIST, January 5, 1974]

THE COMING GLUT OF ENERGY

A NEW YEAR PROPHECY THAT SOUNDS UNCONVENTIONAL, BUT HAS A GOOD CHANCE OF PROVING RIGHT

There is a case for arguing that the world is likely to be glutted with energy before the end of this decade. The present energy "crisis" is about the 15th time since the war when the great majority of decision-influencing people have united to say that some particular product is going to be in the most desperately short supply for the rest of this century. On each of the previous occasions the world has then sent that product into large surplus within 5 to 10 years.

The reasons for this are now quite logical and rather technical. In modern conditions of high elasticity of both production and substitution, plus surprisingly equal lead times for many investment projects, we now generally do create overproduction of whatever politicians and pundits 5 to 10 years earlier thought would be most urgently needed, because both consensus seeking governments and profit-seeking private producers are then triggered by that commentary into starting the overproduction cycle at precisely the same time.

Energy has played its part in the game of cheat-the-prophet three times since the war. During the coal crisis of 1947, it was said that no coal miner in Europe or Japan need fear for his job during the rest of this century, within a decade a majority of European and Japanese coal mines had closed down. In 1956, France and Britain went briefly to war because the closing of the Suez canal for a week would starve Europe of oil and cause an insurmountable world shipping shortage, even although it was agreed that this invasion would put France and Britain into the Arabs' bad books for a millennium. Instead, Europe continued its quick switch to cheaper oil even when the canal closed again; the rear-admiral whom Mr. Macmillan appointed to ration Britain's share of world shipping was still recruiting staff when the biggest-ever laying-up of the world's surplus shipping began; within rather less than a millennium, France and Britain are the Arabs' European powers.

EVER SINCE WATT

For the last 200 years, energy seems to have had a higher elasticity of supply than anything else except transport. Indeed, the accelerating elasticity of supply of these two things is what the industrial revolution since Watt's steam engine has been largely about. A product generally has a high elasticity of supply (a) if it can be produced in many different ways; (b) if technology seems on the brink of bringing in more powerful new ways; (c) if the distribution system for it can be greatly improved. Gluts will also occur if (d) economies in the product's use seem fairly easy. Energy fulfills each of these conditions in profusion.

There are many thousand possible ways of releasing energy from storage in matter. They range from petty ways like 25 Btu per pound of matter by letting a pound of elastic bands untwist; through fairly petty ways, like 20,000 Btu's by burning a pound of petrol through more sophisticated ways like 250 million Btu's from the fision of the U–235 isotope in one pound of natural uranium; up to 260 thousand billion Btu's from the fusion to helium of a pound of hydrogen. Note that this last system, in which the waters of the oceans could serve as a limitless reservoir of fuel would therefore be more than 10 billion times more effective per pound of matter than burning a pound of the Arabs' oil. Of course, new technology will drive on toward the cleaner power sources nearer the top of the range.

THE MULTIBILLION FACTOR EQUATION

Some critics say: "Which of these science-fiction inventions do you really expect will be operating within 6 or 7 years?" The pons asinorum of economics is to recognize why that question is absurd. If you were so foolish as to try to draw up a computer model of energy economics over the next 6 to 7 years, you

would have to combine the thousands of possible ways of producing energy, and of possible ways of changing distribution systems and consumption patterns for it, together with estimates of time lags for each, and today's prices for each, and of guessed elasticities of supply and substitution for each, into an equation with multibillion factors. Governments which produce "energy policies" do not work with multibillion factor models of this kind, but with the guesses of perhaps three boffins and a minister—which is why such policies have no serious chance of being right. Apostles of a free market say that it arrives infallibly at the best possible answer to the multibillion factor equation. Actually, it usually does something much less perfect but still rather useful: a free market will generally bring the mix of production-consumption-distribution patterns within the spectrum of the "several million possible answers" which are not wholly incompatible with the multibillion factor equation.

If you then change some price in the system rather marginally, a different but overlapping spectrum of "several million possible answers" replaces the present spectrum; if the market has already rather haphazardly chosen one of the answers within the overlap, then neither production nor demand will change with the change in price, and both supply and demand are said to be surprisingly inelastic over that range of price. But if you change expectations about the price of the most important present energy source, namely oil, from under $3 a barrel before this autumn to a level where people and governments and profit-seeking entrepreneurs believe that it is going to be over $12 a barrel or $17 a barrel (or whatever is the figure that the latest hopeful Arab or temporarily panic-stricken auction bidder last thought of), then people and governments and profit-seeking entrepreneurs suddenly believe that billions of possible new answers will be more profitable than whichever one of the "several million possible answers" is the most people are using now. If other factors remained as now, they would be more profitable; but other factors won't remain as now, because the new ventures will themselves change them. It is because you cannot get many quarts into a pint pot—or an expectation of billions of possible answers into a situation where only a changing several million answers will at any one time be possibly logical—that forecasts of lasting shortage generally do lead nowadays, within a short time span, to embarrassing glut.

The most respectable argument on the other side is that the time lag may nevertheless stretch beyond the end of the 1970's, because of a supposed long lead time before changes can come into effect (which is true of some of the investment, but most unlikely of economies in demand), or (this is a better argument) because the elasticity of substitution from an oil-based to another energy-based system will be low since people are romantically in love with the expensive oil-using machinery such as motor cars which they possess. There are three answers.

WHY IT'S QUICKER THAN YOU THINK

First, the speed of change has in fact been very quick in the downward direction. People forget that from 1963 right up to the early 1970's the "oil question" in America meant that you should not allow Texan oil millionaires to make so much money. Indeed, it was this trendy populism in America in the past decade which created much of the present temporary energy "crisis." In 1964 American courts compelled a quite unprepared Federal Power Commission to regulate for the first time the prices charged for natural gas; by 1970 the FPC had a backlog of over 2,000 producer rate cases in natural gas, which would have taken 13 years for it to give answers to. The price allowed for this environmentally clean and premium fuel was therefore so low and out of date that it not only made more production of natural gas uneconomic, but also distorted the market for other fuels and cut investment in them at just the wrong moment. Through the years of gathering crisis, the price of gasoline in America was about half the price of petrol in most other countries. In President Nixon's first budget, as late as 1969, there was universal acclaim when he cut drilling for oil through reducing the rate of percentage depletion allowances for oil and gas from 27½ to 22 percent. Then in 1970–72 environmental restrictions were directed most especially against the energy industries. By 1971 fewer exploratory oil wells were being drilled in America than at any time since 1974. One reason why Mr. Herman Kahn and others think that it is going to be very easy to step up output of energy to America is because they are among the few who remember that almost everything has been done for a decade to bring it down.

Second, the very low figures usually published for oil reserves round the world are mostly reserves discovered in days when just about the only known way of striking oil was to get a Texan to go and sniff for it. There really is now a much greater, and still expanding ability to find the stuff by electronic sensors attached to computerized systems.

Third, it will gradually be realized that the mechanism through which the price of anything is determined—including oil—really is a bit more sophisticated than an Arab saying what he wants for it. So oil's price should come down rather sharply well in advance of the energy glut which its price rise this winter will now create; but is unlikely to be in time to stop the energy glut, because the new investment and habits will already be in train. Until this winter, it had seemed marginally likely that the oil price would rise in 1970–80 by more than most other prices; the main consequence of the past 3 months is that it will now presumably rise by less.

TIMING OF REPORT

Mr. LONG. We should keep in mind that possibly we are doing things in the name of your agency that are counter-productive. Do you expect any useful report before the 5 years? Will we have something we can get our teeth in, that we can work with?

Mr. RESLER. More quickly than that I would hope, as far as this program planning process is concerned, yes, very definitely. As far as the Project SEAM is concerned, our plans are to terminate that project within the 5-year period. That again depends upon how things develop, but our basic objective is to develop this kind of research and applications understanding quickly, because we recognize that the types of things you are talking about will be pressed upon the Nation, in order to satisfy energy and other shortages.

Madam Chairman, I noticed in the Wall Street Journal yesterday an interesting article that talks about a new development of interest. It has to do with the development at LSU and elsewhere of the use of wood cellulose and other wastes through a bacterial treatment process to produce edible protein. Well, when you start thinking in terms of what will happen down the road a few years in terms of the new technology that is coming on daily, I think it must be recognized that this kind of a programing process will have to be adjusted at frequent intervals, because developments such as this are more nearly the usual rather than the exception.

Mr. WYATT. Is that Ewell Gibbons?

Mr. RESLER. The technological process is kind of interesting.

Mrs. HANSEN. I would say to Dr. Long, if he will yield, I have read the committee's directive to the Forest Service last year. The committee was concerned then, and has been concerned for 10 years about the failure to get trees in the ground. The problem of the forests' future is ours. This is something that is renewable. It is not like coal. The problem of supplying current needs and at the same time not destroying the environment is the goal of the committee. This is very simply why we directed that a long range plan be developed. If you were to denude the country of all the trees without having any management program to plan for the renewal of these trees, this would be a disaster for the United States.

This is where the responsibility of the committee comes into focus, because it is here that your relationship to programs and money come into play. It just happens that Mr. Wyatt and I have been deeply concerned about the forest laboratory at Corvallis. I think the gentle-

32-043 O - 74 - 2

man from Maryland has to realize that in the national forests about 5 million board feet of timber is destroyed by insects per year. We can't allow this insect damage to continue when within the laboratories of our great universities techniques can be developed to stop this destruction. Those 5 million board feet will build a lot of houses. This is why the committee wanted a long range program to develop the kind of forest management that is going to be necessary, so there isn't any destruction of the land and destruction of the timber.

QUALITY MANAGEMENT

Mr. LONG. I hope I realize what the chairman has pointed out, that there are great wastes going on that could be corrected with relatively small sums of money. Those are things which I would very much like to see done, but I am also disturbed when I read about cutting much of our national forests in the name of getting quick lumber resources. I am disturbed when I read about much of the public lands being used for strip mining of coal, and also naval reserves being used to supply oil. Those things bother me. I think they bother an awful lot of people, and I am inclined to predict that a few years from now the public is going to wake up suddenly and realize that in the name of all this urgency and realism we have been taken for a lot of our resources, and I want to be on record now to point that out, and I hope you folks realize it.

Mrs. HANSEN. That is what the committee seeks to prevent.

Mr. THORNTON. I would like to say, if I may, in our draft here we addressed that question to some degree, where we have basic assumptions and principles that underlie all three levels we are proposing. It gets at the quality management that Mr. Resler spoke of. We do recognize that and speak to that point.

Mr. LONG. I would hope that we not only recognize it, but act on it.

Mrs. HANSEN. Mr. Wyatt.

Mr. WYATT. I would like to say there is certainly a great deal of difference in the area of natural resources between petroleum, coal, and other finite substances, and a renewable resource such as wood fiber, isn't that correct?

Mr. RESLER. It certainly is.

MANAGEMENT OF RESOURCES

Mr. WYATT. Do you know of any real excuse why a nation with the wealth, the resources that we have, why we have millions of acres capable of growing this fiber that aren't doing it simply because we haven't reforested them?

Mr. RESLER. Mr. Wyatt, obviously the technology is available to do this job. It is a matter of priorities, and it is a question of when we can get to the kind of job that needs to be done.

Mr. WYATT. But a very substantial additional volume of wood fibers——

Mrs. HANSEN. I have heard of these national priorities for a long time, and I don't understand why we spend vast amounts of funds in foreign aid when we can't afford to do the research on cleaning up our coal, or the research that will plant more trees. I hope my re-

marks are read by somebody who is supposed to be determining national priorities. I just cannot understand how we can tell the whole world how to run their affairs and we are not running ours properly.

This is a matter you have to take into account in establishing our national priorities, that America cannot operate without people who are working and who don't have the resources to conduct their affairs, or you might just as well save the trouble of fighting for existence.

What I hope somebody discovers is that our national priorities have to include the preservation of our resources and the management of our resources. The Federal Government manages one-third of the land of this country, and we spend less per acre on that management process than any private business in the country, and I just wonder if the rest of the countries aren't going to begin to look at us and say, "Mind your own business, because you can't tend to your affairs."

We are going to reach that point in time where we are short of a great many commodities, and we are going to have to rely on somebody in other countries for our timber, or somebody someplace else who decides we can't have any uranium, because we haven't thought about the priorities of management. How many years does this committee have to sit here and urge OMB to request adequate funding for the management of our resources which is the lifeblood of the economy and well-being of this Nation.

Mr. WYATT. I would just like to go on record, Madam Chairman, as saying that I don't consider an investment in reforestation of millions of acres of Federal timber land, and an investment in the proper management of these lands for all the purposes for which the Forest Service and other Government agencies that manage these lands, I don't consider this a rape of the natural resources. I consider it a step that is absolutely vital, if we are going to provide wood fiber and all of the other amenities for future generations, the amenities for which we manage these resources.

Mr. Resler, your so-called 10-year plan, is it 10 years in each of these three options?

Mr. RESLER. Yes, Mr. Wyatt, that is exactly what it is. It is laid out for a 10-year program based on three assumptions of management level. It shows the level of activity required during the first 5 years to produce outputs by the 10th year.

EFFECTIVE DATE OF PLAN

Mr. WYATT. Now, is there a given point of departure or a given period of time when this program would go into effect, or does that depend on when additional money is available to start it?

Mr. RESLER. It depends on when the plan is approved and when the money is available.

Mr. WYATT. If the plan is approved by the time we have our regular hearings, and if we have a dollar figure for each one of these three levels, and if we provide that dollar level for the first year, then there is no reason why the plan couldn't get underway this coming fiscal year?

Mr. RESLER. That is correct. It is laid out so we are talking about a 10-year period for outputs and a 5-year period for costs. It is actually geared starting with 1975.

Mr. WYATT. In your plan as you have it presented, do you have the anticipated dollar cost year by year, year 1, year 2, year 3, all the way through year 10, for each one of these three levels of management?

Mr. RESLER. No, sir. The package that you have shows a ratio of what each one of these levels of activity would cost in comparison to the 1973 level, and that is included in three charts. It is not broken out at this time on an annual basis.

ANNUAL COST ESTIMATES

Mr. WYATT. By the time of our hearings, would you expect that this will be broken out on an annual basis so we are going to know what your present estimates are of the total 10-year cost of each one of these three levels of programing and what the fiscal 1975 first year would be in each of these three program levels?

Mr. RESLER. From the timing standpoint I think we could cost this out. We can show the first year's costs and the total costs for 5 years.

Mr. WYATT. I think it is essential that you do that and you be prepared to have those figures for us by the time of our regular hearings and, very frankly, I think that if we don't go forward with the program at the highest possible level we will be in a sense embezzling from our children. We could provide for the future and yet would not be doing so. We can go forward and we are just not doing it. I think it is extremely important that you have these figures for us at our regular hearings.

ESTIMATED RETURNS

One other area. Will you at that time also have pretty firm estimates as to what the returns in dollars would be to the Government by year looking into the future?

Mr. RESLER. Yes, sir.

Mr. WYATT. By going forward on these program levels?

Mr. RESLER. Yes, sir.

REFORESTATION NEEDS

Mr. WYATT. Do you have a firm figure now—it may be in your report, and of course I haven't had a chance to read it except to glance at it since I just saw it—as to what the total number of acres are that are feasibly, economically capable of reforestation in the national forests which are unreforested and yet are capable feasibly of being reforested. We have been using 5 million acres roughly as a figure in the past and I understand this has been revised.

Mr. RESLER. Yes, we are working on that now, looking more critically at such things as site quality and the standards of stocking such acres. Included in that original figure of course are not just nonstocked acres but poorly stocked acres in many cases.

I don't want to convey the impression either that these are denuded lands in the sense that they have no vegetation on them, quite the contrary. They are lands in which some kind of site treatment and/or reforestation is needed to bring up the quality. They are underutilized sites.

Because of site quality factors, the cost of restoring those sites, and several other considerations, there is no question but what we would not attempt on some of those sites to invest money on them at this time. We are trying to get a better assessment of just what that acreage would be now.

I would hope that we could round it up——

Mr. WYATT. In time for our regular hearings. I hope so, too, because I think that would be useful to the committee in making its judgment.

Thank you, Madam Chairman.

Mrs. HANSEN. Mr. Veysey.

FISCAL YEAR 1975 BUDGET

Mr. VEYSEY. Thank you, Madam Chairman.

Mr. Resler, you described for us an interesting process of evolving a plan over a number of years in-house. I guess it represents the best of your thinking and is about to be crystalized now.

Can you tell me what effect that plan may have or should have on the present budget which we have before us? Have you in fact reflected in the budget you bring to us the findings and recommendations of that plan?

Mr. RESLER. Well, at this stage we are attempting to lay out for the administration, for Congress, all and sundry, what some of the opportunities and needs are. From that we would then hope to be able to move to a series of recommendations that would influence our assessment of what needs to be done, and of course it will also provide information giving Congress an opportunity to make some of its own judgments.

Mr. VEYSEY. I guess you are telling me in fact that the process hasn't been accomplished and so is not incorporated in the present budget?

Mr. RESLER. That is correct. That is our next step and we will be working on that.

PROGRAM PRIORITIES

Mr. VEYSEY. From what you know, and I guess the rest of us don't know what is in your plan, do you see some major changes of emphasis and direction in the budget coming out of this work?

Mr. RESLER. What we are attempting to show here in the first presentation is some realignment of program priorities among the various uses, attempting to develop a better sense of balance among the various resource activities, and within each one of those programs, assumptions on funding levels. Of course the higher you go, obviously the more work you can do in any of the areas, but the basic thrust has been aimed at trying to relate production to a quality job. This is reflected in the draft and results in some realignment of priorities in this initial phase.

Now we move into the next step which will be to look critically at these proposals and make some assessments as far as the administration is concerned, as to whether or not those initial assessments are valid.

I am suggesting that there may be substantial changes as we get to looking specifically at relationship of one program activity to another. I am sure you folks will also have different ideas.

Mr. VEYSEY. It sounds like you are moving deliberately. In other words, you really don't have much to say to us about what we ought to do in changing the emphasis of the present budget or the directions that we have been going in the past several years at this time.

Is that correct?

Mr. GILBERT. If I stated some of our assumptions in this program it might help you. We tried to get in this early document the best assessment we could of what the demands and trends of the various resources would be during the next 10 years; the demand for timber, what outdoor recreation people might engage in during the next 10 years, the demand for water, forage, and so on.

Mr. VEYSEY. We have heard a couple of interesting statements here. Dr. Long has said we are raping our natural resources, and we might be, and Mr. Wyatt has said we are embezzling the birthright of our children. Is that part of your findings? Do you find things like that?

Mr. GILBERT. Well, I would say there are all kinds of symptoms and evidences of things that people are interested in all around in our society. These have been troubled times, and we are part of the troubled times. We are trying to be part of the solutions; this certainly is what we are aiming for.

CHANGES IN DIRECTION

Mr. VEYSEY. What I am groping for is what are the real substantive changes in direction that you are going to suggest out of these several years of study? We need to know these early on in the budgetary process so that we may be looking for them, identifying them, and putting them in the budget.

Mr. GILBERT. In this preliminary stage of our thinking, what we are mentioning to everybody, not only to ourselves and to you folks, but to all the public concerned, is our best assessment of the trends and demands, not only for the renewable natural resources, but for the environmental quality, the esthetics, the amenities, the whole array of things in which we play a role.

We are also raising here publicly all the issues that we can foresee; the major issues in the area of natural resources that we think should be resolved. Perhaps they may not be resolved, but attempts should be addressed during the next 10 years. Hopefully the proposals that we are putting forward here will play a role either in helping meet some of the demands and some of the needs or in helping resolve some of the issues. We can't say we can do all of it in the next 10 years, but we want to play a role in doing this.

Mr. VEYSEY. Is your report going to say that the things we have been doing in the past ought to be stopped or some of the things ought to be multiplied by a factor of 5 or 10? Is it going to say things like that?

Mr. GILBERT. Under each of the alternative levels that we have in here you will be able to see, and it will be displayed much more clearly in the redraft, what would be produced and what would be accomplished under each level. We are using indexes here right now of what the cost would be in terms of how much we spent in 1973 so one will be able to see what you will get for what you put into it.

The public involvement process would be in a sense almost like a smorgasbord. There are all these things that should be done and all these needs to be met. We aren't unilaterally saying this is the best mixture. We are considering all the views of all the people in these things. Hopefully we can propose something on which we can get an area of agreement and move forward. Generally that has been the view with which we have developed this package.

Mr. VEYSEY. You haven't really lifted the curtain very much on direction that you are going to tell us we ought to follow. That is what I am looking for. Can you give us these directions?

Mr. GILBERT. We can tell you some of the things. Mr. Resler can tell you what we propose to do at some of the levels. That will give you what you want more explicitly—increased timber supplies, recreation development, and so on.

Was that the kind of thing you would like to see?

Mr. VEYSEY. Yes. I assume that you have made some fiindings, are going to make some recommendations, and if we have been on the wrong track, as has been indicated possibly we are, then we are going to change directions. I want to know what direction we are going to change and how much, how fast.

Mr. RESLER. Let me see if I can be a little more explicit.

Specifically in this proposal are three program levels and they are shown in chapter VII. Four major program areas, the National Forest System, human resources, research, and State and private programs. They show in a rather clear manner what could be accomplished at essentially a static program level, what would happen at the moderate level of increase which would be represented by continuation of the present trend of funding over the last immediate past, and then what could be accomplished with what we have called a high level.

Now, obviously within that range there is a multitude of options available.

Mr. VEYSEY. You are not going to say whether we should go high, low, or what? Your report is going to say what you could do if we gave you so many dollars?

ASSESSMENT OF PRIORITIES

Mr. RESLER. The point, and hopefully we will be able to get into it in a little more detail later on, would be, we are trying to present information here that Members of Congress and all others can see and make their own assessment on priorities.

In addition to this, obviously, we will be working with the Department and with the administration to come up with a specific set of recommendations that will be certainly included in the annual budgetary process and preferably as a general guideline to this committee and others as to areas of program emphasis, recognizing that in the annual budget process those recommendations may have to be deviated from substantially, but to give you some idea as we get into this later on as to what could be accomplished, depending on how much money is going to be invested.

Each one of these program options of course does carry with it, as I said at the outset, the assumption and the cost relationships that

would be dependent upon maintaining an acceptable level of environmental quality and protection.

For instance, one of the most controversial areas, timber sales offerings and timber harvest, has built into it the cost required to do the landscape management job, the soil protection, the development and use of cable or other systems of logging that will minimize erosion. It also carries with it a clear understanding that those areas are going to be reforested as they are now.

I remind the committee that we are planting something in the order of 90-plus million trees a year. We are not letting our lands go by the wayside. We would like to do more. This is all spelled out in here but in the context that there are many management decisions that have to be made and one of them relates to programing and cost.

For a given cost input in a given activity we can do certain things, and that is what we are trying to display so that this committee, as well as others, can make some judgments as to what those priorities ought to be. I am sure we would all disagree if we sat down here now and tried to pick the best course of action.

Mrs. HANSEN. This is reverting to Mr. McKay's question, where the public input can be of major assistance.

Mr. RESLER. That is correct.

Mrs. HANSEN. I think when we place a price tag on an activity and you see what we are going to pay for it and what we are going to get as a result, then you either have a lot more opposition or you have a lot more enthusiasm, but certainly you will have a lot more understanding.

Isn't that correct?

Mr. RESLER. Quite correct. I would hope that we would be able to answer your question more specifically, Mr. Veysey, as we get into this in more detail.

LOSSES OF WOOD FIBER

Mr. WYATT. Madam Chairman, would you yield for just one more brief question?

Mr. Resler, the GAO issued its famous report indicating the total of wood waste that is left in the national forests as a result of logging activities. I wonder if you could insert and furnish for the record the estimate as to the annual loss in recent years of wood fiber by board feet due to insect kill—and separate these categories—due to disease, and due to fire, and perhaps, if you could do it, the annual loss due to dead or terminated growth.

Mr. MCKAY. Overripened.

Mr. WYATT. Overripened, yes. I think that might be helpful to us.

Mr. RESLER. That latter will be the most difficult to come by, I am sure you understand.

Mr. WYATT. I am talking about your best estimates, and also include the figure used by the GAO, just so we can compare these quantities.

[The information follows:]

ANNUAL TIMBER LOSS

The volume of annual loss is determined from a tally of standing and fallen dead trees made at each sampling location during the course of a statewide or National Forest timber resource inventory. An attempt is made to determine the principal cause of death, but this has proven to be very difficult and imprecise because the evidence of the causal agent has disappeared or there is evidence of more than one causal agent. Furthermore, since inventories are usually made at intervals of 10 or more years, it is also difficult to judge how long a tree has been dead. This further confounds the determination of annual mortality or loss.

The following table represents our best estimates of this very elusive annual timber loss by cause.

Annual Mortality of All Sawtimber by Cause on Commercial Forest Land in 1970

	Million Board Feet			
	Local scale-log rule		International ¼-inch Log Rule	
Mortality Cause	National Forests	All Ownerships	National Forests	All Ownerships
Fire	369	902	439	1,073
Insects	1,875	4,509	2,231	5,366
Disease	1,328	3,222	1,581	3,834
Other 1/	1,054	2,576	1,254	3,066
Unknown	667	1,675	794	1,993
Total	5,293	12,884	6,299	15,332

1/ Weather, animals, suppression, etc.

It is not possible to identify old-age as a cause of death of trees. However, a mature or overmature tree is usually readily identifiable by the change in form which occurs and the evidence of lessened vigor. Such trees fall prey to infestation by insects or infection by disease. Because of their size and root structure, they also become more susceptible to windthrow or flood damage.

We estimate that old-age may be a contributing factor in approximately two-thirds of the loss on the National Forests, or about 3,500 million board feet--local scale.

The GAO report More Usable Dead or Damaged Trees Should be Salvaged to Help Meet Timber Demand, October 5, 1973, quotes mortality information taken from the Forest Service report The Outlook for Timber in the United States, October 1973. The same mortality totals appear in the above tables.

The GAO report Increased Use of Felled Wood Would Help Meet Timber Demand and Reduce Environmental Damage in Federal Forests, July 30, 1973, quotes statistics concerning logging residues taken from the same Forest Service report. Particularly referenced in the GAO report was the information that showed about 1.6 billion board feet of wood (International ¼-inch log rule) in the sawtimber inventory was left on Federal, State, and private logged-over areas on the Pacific coast during 1970.

GRAZING LANDS

Mrs. HANSEN. Mr. Resler, as we look at our national priorities I find one item in your budget that is always deficient and that is funds for the management of your grazing lands. I hope you tell Secretary Butz to bring this to the attention of planners that are thinking about priorities, particularly at this time when there is all this concern about milk prices and beef prices. An improvement in the grazing practices over a period of several years could immediately affect the production of milk and beef.

How many acres of land does the Forest Service have for grazing?

Mr. GILBERT. About 100 million acres, but we have about 54 million acres under active grazing.

Mrs. HANSEN. This is quite a sizable area.

Mr. GILBERT. Yes, ma'am.

Mrs. HANSEN. When you improve your production you would also improve the fiscal ability of those very low income people living on or near these areas. I just can't understand how you cannot consider improvement of these lands as a national priority.

Mr. RESLER. Mrs. Hansen, we are working with the Department now—

Mrs. HANSEN. Yes, you are working with the Department but nobody ever seems to request adequate funding levels. The Office of Management and Budget is well aware of my opinions.

I just don't think you should help determine international priorities and yet not bring some understanding to some of our own budgetary failures.

These are the things that dismay the committee. The committee deals with the economic plight of, for example, the Navajos and the Papagos. If you visit some of the Indian lands and see what could be done to improve the level of food production maybe our national priorities would be different.

I really don't think some of their land would even feed a jackrabbit comfortably.

Mr. RESLER. Mrs. Hansen, perhaps you haven't had a chance to see yet the document we published called the "Forest Range Environmental Study" which is a nationwide analysis of range use, range needs, all ownerships. It does serve as a basis for our planning levels in this document here.

Mrs. HANSEN. You underline a copy and send it to the Office of Management and Budget.

Mr. RESLER. I think the Office of Management and Budget has a copy.

Mr. YATES. But it isn't underlined.

EXPLANATION OF LONG-RANGE PLAN

Mrs. HANSEN. Underline it for them. This lack of attention to our grazing lands really concerns the committee because this involves the depletion of our land, a depletion of people, if you please.

Mr. Resler, will you please explain briefly for the committee the highlights of the various components of the long-range plan.

Mr. RESLER. Mrs. Hansen, I would like to run through the format of this very briefly. First off, there is a general introduction that spells

out some of the management assumptions and the various elements in this program proposal as we have it defined and labeled currently.

I won't dwell on that. There is a section having to do with the Forest Service's role in natural resource policy and programs and States, in pretty concise form, our basic authorities and objectives, and an outline of the Forest Service total program effort.

Mrs. HANSEN. Mr. Resler, because of the parliamentary procedures in the House an appropriation bill cannot contain any funds for programs which lack legislative authority.

Particular attention has been paid recently to the language "Funds shall remain available until expended." Will you in developing your policies and programs be determining if each activity has the proper legislative authority?

Mr. YATES. You ought to point out that Executive orders aren't the necessary authority.

Mrs. HANSEN. This is an inherent problem in almost every agency and I would be less than frank if I didn't discuss this with you at this point.

Mr. RESLER. I am not aware at the moment of any specific action that we would be proposing in here that would require special legislation but will take your counsel and work with it.

UNIFIED DECISIONMAKING PROCESS

There is one section in chapter II that we have called "Unified Decisionmaking Process" where we try to spell out how we propose to reach some of the significant decisions within the Forest Service. It is mainly there for your enlightenment and that of the public in general. It is an involved process, as I am sure you can imagine, with the number of units that we have scattered throughout the country.

POPULATION GROWTH AND ECONOMIC DEMANDS

Chapter III deals with an analysis of some of the population growth and economic demands. It talks in terms of trends not only in gross national product as affected by the Forest Service programs but also projections of demands. It looks at the question of quality environment and what is required to maintain it.

In other words, basically it is background information, hopefully that will be useful. It shows some projections based on a series of different analyses, projections on recreation use, for instance, by various types.

It shows consumption of certain kinds of commodities from all lands, energy, timber, water, range, key issues there, and indicates projected rates of increase based on stated assumptions. These are not all taken from our analyses obviously. They are from various sources.

FORESTRY PROGRAMS AND MAJOR POLICY ISSUES

There is a discussion in chapter IV on forestry programs and major policy issues. One of them has to do with land use policy and planning. Of course it gets into the question of such things as the dominant use theory and how it might vary in interpretation. It obviously must deal with such questions as the rate of utilization of old growth timber in

the Western national forests, and many other issues, including land-ownership issues.

MANAGEMENT ASSUMPTIONS

Chapter V is basically the management assumptions that we have developed.

Mrs. HANSEN. Please review some of these management assumptions for us.

Mr. RESLER. Yes, I'll be glad to. Such things as environmental standards have already been mentioned. The basic assumption is that we will maintain an acceptable level of environmental quality as we go about the production effort at whatever level of management intensity.

It talks about compliance with the National Environmental Policy Act in its total context, stewardship of resources in all resource activities, not just on the national forests but elsewhere. It discusses public involvement process and, I hope, addresses the question of whether or not local entities will be able to have a realistic and meaningful input.

Mrs. HANSEN. Mr. Resler, are you conferring and working with the very distinguished scientists in our American universities? You have excellent forestry departments at Oregon State University and the University of Washington. You have an excellent forestry department I think at one of the universities in California.

Mr. RESLER. Yes, ma'am. We work very closely with all of the academic institutions. In fact, Monday of this week, Chief McGuire, the Secretary, and others were meeting with the deans of forestry schools having to do with a number of policy issues as well as research programs within those academic institutions. We recognize this is an important source of additional information that is vital to accomplishing our total mission.

I am afraid sometimes the public looks on the Forest Service as being responsible essentially for the national forests when in fact the bulk of our contact with the public and the influence that is eventually felt by the public may be in other areas entirely, in the field of State and private forestry and certainly research and its related activity.

So we see ourselves as partners with these groups.

We talk in chapter V also of some objectives in terms of trying to improve the efficiency of this agency and the delivery system of our programs.

GENERAL ECONOMIC ASSUMPTIONS

Mrs. HANSEN. I noticed a statement in your report that surprised me: "General inflation in the 1975–84 period is presumed zero."

Where have you been?

Mr. RESLER. Mrs. Hansen, I am sorry you noticed that. I expect that statement will be rather substantially changed in the next draft.

Mrs. HANSEN. Inflation I think is really becoming worse and worse.

Mr. RESLER. It is not that we or our analysts are unaware that inflation is a factor, but it is possible for this type of planning process to make a certain assumption.

Mrs. HANSEN. I bought two loaves of bread at the grocery store yesterday. You know what they cost—$1.

Mr. THORNTON. One of our assumptions is to put a framework of what we are talking about. We could have assumed a certain figure, but we wanted a basis for the figure.

Mrs. HANSEN. That is a very optimistic statement.

Mr. THORNTON. We didn't know what percent to put in there, therefore all costs are expressed in 1973 constant dollars.

Mr. RESLER. This is the type of thing that we will be looking at. We discuss in a very general way the private, State, and Federal Government relationships in this whole process, certain general economic assumptions.

FOREST INCENTIVE PROGRAM

Mrs. HANSEN. Mr. Resler, as you well know, there is a great backlog in forests for commercial use, and recreational use in the future is dependent on the management of the private forests. The private owners, unless they own a substantial acreage, and by this I am excluding the commercial producers of timber like Weyerhaeuser, Crown, Georgia Pacific, Louisiana Pacific are not able financially or do not make an attempt to manage these areas so they will be a continuing source of timber supply.

There has been a tremendous tendency to cut and get out. This is one of your problems. I think you recognize this problem nationwide has denuded a lot of land and has affected the supply of our timber products.

So I want to know what you are doing about this situation. Are you developing a policy that is workable rather than just something on paper?

Mr. RESLER. I am sure you are aware that we do have a forest incentive program which is just getting underway this year but I would like to defer to our new Deputy Chief of State and Private Forestry on that question if I may.

Mr. THORNTON. We are delighted you recognize that as one of the big challenges. We sometimes think that the National Forest orientation in this committee is something we would like to broaden out to a concern for the total forestry problem in the country.

As you know, we have had a number of reports this last year that really define the challenge on non-Federal lands. This forestry incentives program just gets underway this month. As a matter of fact, this is the first major effort we have made to tackle this problem you speak of directly on a reasonable scale.

We have a $10 million program in 1974 as part of the rural environmental conservation program which is a combination of USDA agency efforts.

Mrs. HANSEN. What kind of techniques are you planning on using? Say a man owns 40 acres of timberland and the price of timber products is up, so he cuts the 40 acres of timber.

The temptation then may be to sell the land to a developer, creating additional problems of sewage, water, et cetera, when actually the owner and the Nation would be best served if he could reforest that land.

That is what concerns me.

Mr. THORNTON. The basic approach is cost sharing for the establishment of new forest or to improve the forest.

Mrs. HANSEN. But if and when that timber is cut, be it for pulp, poles, or a mill, a certain portion could be withheld with the owner's consent for cleaning and replanting the land. It is a relatively painless process.

But if you wait until the land is covered with blackberry bushes and a few other things it becomes much more costly and the incentive is gone. Much of this land is owned by people that feel a great responsibility for the environment but they do not have the finances or knowhow to properly manage these lands.

Mr. THORNTON. That is one part of the problem. Another great part is the land that needs to be converted back into Douglas fir, for example.

Mrs. HANSEN. Well isn't this part of your land use planning?

Mr. THORNTON. Yes, and it is part of the need for an incentive. That owner has perhaps even less incentive.

Mr. MCKAY. Don't you already have some multiple conservation programs on a voluntary basis operating where the Government has provided either the seed money or some other material?

Mr. THORNTON. Through the State organizations, production of trees at cost, for example, for planting. That is one approach. There has been a longstanding cost-sharing program, as you know, for many years operated under the ASCS.

Mrs. HANSEN. A lot of these people don't quite understand the difficulties of planting and replanting 40 acres of land in one of your high-harvest-yield areas. You also have a labor problem.

Mr. RESLER. Mrs. Hansen, there is a very real problem, as Phil has touched on here, and you have also, incentives to the individual. With the present program that we have underway at the $10 million level, prioritywise we have had to conclude that we should put the bulk of that support into the reforestation of previously cutover areas rather than freshly cutover, the assumption being that there is an opportunity here for the individual to underwrite the reforestation of that area because he does have an opportunity at least to plow back into the regeneration of those stands from his proceeds. The other approach, of course, is that the States can do a great deal in terms of providing a tax incentive.

Mrs. HANSEN. If an owner cuts so many board feet, some part of that should be reserved for replanting because it makes economic sense, otherwise the land will never be replanted.

I just happen to live in this kind of county where it is mostly timberland. There are relatively few acres in the production of dairy products, so most of it is timberland. The county itself is more financially secure knowing that this land is going to be replanted.

The county has to have funds to build schools, run schoolbuses, build roads, sewers, waterlines, and then all the other amenities of civilization.

[Discussion off the record.]

Mrs. HANSEN. I think it is not only essential for us to look at the total objectives but to look at the brutal realities of what you are dealing with in economics.

STATE COOPERATION

Mr. RESLER. We will be continuing, Mrs. Hansen, to deal directly with the State foresters through the National Association of State Foresters in trying to find a better solution to this very real problem.

It strikes me that land use planning legislation which will lead inevitably to some decisions about that will border on zoning at least or designation of lands that ought to be kept in forest production. That may provide us with a better handhold on the question of how do the States come into the picture in providing some kind of incentive or a direction.

We do the same thing under the Knutson-Vandenberg authority, as you are well aware. It could be done under State authorities, too. That is a question States will have to address.

Mrs. HANSEN. It needs a lot of very frank discussion with these owners of everything from 10 acres on up because there was a time, as you are well aware, when people sold timber by the acre. That is no longer true. You sell by the trees.

Mr. RESLER. There are literally hundreds of thousands of these 40 acre tracts, too.

Mrs. HANSEN. That is correct.

Mr. RESLER. It is significant in the total.

Mrs. HANSEN. They are significant for timber products as well as for small recreation areas. They are significant in what they provide in watershed and erosion control. This is a subject that has to be addressed locality by locality so the general public will understand what is involved.

Mr. McDade, do you have a question at this point?

STRIP MINING

Mr. MCDADE. Thank you very much, Julia.

I would like to just inquire into one matter.

You have developed a body of expertise on Forest Service lands with respect to the question of strip mining. You have regulated it, you have examined it, and I hope have been able to come to some conclusions, and that is really my question.

Are you able to determine as a generalization yet whether or not you have confidence that you can control strip mining with reclamation that does not do permanent harm to the environment?

Mr. RESLER. We have a rather substantial body of experience. I think the answer would have to reflect a great variety in circumstances, but on reasonably gentle terrain, some fairly deep soil, there are techniques available that would allow one to extract through strip mining, surface mining, the minerals and restore the site to an esthetically pleasing and useful form.

It is expensive. We have examples in which this has been done. As I mentioned earlier—I don't believe you were here at the time, Mr. McDade—we have a project SEAM.

Mr. MCDADE. Yes, I was here.

Mr. RESLER. We basically would hope to expand our technology and knowledge for that matter in this area. I think it can be done under certain circumstances. There is a price to pay.

Mr. MCDADE. Do you know of instances where the Forest Service has engaged in leasing for strip mining that has resulted in permanent harm to the environment?

Mr. RESLER. I am not aware of any on the national forests.

Mr. MCDADE. My question is directed of course specifically to the national forests, which is your jurisdiction. That is what I want to pin down with you if we can.

Mr. RESLER. I really can't answer that question. I don't know of any such area. Do any of you?

Mr. THORNTON. It depends on what you mean by "permanent harm." A pile of tailings, for example, is a rather permanent mark on the landscape.

Mr. MCDADE. Do you not require that the land be returned to contour when you issue a permit?

Mr. RESLER. Yes, where we are leasing areas now, but many of the areas that we have that have been strip mined are those in which prior rights were reserved when we acquired the land by purchase. In some cases we have less control of those than we would like to have.

In special projects, in some cases, we are going back in to refill and replace top soil and do the various other things such as using the sites for sludge deposit, for instance, to improve the productivity of those sites. Many of those are very well restored, but they are changed. There is no question about it.

Mr. MCDADE. Well, changed esthetically or do you mean changed in the sense of permanent damage?

Mr. RESLER. No, changed esthetically.

Mr. MCDADE. I don't want to surprise you with something like this. I know this is one area where you did experimentation and I have no desire to trap you. So if you want to amplify your comments in the record, do so.

Mr. RESLER. I would really prefer to do that. I am just not knowledgeable enough in all the circumstances we have now really to respond to that but I would be glad to supply something on that.

[The information follows:]

The only case where the Forest Service has exercised what amounts to operating control over a coal strip mine occurred in western Pennsylvania on the Allegheny National Forest in 1963–64. The Forest Service entered into a cooperative agreement with the Wetmore Coal and Construction Co. to gather information on costs and methods of ameliorating the environmental impacts of strip-mining through improved mining and reclamation in a closely controlled operation. Less than 60 acres of stripping was involved and the area has been satisfactorily reclaimed.

Mr. MCDADE. I wish you would. My State is one that has experienced a good deal of strip mining. We have had a strip mine control law for some years now and it will be the model on which the Federal legislation will be based when we finally do get the Federal bill.

It has proved to be legislation that seems to work. We pay a price. As you indicated there are some prior mineral right owners that per-

haps you didn't have control over. We have some lands that were stripped well prior to the State law where we are paying a tremendous environmental price. You might keep those in mind when you talk about your project SEAM.

But I think the Forest Service could in its general operations perhaps even take a look at how the law is working before we write a law which we hope will benefit the people.

I would like to know for the record when you get a chance how many acres you have under lease, how many acres represent prior permits, how many acres represent current actions where you can control to the extent possible restoration of the land, and if you could be specific about whether or not you think there are instances that have resulted in some kind of permanent degradation I would like to know about it.

Mr. RESLER. We'll be glad to do that.

[The information follows:]

	acres
Estimated strippable mineral leases on National Forest System lands	70,000
Estimated acres representing prior permits	7,500

Statistics as to number of acres which represent current action are not available. Nearly all Forest Service permits issued to control operations under reserved rights provide for reclamation of the lands disturbed. Where the Forest Service cannot require satisfactory reclamation under reserved or outstanding rights, we must rely on State reclamation laws. Virtually all lands in the Eastern United States, where any substantial amount of surface mining is done, now have reclamation laws. Most State strip-mine permit and reclamation requirements are adequate to protect surface values and ascertain that satisfactory reclamation is accomplished, but enforement can be a problem in some areas.

For the most part it is in the area of surface disturbance associated with prospecting under the 1872 mining law that restoration is not being satisfactorily controlled. To that end, the Forest Service and the Secretary of Agriculture have published proposed regulations which would require reclamation of areas disturbed by prospecting. It is hoped the final regulations will be effective by June 15, 1974.

LOCATIONS OF STRIP MINING

Mr. MCDADE. Thank you, Madam Chairman.

Mr. YATES. Is there strip mining in the national forests?

Mr. RESLER. Yes, in places.

Mr. YATES. In what States?

Mr. RESLER. I guess there would be some possibly in your State.

Mr. YATES. On the national forests there is none?

Mr. MCDADE. No, not in Pennsylvania. Ohio.

Mr. RESLER. There certainly is in West Virignia and Ohio.

Mr. YATES. None in the Western States?

Mr. RESLER. Yes. There is going to be——

Mrs. HANSEN. How about Utah?

Mr. RESLER. I am not aware of any in Utah.

Mrs. HANSEN. How about Montana?

Mr. RESLER. I am not aware of any there now. The bulk of that I believe is on public domain lands at this time.

Mr. YATES. Where is it contemplated that there will be strip mining in the national forests?

Mr. RESLER. A great deal of the country, particularly in the Plains States, is underlain with coal at strippable levels. A good part of the national grasslands, some of the national forests in Wyoming and elsewhere, is underlain with minerals.

32-043 O - 74 - 3

REFORESTATION AND STAND IMPROVEMENT

Mr. WYATT. Madam Chairman, may I ask one final question.

Mr. Resler, you talked about the new figures on acres to be forested and to be upgraded as far as their growth of fiber is concerned. Under your high-level program that you contemplate now at the end of the 10 years would this forestation, reforestation if necessary, and the upgrading of the quality of wood fiber growth be substantially completed at the end of the 10 years?

Mr. GILBERT. The best opportunity we contemplate at a high level is doing something like a million and a half acres of reforestation and about 3 million acres of timberland improvement. We would be starting with the best opportunity. There may be others but these would be the better ones.

Mr. WYATT. This would catch us up, so to speak, in a 10-year period with a high level program?

Mr. GILBERT. Yes, sir.

Mrs. HANSEN. The committee will adjourn until 1 p.m.

AFTERNOON SESSION

Mrs. HANSEN. The committee will come to order. Mr. Resler, please proceed with your remarks.

PROGRAM STRUCTURE
MAJOR PROGRAM ALTERNATIVES

Mr. RESLER. I would like to get through as quickly as we can to the part that I am sure you are most interested in. There is one section in here, chapter VI, that outlines the major elements of the program activities. That is included for those who are not familiar with the agency's program.

Chapter VII is the rack-up of major program alternatives. It identifies three different program levels. We have elected to call them low, moderate, and high, because that is the simplest definition we could find. The lower level in management is based on the assumption that the Forest Service's level of activities and total production of output would remain at the 1973 and 1974 levels——

Mrs. HANSEN. Then you are not moving ahead very far very fast.

Mr. RESLER [continuing]. During the 1975–84 period. This level would imply, obviously, a reduction in the relative share of the production of necessary goods and services. Contained in this section is a series of graphs and specific program outputs that would be possible to achieve, based on the assumption of program activity.

Mrs. HANSEN. On your graphs, you show the number of billions of board feet of timber sales.

Mr. RESLER. Yes, ma'am.

Mrs. HANSEN. If you were to continue the timber sales program at the present level of activity, I don't know how you are even going to stay even.

Mr. RESLER. The rate of inflation would obviously have a negative effect on the programs over time if the funding were constant.

Mrs. HANSEN. At the present time it is my understanding that the allowable cut isn't what many would call high. You constantly get into areas that are questionable. Are you cutting too much here? Are you cutting too much there? To make the determinations, because of the environmental costs and the very technical nature of a forest operation, your dollar doesn't go very far, isn't that correct?

Mr. RESLER. That is correct.

Mrs. HANSEN. So at a constant level of funding you would be constantly falling behind. Of course this you should label as the OMB level.

Mr. RESLER. This is one of three alternatives.

Mrs. HANSEN. If you just look at your graph it looks pretty good. It doesn't look too destructive. It looks like it is on a fairly even keel, but then you think how your demands and costs have increased and the picture isn't as bright.

Mr. THORNTON. But we are talking about a constant level of output and activities, not necessarily dollars. That is why that assumption was made. We are trying to have a base here.

Mrs. HANSEN. Even if you have the same level of production or output it will cost more.

Mr. THORNTON. It may require more dollars.

MODERATE SUPPLY LEVEL

Mr. RESLER. The second level is based on a continuation of the present trends in outputs. It shows a different curve clearly. That is shown on page 32. We will get into the specifics more in just a moment.

Following those graphs is a summary of the specific outputs, such as during the 1975–79 period, 1.1 million acres of wildlife habitat would be improved. That type of thing is shown in the subsequent tables.

HIGH LEVEL PLAN

The third level, the high level, is based on the assumption that the Forest Service would increase its share of providing goods and services demanded by society from forest resources. It would be substantially increased in aggregate during the ensuing 10-year period.

Following that is a display of the outputs that would be achieved with this changing program. Following that I believe you have a display which shows an index of each of these program levels compared to 1973. For instance, if you used 1973 program levels as the base period, or 100, then the high level program would show a substantial increase in the index ranging upward to 154 in 1975 and 228 in 1979, which means a 54-percent increase and a 128-percent increase over the 1973 level.

If you look at the low index, and I apologize because your books are not compiled so you can go from one to the other handily—they will be in the next issue—comparing the low index, for instance, with the high, we maintain a static level at an index of 91, with 1973 being the index period. The moderate level would represent about a 5-percent increase in 1975, and a 50-percent increase in 1979.

Mr. EVANS. Can I ask a question here? You are talking about 5 percent, 50 percent and so forth. Are you talking about levels of activity and levels measured how, in constant dollars?

Mr. RESLER. Yes, sir.

Mr. EVANS. Are you talking about dollars or people or what?

Mr. GILBERT. These numbers are in index form for comparative purposes. These are on the dollar side. We are using 1973 as a base, so that 100 percent of the base would be the same as $9, without any inflation. That is just a way of avoiding arguments about what the inflation is going to be. We recognize in the real world there is some, but to get the relative differences as between the low, moderate, and high, we just made that assumption.

Mr. EVANS. Thank you, Madam Chairman.

ALTERNATIVE FUNDING LEVELS

Mr. RESLER. I think perhaps the area of primary interest would be to look at the tabulations, give some comparisons of what these three levels of outputs might amount to, if we take any one system or set of activities. Since everyone does not have a copy of the book, perhaps I could give you some examples at the low, the moderate and the high supply situation, to show you what variations there would be.

Mr. EVANS. On what page are you going to begin?

Mr. RESLER. You can see why we are anxious to redo this.

Mr. GILBERT. What Mr. Resler has there is a summary.

Mr. RESLER. If we take any one of the resource systems, and I will start off with timber, and run through three or four others very quickly on just a few of the elements, to give you some idea of the difference in approach. Under the low alternative we would offer approximately 13.4 billion board-feet. It would increase to 14.8 at the moderate level in 1979.

Mrs. HANSEN. What is the moderate?

Mr. RESLER. It would be a continuation of the trend of production in the recent past. At the high level it would amount to a sales program of 17.1 billion, International ¼-inch scale, at the 1979 period.

If we went out the full 10-year period—keep in mind this includes with it all of the support activities that would be required to maintain quality—we are suggesting in these three levels that production would range from about a 13.4 billion board foot sales offering at the low level in 1984, essentially 10 years hence, to the high point of about 18.8 in 1984. In order to reach that, of course, there are substantial increases that must be achieved, in terms of reforestation acreages, treatments in the form of thinnings and other cultural treatments. For each one of those levels we have tried to array what would be required in each of the various types of facilities to produce that output.

MULTI-USE MANAGEMENT

Mr. EVANS. May I ask a question there, Madam Chairman. Would each level, low, medium and high, still be based on the principle of sustained yield? Whatever your cut is you are going to try to have your yield sustained and have a backup of unreforested lands?

Mr. RESLER. That is correct.

Mrs. HANSEN. It also includes all the other activities that are associated with proper timber management such as wildlife management, wilderness management, et cetera. Isn't that correct?

Mr. RESLER. That is correct.

Mr. MCKAY. Range grazing?

Mr. RESLER. Yes, sir. If we look at the recreation and wilderness system, as an example, at the three levels, we plan to develop new Forest Service operated recreation sites with an increase of 15,000 people-at-one-time capacity at the low level, an increase of 87,000 at the moderate level, and an increase of about 351,000 people-at-one-time capacity at the high level, a sharp upward trend.

Mr. EVANS. Is this the 1st or the 10th year you are talking about? about?

Mr. RESLER. This would be the 10th year and the total level of activity required during the 5-year period to arrive at the outputs in the 10th year. It is not an annual production. During the 10-year span we would also achieve certain other outputs. This would involve a substantial increase, for instance, between the low and the high levels of such things as getting on with the detailed examination of the roadless areas included in the roadless review, studying each of them for possible inclusion into the National Wilderness Preservation System or to determine whatever management prescriptions seem proper.

These are merely examples. We could do the same thing for wildlife and fish habitat systems. In your next draft you will have these racked up in the manner that I have them here. The program also includes such things as the land and water system which would propose such things as thousands of acres of seeded areas to maintain or improve, the hydrology of an area, to restore in this case 200 acres of lands disturbed by prospecting and surface mining at the low level, going up several hundred acres to 500 acres at the high level.

This shows what would happen in all of the resources areas. There are not dollar signs attached to these directly. I realize that this would be most useful information to you in the long run. So far we have concentrated on trying to identify outputs in program level.

The range resources system is another one that was mentioned earlier.

That is the basic approach then that shows what could be achieved in terms of production outputs at these three levels. As I mentioned earlier, there are many variations in between as to what the options would be, depending upon capital investments in the land. These at least provide a framework for more detailed investigations and perusals of what the opportunities are, and where the money should be spent. I think that takes you through the general format. We can then move at your pleasure, Mrs. Hansen, into more details on any one of the subsystems you would like.

IMPACT OF THE FOREST SERVICE ON THE FOREST INDUSTRY

Mrs. HANSEN. At the present time the Forest Service timber sales are sort of a balance wheel in the entire forest industry. In the matter of recreation your programs probably rise above the other systems. Your sales programs kind of fill those economic gaps. If you listened to the meeting the other day you would certainly know where the gaps were.

As our population increases, what do your economists think will be necessary to meet this increased challenge each year? As you are

well aware, as the population increases, you have an additional need for a great deal more timber products. You also have additional need for water. You have additional need for the minerals, and so on.

Which alternative funding level will enable the United States to survive and continue a high basic standard of living?

Our State director of public lands, as you are well aware, has been talking about timber purchases in Siberia. What I am afraid of is we will get a little careless, and we will overcut using Siberia as a backlog, and then all of a sudden the same thing happens to the United States with Siberia as happened to us with Saudi Arabia. The same thing can happen with the Canadian and American forests. This is a continual problem. Canada may decide that she has other places to supply. It is almost a reckless philosophy to not plan for what we need nationally.

TIMBER IMPORTS

At the present time we are a total importing nation in the world. What is the percentage?

Mr. RESLER. About 8 percent, a net importer of about 8 percent of our total needs.

Mr. GILBERT. It is about 8½ percent now.

Mrs. HANSEN. If we become an importer of say 25 percent, we may be confronted with the same hazards that we have in the energy field. We have several economic problems. This involves the survival of our Nation. Which is going to be the alternative that most nearly reflects the basic economic needs?

MOST DESIRABLE SYSTEM

Mr. RESLER. Madam Chairman, this will vary from one system to the other. It depends a little bit on your perception of what the real world is all about. There have been a number of studies by the President's Panel on Timber and Environment, the National Materials Commission and various others, and our own Timber Outlook. These suggest there is no need for a timber shortage in this country, provided we do the things that we know how to do. Here again there is a fundamental question that ties back to the question of what our pricing policy ought to be. For instance, if one assumes that prices for building materials, wood products in general, can go up at a rather sharp level, that causes the total demand to fall off, and that gives you a different conclusion about what you would need to produce as a Nation in terms of total wood fiber.

If you make another assumption about what that pricing policy ought to be, that says consumer prices ought to be held at fairly low levels, or at least a moderate rate of increase, then that produces higher demand values.

We attempted to spell this out in our Timber Outlook report. This is basically the type of question that we are going to be working with the Department and OMB, to try to determine what best meets those needs. I think it seems clear, without looking at other national priorities, the easiest way to meet future demands in, we will say, just one resource, timber, for instance, is to put substantial increases in invest-

ments to produce those products. There is no question but what it can be done.

Mrs. HANSEN. Isn't this going to force a continuing general inflation, because of the competition to get just x number of so many board feet?

Mr. RESLER. That is right. As our national demand continues to rise, then obviously there needs to be more supply to meet it. We have had two fairly recent periods in which runaway prices have come about, not as a matter so much of total shortage of wood fiber. There is no question but what very substantial quantities are available, but it is representative at least of some of the dislocations that are going to come about more frequently as demand and supply come closer and closer together.

I guess you could make the assumption that somewhere between the moderate and the high level that is represented here might be very appropriate to achieve that one objective.

Mrs. HANSEN. I am one of the people in the United States who doesn't like to see the United States become the kind of nation that creates classes, because of our inability to have housing available. The young married couple today trying to build a home finds it practically impossible because of the total costs. I am well aware that lumber is only a small portion of it, but I would hate to see us become a tenant or a feudal nation, where there is no ownership or no home pride.

[Discussion off the record.]

Mr. EVANS. Would the gentlelady yield on that question?

Mrs. HANSEN. Yes.

Mr. EVANS. I suppose it is a most difficult thing to estimate what the reasonable demand is going to be and at what prices at some time in the future, because our building industry has been spotty in the past and I am sure will be again in the future.

Certainly the U.S. Government, in regard to land it controls, must have a policy to cut so much timber. We have so much unforested areas, you have some new areas coming in that you are going to have to reforest, and it would seem to me that a formula should move along to keep us producing on a sustained yield concept, and also catch up on the areas that have not been reforested. No matter what your cut is per year, your management should automatically put us in a situation where we would be catching up and keeping abreast of new areas that have to be reforested.

Mrs. HANSEN. Also paying for all your fires which are incidental and unexpected.

MONONGAHELA NF COURT CASE

Mr. EVANS. Of course another thing that is obviously cranked into your thinking and you are going to have to give some thought to, is the recent court decision on cutting timber, where was that case recently decided?

Mr. RESLER. Monongahela.

Mr. EVANS. If fascinates me that the Organic Act has not been followed. It would appear that this has not been followed for years, or do you disagree with the findings of the court?

Mr. RESLER. Perhaps I can answer this way. We are going to appeal the decision. It is a matter of interpretation of an act passed in 1897 that is open for honest differences of opinion in the interpretation of the language. We have one decision by one court which says that we

are not conforming to the intent of Congress and it advocates, in effect, that since we are not, then we should go back to Congress for clarification.

I think inasmuch as Congress has repeatedly, through use of the various oversight functions, been very familiar with what the agency has done over time, that it is reasonable to assume that Members of Congress as well as the agency and the legal institutions to the executive branch have reached a reasonable conclusion that we are doing what the act intended. It remains to be seen whether or not that is a valid assumption. The judicial appeal process will help clarify it. If we are in fact in violation of law, then obviously we are going to seek a legislative solution, but I think it is premature, considering the judicial review process that is available to all and sundry, to conclude that we are now in violation.

Mr. EVANS. You have appealed the case?

Mr. RESLER. Either have or will shortly.

[Short recess.]

WILDLIFE HABITAT MANAGEMENT

Mr. RESLER. Mrs. Hansen, we think maybe it would be easiest to follow in your book if we took one level and followed it directly through these several systems, to give you some idea of how to read this.

Mrs. HANSEN. That will be fine.

Mr. RESLER. If you would turn to page 62, these would be management activities for the National Forest systems, wildlife habitat management. This would be the high supply alternative, the highest one of the three. This alternative would be to operate this program so that the outputs would improve 22.5 million acres of wildlife habitat during the decade, a large part of which would be related directly to the manipulation of vegetative cover. Out of the 22.5 million acres, 7.9 would be related directly to timber management activities. There would be various activities undertaken to protect rare and endangered species and it would improve 1.6 million acres of fish and aquatic wildlife habitat, over 400,000 acres of the total would be for rare and endangered species.

RECREATION AND WILDERNESS

In recreation and wilderness activity it could include, during the first 5 years, the development of recreation sites with the capacity of 351,000 people at one time.

Mr. EVANS. Is that increase or total nationally in a year?

Mr. RESLER. It would be an increase—plan and develop new Forest Service operated recreation sites with that capacity during the first 5 years.

Mrs. HANSEN. Is this just about the percentage that your visitations are increasing at the present time?

Mr. RESLER. It would closely match it. We are actually running behind.

Mrs. HANSEN. I know from discussion with people who have been visiting these places. In this particular category, to keep abreast of the

visitation increase you would have to have the high funding alternative level. Isn't this correct?

Mr. RESLER. Yes, ma'am.

Mr. GILBERT. This is just Forest Service operated facilities. In addition to that we are counting on an unspecified amount of concessionaire operated programs, complementary to these. I think our estimates are that recreation visitations are increasing at the compounded rate of about 4 percent a year.

Mr. RESLER. That is correct. In one study we conducted about 2 years ago, we projected a need for almost doubling the physical plant of recreation sites during a 10-year period. About half of that would be built by private capital under concession or arrangements.

Mrs. HANSEN. Would this include marinas and that type of thing?

Mr. RESLER. It would be marinas, winter sports complexes, various types of resort facilities, things of that nature. Generally those activities are developments that require pretty heavy capital investment and are subject to high concentrations of use. In other words, if there is a type of activity that has the potential for being economically feasible using private capital, we try to concentrate those developments in one area and make them available for commercial development.

TIMBERLINE LODGE

Mrs. HANSEN. What percentage of your facilities are in that category? I am thinking about Timberline Lodge.

Mr. RESLER. Timberline is a unique example in many respects. About 75 percent of the winter sports activities and use, in the 11 Western States, occurs on the National Forests and practically all of that is private capital development.

Timberline Lodge is an exception, as you are well aware, because of the fact that the lodge itself and one lift was developed with appropriated funds during the CCC program and subsequent to that. It is unique in that it has both private and public capital developments.

Mr. EVANS. Where is that?

Mr. RESLER. Mt. Hood, Ore.

Mrs. HANSEN. I asked the question because most of our park concessionaires don't replace facilities. That is one of our problems, because of the shortness of the season. Are they disinterested in maintaining a lodge in the manner in which it was constructed?

Mr. RESLER. Mount Hood has had a long history, most of it rather distressing from our standpoint, in terms of the types of concessioner service we have been able to provide there. The recent permittee—he has been there quite a while now—has been doing a fine job and taking pretty good care of the lodge. Our problem there has to do with the kinds of facilities that can accommodate the very rapidly growing public use. There is no question but what people are just loving Timberline Lodge to death. That is why we have been trying to find solutions in the form of some additional facilities to draw off that heavy day use.

Mrs. HANSEN. This is the kind of history of most of your Forest Service recreation areas, a tremendous heavy use.

Mr. RESLER. That is correct.

Mrs. HANSEN. The shortage of gasoline may help you in some areas.

Mr. RESLER. That could very well be a new dimension in our planning processes as far as the assumptions are concerned. We may see substantial downward shifts, for instance, in the use of some of the more remote recreation sites. We may see very substantial increases in the more accessible ones, merely because of the fuel situation. We might draw a comparison between what the high and the low level would mean in recreation developments. Do you have that?

Mr. THORNTON. For example, in new capacity of picnic and campground facilities, this level we are talking about is 10 times what the current level is.

RANGE RESOURCE MANAGEMENT

Mr. RESLER. If we were to take the range resources activity, for instance, on page 63, the high level would involve managing some 11,700 grazing allotments. The number of grazing allotments really won't change significantly from one level to the other. That is a static job. However, it would involve a major effort to bring 7,800 of these range allotments under intensified management.

This would mean implementing complex systems. It would involve revegetation of 2.8 million acres, construction of 11.8 thousand water developments, and building some 10,700 miles of fence to achieve this type of intensive management activity and livestock control.

At the lower level, what do you have, Phil?

Mr. THORNTON. Revegetation would be about one third of that.

Mr. RESLER. What we are trying to say is that at these different levels there would be substantial differences in output.

Mrs. HANSEN. Mr. Resler, the initial investment in range management and reforestation is high, but your return is also substantial, isn't this right? I mean you provide money for reforestation for a wide variety of purposes.

The result is the economy is assisted, because you have additional cattle and additional food for the market place. That initial Federal investmnt will actually return more to the Federal Treasury than the costs of the investment. It is almost a question whether we can afford to do for the United States what we are doing for the Agency for International Development.

ACCELERATED RANGE REVEGETATION

Mr. RESLER. There are a number of advantages that would flow from this kind of program. For instance, take an accelerated range revegetation program. Improvement of the range vegetation improves the hydrologic condition of range lands.

It is not only measurable in terms of additional pounds of beef or numbers of wildlife as such, but it can be reflected in improved water flow and quality conditions and things of this type. We are now exploring the options of accelerating the range improvement program, for the simple reason that the Department feels there are some real opportunities for an accelerated range program to increase beef production at relatively low energy requirements.

There is some question as to whether or not cost efficiency is best on the open range types of beef production as opposed to a feed lot, which

is high energy requiring, but nevertheless that is the type of trade-off that we are looking at currently. We would hope to be able to reach some conclusions on what our options are for expanding that kind of activity fairly soon.

Mr. McKay. Of course your feed lot situation is one factor, but your calf-cow situation, which feeds into that feed lot is another situation. Your cost efficiencies are not comparable in totality between final feed off in the cattle yard versus the calf-cow operation, which maybe doesn't take that high intensity of feed.

Mr. Resler. That is right.

Mr. McKay. Don't you also, by just sharing management systems, that is you go on before the 15th of June or the 10th of May, and then go back once and come back again or whatever, without putting anything in planting doesn't the native vegetation come back to where it may have been depleted before, without a replanting?

Mr. Resler. Absolutely correct. This is where a great deal of our effort would be placed, in trying to improve on the management systems which is the fancy title we give to exactly the thing you are describing.

Only certain sites that have some real potential, or are really in need of artificial regeneration, if you will, seeding, would be treated in that manner. A lot of times, most of the time in fact, just through effective management you can bring back range conditions and increase production a great deal.

Mr. McKay. I am sure there are some areas where you have had juniper and other things, kind of a vegetation, where you have had to do some shrub removal along the way, but the great majority of it is sheer management.

Mr. Resler. That is absolutely correct.

PUBLIC INVOLVEMENT

Mr. Evans. I have another question or observation I would like to make. We are talking about three levels of management, low, medium, and high, all of which result in certain recommendations which the Congress will or won't accept, but obviously something is going to be done from year to year. I think more than ever before you people are under pressure from more people, isn't that true?

You have more people who want to use snowmobiles, motorbikes, and to hunt, fish or camp, or not use it for anything except hiking or cutting trees. You fellows are at the focal point of all these controversies. I wonder if you are satisfied with your current ability to inform the public? It has been my experience in my district that when local forest rangers have their heads screwed on right, they know they have these competing uses. They give notice of public meetings and they hold their breath, bite their tongues, they have all kinds of patience, listen to all kinds of people, think about putting these people here and those people there, and try and compromise, staying within good management guidelines of course. When the public, which uses these areas, understand and feel like they have had a chance to put some input into it, I am not bothered as a Congressman at all, but I will tell you, when somebody makes a sudden decision that these folks aren't going to go in this area or this is going to be

used for something else, all hell breaks loose. If we have trouble now, it seems to me that it is only logical to conclude that you are going to be plagued with that kind of thing in the future.

My question is, what better means of informing the public of what you are doing, of what the problems are, of what the alternatives are, or do you think this is a problem that is getting enough attention.

Mr. RESLER. This is one of the areas in which we are trying to greatly strengthen our efforts. As you say, people today not only want, they will involve themselves in the kinds of decisions that they feel they ought to be connected with. For the last 3 or 4 years we have been making a special effort to try to involve the public at the local levels in land use planning activities. One of the purposes of this long-range program here is to try to raise some management options and develop from the field level up a better understanding of what we can reasonably do in terms of production outputs and what it is going to cost. In order to do that we have to have local input.

At the same time people at the national level are very much interested in overall policy considerations. What we are trying to do with this, and many other activities primarily in the land-use planning undertakings that are going on at every management level, is to try to overcome this gap of understanding between ourselves and the general public.

It is difficult to communicate because people have many demands upon their time and interest. When we start to do something that conflicts either with their assessment of what ought to be done, or if they feel that they have not been exposed to the activity, then you are absolutely correct, we wind up with some kind of a reaction.

Sometimes it takes the form of public comments, of letters to Members of Congress. Sometimes it takes the form of legislative or judicial pursuits. We are not satisfied with our ability to inform and involve the public, but we are making a major effort to try to strengthen our activity in this field.

It is a significant time impact that I am sure you can recognize, but, nevertheless, we consider that it is a prerequisite of getting the job done.

That is a long answer to your question but it is one that is paramount in our thinking constantly.

Mr. EVANS. Thank you, Madam Chairman.

TIMBER MANAGEMENT

Mr. RESLER. If we could look quickly at the timber management activity to show some comparisons, and I would also like to touch on State and private forestry and the research programs. At the high level management alternative we would increase the rate of sale offerings to 17.1 billion board feet International ¼″ scale by the fifth year. The allowable harvest level would be in the neighborhood of 20.0 billion board feet International ¼″ scale by 1984. The reason for that increase would be accelerated investments in reforestation, timber stand improvement work. There would be at the same time much addi-

tional effort put into improving wood utilization. This would involve some of our people in State and private forestry who have wood utilization expertise and by providing technical assistance to State foresters. All of these activities would be tied together to try to strengthen the total output of wood produced and utilized.

If you compare that with the low or the moderate production outputs, that would be——

Mr. THORNTON. Timber sales offerings of 13.4 billion International ¼″ scale, allowable cut level of 16.4 by 1984. There is quite a substantial difference.

Mr. RESLER. The increase in thinning and salvage, reforestation, and other cultural efforts at the high level would achieve an increase of 3.8 billion board feet International ¼″ scale by 1984 in the allowable harvest level.

Mrs. HANSEN. Is the high level funding alternative comparable to what private industry spends on their lands in the production of timber products?

Mr. RESLER. I guess my reaction would be to say no. We have not made a direct comparison.

Mrs. HANSEN. I think you should because I think very few people in the United States realize, for example, what the Federal Government spends an acre to manage our public lands. The figure is about $1.37 per acre and the commercial private forest industry spends on the order of $128 per acre. It is a sad comparison.

[Discussion off the record.]

BUDGET CONSTRAINTS

Mrs. HANSEN. I think the Forest Service with all its talent, ability, and with its breadth of understanding of the American people's needs and desires can do an excellent job in our National Forests, but I think they have been tremendously handicapped by a lack of understanding of the resources necessary to put them on a viable fiscal basis.

Mr. EVANS. Madam Chairman, I just don't think they have ever been allowed to spend what they feel they need. When they have the funds on occasion I don't think they have been allowed to spend what they know they should spend.

Mrs. HANSEN. Of course they haven't been allowed to spend. They haven't even been allowed to spend what the Committee has given them.

WILDERNESS MANAGEMENT COSTS

Mr. MCKAY. Isn't it really a misnomer though to assume that wildernesses take less management money than other areas?

Mr. RESLER. Less management money?

Mr. MCKAY. That is, you have more policing problems to insure that that is absolutely not tainted.

Mrs. HANSEN. I think in dollars per acre it probably is less but not a great deal less.

Mr. MCKAY. Not much less.

Mr. RESLER. If you relate it back to the levels of visitor use then I think you would develop a strong argument that wildernesses are high cost to manage, some wildernesses—let me qualify—for the sim-

ple reason that you do have to maintain positive control in some form over the use.

I think if you looked at it in broad total, though, that our 10.7 million acres of wilderness on the National Forest System, I am sure the expenditure rate per acre and certainly per visitor day of use, is not noticeably higher than you would find or even comparable to developed recreation sites.

Again it ties back to level of use. Wildernesses are not cheap to manage, there is no question.

Mr. McKay. Not only because of the visitor problem, the problem you have in controlling the visitors in what they do, but the cost of management of those to maintain them.

In fighting fires, for example, you are inhibited. You expend considerably more funds to go in and fight a fire, or disease, or anything else. You are just inhibited.

Mr. Resler. That is correct.

Madam Chairman, I would like to make a couple of comments if I may on your earlier comments.

First, I am a little biased. I guess we all are. We, also, think we are competent to handle the job of managing Forest Service programs any way the American public wants to have them handled.

I would say this, however. We recognize the nature of the problem that both Congress and all administrations face in trying to assess priority on where limited dollars will be spent.

Any agency or manager worth his salt, in my judgment, is going to conclude that his programs are extremely important and he is going to do his best to try to portray them in a favorable light. We work very directly and forthrightly with our Department and frankly my contacts lead me to believe that Secretary Long, for instance, and Secretary Butz, are both knowledgeable about and concerned with this important forestry resource and we have confidence in them.

Mrs. Hansen. But they have ceilings imposed.

Mr. Resler. Yes, they have to live within the system of national priorities, also.

Mrs. Hansen. Mr. Resler, when we consider an item we just shouldn't look at it in the context of being x amount of funds but as what type of investment this will be in America's future.

It is not commonsense not to spend the money that is going to earn not only money but a livelihood, for example.

Mr. Resler. Correct. I am sure you will be pleased to know that Assistant Secretary Long is very much concerned about this very point, namely, that he thinks one of the things we need to do, and we have felt so for a long time, that we need to present our program in terms of a capital budget approach.

Now, for purposes of the appropriation process, obviously one agency or one department can't present its budget separately from the rest, but we are exploring now with his strong encouragement the idea of trying to at least array our programs so that they do distinguish capital investments from outright expense. At least this will be helpful in allowing people to make better judgments as to where the moneys are expended.

I would like, if I may, to press on to some other activities other than national forest systems. They are all displayed at the high level in the pages in the sixties.

STATE AND PRIVATE FORESTRY

The State and private forestry activity, to give you an example, that appears on page 69 in this draft shows the expanded program at the high level that could be accomplished in cooperative forest fire control. I might ask you gentlemen if you would touch on three or four of these points quickly.

Mr. THORNTON. In our State and private forestry cooperative programs with the States, at the high level, cooperative forest fire control would improve the protection from fires on 787 million acres, which would be in contrast to 631 million acres at the low constant level.

Also, we would be able under that level to concentrate our attention on the larger fires that are currently doing most of the damage. We describe how we would do that.

The rural community fire protection program is authorized by law under the Rural Development Act. This program would help small communities train and equip volunteer firefighting forces to increase the protection of communities, the land between the forests, and the cities. Under the intensive program that effort would be undertaken.

This has not yet begun. We have nothing funded for that program.

Insect and disease control covers all the forest land, Federal and non-Federal. We would intensify protection through control and we would do a more intensive job of detecting and evaluating insect and disease outbreaks. This is mostly a contrast in levels of activity that we are now doing.

In forest management and processing activity, this is the program that we talked about this morning of advising small private landowners through the State foresters how to better manage their property. Under the intensive program we could do more of that, say 900,000 assists to woodland owners during that 5-year period covering some 60 million acres. With the current state of both State and Federal laws, the best approach to the problem you described this morning, Mrs. Hansen, would be to go a persuasion and technical assistance route. We could explain to the landowner when he clears his land if he does not reforest it then it is going to be a lot more expensive to reforest after the brush gets 6 or 10 feet high.

That is our one program that is designed to attack that particular kind of a problem.

We have legislation for urban and community forestry programs authorized several years ago. Under the intensive program we would include a start in that program. This would help communities make use of the trees in an urban environment, protect them, and that sort of activity.

This is not included at all in the constant level. We don't have any program there now.

FORESTATION AND TREE IMPROVEMENT

This is an old program that we talked about again this morning, about supplying seedlings to landowners and genetically improving the seedlings and this sort of thing.

This is an intensification of that kind of activity. Perhaps those are the highlights of State and private forestry.

Mr. RESLER. Here again the only point I would add is that there is a range of options available all the way from where we are now to this conceivably higher level or someplace in between.

I think the point we would make here, though, is that this is one array of options.

FORESTRY RESEARCH

I think the public is not too well informed concerning our research program and what major contributions it has made in the past and hopefully it will make in the future. I would like to ask Dr. Youngs, if he will, to take a couple or three items and give them quick treatment.

Are you prepared to do so?

Mr. YOUNGS. Sure. The research program of course is designed to provide the technical support and technical backstopping, not only to the national forest program that we have been talking about but to improve forest management programs generally on other Federal, State, and private lands as well.

Our program then as part of this overall system is designed to provide that kind of support at various levels of activity. One of the major efforts that we are making within the research program, which would not show so much as a new departure as in the structure of the program within the various line items, is the effort to focus all of the efforts that we can on solving real problems.

This means, of course, that we will still conduct basic work necessary in the long run but we are focusing on problems.

Mr. EVANS. Will the report or study mention the areas that you so consider?

Mr. YOUNGS. Yes, sir. This is an example. We are focusing on eight major problems which involve, for example, timber supply; destructive insects and diseases; destructive fire; pollution amelioration; improving social and amenity values; economics and social knowledge of land use planning; knowledge of ecosystem interactions, which of course is basic to much of other resource management; and supplementing other opportunities for increasing rural employment and income.

Just to give you an example of how this operates at the different levels, within the timber supply problem we have two approaches which we are following and will follow more intensively.

One of these is through improved utilization of the timber that is now available and will be available under our present system. Under the low alternative, for example, we conduct research to improve timber utilization that we anticipate would increase the effective timber supply by the equivalent of 2 billion board feet over a 10-year period.

At the moderate level we think we can make this 11 billion board feet, at the high level something like 29 billion board feet equivalent.

The other approach is through intensive timber culture designed to make it possible to grow more timber. Here again with the low alternative we estimate that we could provide the knowledge and technology for a one-third increase in commercial timber growth in 25 years, at the moderate level a 50-percent increase in commercial timber growth, and at the high level we think we could provide the knowledge to double commercial timber growth in 25 years.

Mr. EVANS. May I ask you are these estimates—they are hard to make and I understand that—based on man's present knowledge or the rate at which he is acquiring knowledge?

Mr. YOUNGS. These are based on acquisition of knowledge which we assume we could do under the accelerated or continuing research programs.

Mr. EVANS. It is not a hope but a belief that, by golly, if you have the funds in that kind of program you could do it?

Mr. YOUNGS. It is our best estimate to quantify what we could get for our investment.

Mr. EVANS. Based on your experience and knowledge in the past?

Mr. YOUNGS. Based on our knowledge of what certain investments in this area will produce. In this area of timber we do a better job of quantifying than we can in many others. In some we don't know the way to do it. This is part of the problem. In this area we think we can at least make some intelligent estimates.

Mr. EVANS. If you asked for money based upon one kind or another and you had some projections there, it would be awfully nice if your projections were fairly hard projections.

Mr. YOUNGS. I think they are as hard as present knowledge of return on research investments can make them.

Mr. EVANS. Thank you.

Mr. RESLER. Might I add to Dr. Youngs statement that all of this is based on actual progression of growth increase resulting from research in the immediate past. We do have some reasonably solid basis of making these forward projections.

INSECTS AND DISEASE RESEARCH

Mr. YOUNGS. This is an example. I could go through some others.

For example, in the area of destructive insects and diseases, one approach here is through assessment of insects and diseases, including research to identify, assess, and predict the destructive impact of diseases.

For example, under the low alternative—we are not able to quantify this quite as well—we could develop the knowledge for the identification, assessment, and prediction of impacts of maybe one or two of the most damaging forest pests. For example, the tussock moth might be a case in point.

Mr. MCDADE. I am sure we would like to hear you mention gypsy moth.

Mr. YOUNGS. That is one very much on our minds.

This could be increased under the moderate alternative to identify the cumulative net effects of the major destructive insects and diseases on timber production and related resource uses. Under the high alternative we could greatly improve our capability for rapid, accurate accomplishment of these assessments.

We could do it more quickly and more accurately. Of course this means more effective control. I think these give an example of the sort of things that are identified in the research area in the document that we are preparing. I can go through more if you wish.

32-043 O - 74 - 4

TIMING FOR REDRAFT OF LONG RANGE PLAN

Mr. EVANS. When do you anticipate this final edition will be out and in our hands and available for study?

Mr. RESLER. We would hope that in March we would have this redraft printed so that it could be distributed rather broadly as the next step in development of the environmental impact statement.

In fact, we are trying to design this so that it lays out program alternatives and conforms with the requirements of the National Environmental Policy Act in the form of a draft environmental statement. It would be out then for 90 to 120 days of response time and then we would propose to finalize it.

During this time also we would be continuing to work internally within the executive branch to expose the several levels of alternatives of management so that they could pass on the judgments later on.

We can't reach any conclusions now as to what ought to be the appropriate level for the simple reason that we would be short-circuiting the decisionmaking process required under NEPA.

PUBLIC INPUT

Mr. EVANS. May I interrupt there to ask one last question and then I am going to have to go.

In the processes you have gone through to date to produce the book that you have and in the final consideration that you give to the publication in the weeks and months ahead, is this circulated down below throughout the field?

Mr. RESLER. Yes, sir.

Mr. EVANS. Do you ask for comment from people out in the regions, in the field, and do you get comment from them?

Mr. RESLER. This is basically where all of this data came from initially. We have two things that are worked simultaneously.

One is the generation from the field level of data on resource capability and their assessment of what realistically could or should be produced in terms of mix of resource value.

At the same time we have had in the past, and are trying to strengthen the process here of defining some overall national goals that are achievable and which are in the ballpark of feasibility in terms of expected appropriations levels. We try to pull those two together with public input and reach an array of alternatives and, hopefully, a set of recommendations, too.

That is normally the approach we try to use in developing an annual budget process, but here we are trying to expand it and provide a broader framework, a 10-year framework, which will then become, hopefully a guide to the annualized budget.

Mr. EVANS. Thank you, Madam Chairman.

HUMAN RESOURCE DEVELOPMENT

Mr. RESLER. Included in your copies are some programs having to do with the human resource activities showing the program levels of activity under the three levels for Youth Conservation Corps, Job Corps, Operation Mainstream, various manpower training programs, and environmental education, something we regard very highly as

being essential to the public's understanding of how they fit in with the natural resource circumstances.

I think those are basically the materials contained in your report.

INPUT LEVELS

At this point I suppose we might talk briefly about the input level so that you can understand these tabulations—the index numbers that are shown in each of the low, medium, and high levels. There is a brief summary there again based on the 1973 program as being the zero level or the 100 index. It compares 1969 to 1974 levels and 1975 to 1979 with each of the three program levels. It gives you some understanding of the magnitude of increase in total amount. It is merely included at this time to be some guide as to how you can interpret from the known past level to interpret any one of these program options.

Mr. McDade. If you would yield, Julia.

STRIP MINING

Mrs. Hansen. I certainly will.

Have you received the data on strip mining in our national forests, Mr. McDade?

Mr. McDade. Rex has given me the data. Do you want that in the record?

Mrs. Hansen. Yes.

[The data follows:]

ESTIMATED COAL RESERVES IN NATIONAL FORESTS

[In millions of tons]

State (region)	National forest	National forest coal reserves at depths less than 1,000 ft.	Estimated strippable coal reserves at depths less than 150 ft.
Alabama (8)	Bankhead		2.5
Arkansas (8)	Ouachita and Ozark		6.5
Kentucky (8)	Daniel Boone		500.0
Virginia (8)	Jefferson		15.0
Illinois (9)	Shawnee		50.0
Indiana (9)	Hoosier		[1]
Ohio (9)	Wayne		187.0
Pennsylvania (9)	Allegheny		[1]
West Virginia (9)	Monongaheia		[4] 100.0
Colorado (2)			[1]
New Mexico (3)	Carson		[1]
Utah (4)	Manti-LaSal	[2] 8,000	300.0
Wyoming (4)	Bridger, Teton, and Shoshone	239	[4] 25.0
Montana (1)	Custer	[3] +6,000	6,000.0
Total			7,186.0

[1] Trace.
[2] Tabby Mountain Field.
[3] Ashland—Otter Creek, Yaeger Butte Field.
[4] Estimate made without strong backup data.

Note: All estimates are conservative because of intermixed ownership. Tonnage lost by H.R. 11500 would be greater than estimated for National Forest acreage.

INTERPRETATION OF CHARTS

Mr. McDade. I was just going to ask you with respect to, say, the chart on page 83 so I understand how to interpret correctly. Does this chart under the 1975 column purport to say relative to the

amounts appropriated in 1973 that there ought to be a 47-percent increase in a program like NFS to reach the high option?

Mr. RESLER. Yes, sir.

Mr. THORNTON. 1973 base index.

Mr. MCDADE. But 1973 is based on appropriations, is it not?

Mr. THORNTON. Program level.

Mr. MCDADE. Of appropriations?

Mr. THORNTON. Yes, sir.

Mr. MCDADE. I don't know whether we had any impoundment at that time or not. Did we? It is just based on what we appropriate, isn't it?

Mr. GILBERT. Yes, sir.

Mr. RESLER. Does it not also include nonappropriated funds, trust funds, in other words, the entire program level?

Mr. GILBERT. I believe it does. It includes a total level of programs.

Mr. MCDADE. So it includes all your permanents and all your appropriated items, based on the 1973 fiscal year?

Mr. RESLER. Yes, sir.

Mr. MCDADE. That is what I need to know.

Thank you.

REVISED DRAFT

Mr. RESLER. Madam Chairman, when next you see this package it will be arrayed so that it is a little easier for you to follow.

Mrs. HANSEN. I hope you will have included your budget recommendations for the various categories because it is very unrealistic if we don't have some options in funding.

Mr. MCDADE. Some of the things that don't reflect though, for example, the human resources, while the percentage increase is enormous, it is not a huge dollar increase. It is really a minimum amount in terms of the overall budget that we consider, but some of the other items that show a lesser percentage increase are much more substantial dollars.

Mr. THORNTON. We could display that kind of thing.

Mr. MCDADE. That might be of some assistance to us in making the judgments.

LOCATIONS OF STRIPPABLE COAL

Mr. RESLER. I would like to comment about the strip mining activity while you are getting copies made. We do not have good information as to the locations of strippable coal and, for that matter, other minerals on a nationwide basis.

Project SEAM that I mentioned a time or two this morning, the Northern Great Plains planning project that is going on, and the USGS programs are all striving now, along with the State geological examiners to develop better information on location and placement.

Mr. MCDADE. Does Geological Survey do that work for you on a reimbursable basis or how is that handled?

Mr. RESLER. They do it as a program responsibility.

Mr. MCDADE. Of theirs?

Mr. RESLER. Yes, sir.

Mr. McDade. So the responsibility for the inventorying, if that is an appropriate word, of natural resources on Forest Service lands rests with the Geological Survey?

Mr. Resler. Mineral resources, yes. We also, however, work with them to help identify some of these so we have better understanding of what is under the surface and what effect it will have, but the basic responsibility does rest in other departments.

The tabulation that we were able to provide you on short notice gives you a general overview of the location and placement information such as we have. It is not mapped yet. We will pursue it further and if we can develop better information we will make it available for the committee files.

Mrs. Hansen. This is a subject of great interest, as you are well aware.

Mr. Resler. That is correct, and in addition of course to the some 7.2 billion tons of estimated coal reserves, there is somewhere in the order of 10 million acres either under lease or under consideration for lease for oil and gas, and some 15,000 leases I am told.

So it does amount to a very substantial area that could be affected.

INVENTORY OF OTHER MINERALS

Mr. McDade. What about other minerals? You talk about coal and we mentioned oil and gas. Do we know enough to have any kind of reasonable estimates about other resources?

Mr. Resler. We have in localized situations pretty fair data but it is not compiled on a national program except that which is held by——

Mr. McDade. We don't have a total inventory but I think it would be helpful to us in understanding the dimensions of the problem to include other resources that might be identified now.

Mr. Resler. Other minerals.

Mr. McDade. Yes.

Mr. Resler. We are trying to develop this information.

Mr. McDade. I mean to the extent you know it. I don't want you to do additional work. To the extent you know it I think it would be helpful to know about that.

Mr. Resler. I don't know how much we will be able to pull together in short order but we will pursue this.

MINERAL LEASING

Mr. Thornton. One illustration on the wilderness area is they are going to make a study to find out what the minerals are. We almost did it on a project-by-project basis.

Mr. McDade. Are you in the leasing business on minerals other than coal? Are you in the leasing business on gas?

Mr. Resler. Interior handles the leasing.

Mr. McDade. But you are as part of the minerals——

Mr. Resler. Phosphates come to mind.

Mr. McDade. Phosphates.

Mr. Gilbert. We have some oil in the Alleghenies.

Mr. Resler. Oil and gas.

Mr. McDade. Perhaps you would list, what other ones are currently operating so we would know about them. That is all.

Thanks, Julia.

Mrs. Hansen. Do you have any more questions, Mr. McKay?

Mr. McKay. Only a statement. I can appreciate what you are going through with national goals and the elusiveness in trying to arrive at absolutes in this field. I am familiar with that problem in the State of Utah with some State goals overall in various areas of highways and all the rest and, as you stated here, they are elusive and they must be updated.

They cannot be stagnified. Circumstances and conditions change so they have to be kept in a fluid condition. So I commend you in your efforts to work in that direction, at the same time understanding some of the problems you are going thorugh.

Mrs. Hansen. They have the worst problems ahead of them. Mr. Resler, I would like to express the appreciation of the committee for your appearance today. It has been most helpful to our understanding of the forest problems.

I think it is necessary to know what directions the Department is contemplating and what options that are acceptable. I want to commend you and the staff for a well prepared preliminary review.

We will look forward with great anticipation to not only your regular hearing but the summation of the report. A few years ago we had a research group doing a lot of highway research in the State of Washington and these professors eternally were raising all kinds of vexing problems and then they would say, "Well, the legislature can settle it."

You know, the legislature met only 60 days, and was always confronted with numerous critical situations.

I said to the professors, "At least tell us what is going to happen if we don't do it and what it will cost if we do."

The professor said, "You know I have never had such an awful job in my life. I have been trained to bring up confrontations and questions and not answer them and not provide solutions."

So I know your problems.

Mr. Resler. Thank you, Mrs. Hansen.

I would like to say to you and the members of the committee we are extremely grateful for the opportunity to discuss with you this draft. I would want to say again that we are still in the developmental stage and we would hope we would have some feedback from members of this committee in one way or another as well as the general public.

Because of your personal familiarity and responsibilities I think you are in a unique position to comment and react to this.

Mrs. Hansen. I think the members of this committee are in the best position anyone is to go out and explain to the public the direction you are taking and what you are going to offer to the public.

Thank you again.

MONDAY, MARCH 18, 1974.

FOREST SERVICE

WITNESSES

J. PHIL CAMPBELL, UNDER SECRETARY OF AGRICULTURE
ROBERT W. LONG, ASSISTANT SECRETARY FOR CONSERVATION, RESEARCH, AND EDUCATION, DEPARTMENT OF AGRICULTURE
J. R. McGUIRE, CHIEF, FOREST SERVICE
R. A. RESLER, ASSOCIATE CHIEF, FOREST SERVICE
J. W. DEINEMA, DEPUTY CHIEF, ADMINISTRATION, FOREST SERVICE
M. B. DICKERMAN, DEPUTY CHIEF, RESEARCH, FOREST SERVICE
T.C. NELSON, DEPUTY CHIEF, NATIONAL FOREST SYSTEM, FOREST SERVICE
P. L. THORNTON, DEPUTY CHIEF, STATE AND PRIVATE FORESTRY, FOREST SERVICE
R. M. HOUSLEY, ASSOCIATE DEPUTY CHIEF, NATIONAL FOREST SYSTEM, FOREST SERVICE
R. P. McROREY, ASSOCIATE DEPUTY CHIEF, NATIONAL FOREST SERVICE, FOREST SERVICE
R. L. YOUNGS, ASSOCIATE DEPUTY CHIEF, RESEARCH, FOREST SERVICE
A. M. GILBERT, DIRECTOR, DIVISION OF PROGRAMS AND POLICY ANALYSIS, FOREST SERVICE
W. A. CAMPBELL, BUDGET OFFICER, FOREST SERVICE
H. E. BANTA, CHIEF MINING ENGINEER, FOREST SERVICE

Mrs. HANSEN. The committee will come to order.

This morning we have the U.S. Forest Service and our principal witnesses are Mr. J. Phil Campbell, the Under Secretary of Agriculture, and Mr. John McGuire, the Chief of the U.S. Forest Service.

I am sure you have a statement, Mr. Campbell, if you will proceed.

REMARKS OF THE UNDER SECRETARY OF AGRICULTURE

Mr. J. CAMPBELL. Madam Chairman, I do not have a prepared statement because Chief McGuire will be doing the testifying.

I do want to make a few remarks though. We feel as though the Forest Service is an extremely important agency of the United States Department of Agriculture since it takes about 25 percent of our employees. They are the biggest agency we have. We say if the Forest Service were ever transferred to any other department we would watch them absorb that department.

We are very fond of the Forest Service in our department. They are extremely important; they are unique. We do feel they have done a real fine job, many times under somewhat trying, adverse circumstances. People are very indiscriminate about attacking the Forest Service from the left to the right and the Forest Service has to sit in the middle and go down the road. We feel they keep a very level head, staying in the middle of the road when they are pressed by court suits from one side and maybe at times by restraints on the budget and personnel on the other side.

They have an excellent staff of professional people. I have had occasion, since being the Under Secretary since 1969, to visit out in the forest areas over the United States. I find their personnel very dedicated and, in my opinion, very talented and wishing to do a first-class job in the administration of their duties.

I find them working for the cause rather than for themselves personally and very often we find governmental employees who begin to work for their agency or themselves rather than the cause for which they are there.

I wanted to use this opportunity to pay tribute to the Forest Service. We do not take any credit for it at the Secretary's level because, as the chairman knows, and the members, we are transigents, as the personnel at the secretarial level are in any administration, regardless of the political party.

I express the regrets of Assistant Secretary Bob Long, who is the Assistant Secretary in charge of this area, who will be with you tomorrow if the hearing does continue. He is in London on an economic meeting today and it was unavoidable that he be absent.

I will turn things over to Mr. McGuire to introduce the people that are with him unless you have some questions you wanted to direct toward me.

Mrs. HANSEN. Thank you very much, Mr. Campbell.

INTRODUCTION OF STAFF

Mr. McGuire, would you like to introduce your staff?

Mr. MCGUIRE. I would be happy to do that. We have made some shifts since we appeared before you last year. Rex Resler continues as Associate Chief. Phil Thornton is now the Deputy Chief for State and Private Forestry. On my left, Tom Nelson is the Deputy for the National Forest System. Dick Dickerman is now the Deputy Chief for Research. He replaced Dr. Keith Arnold who retired and is now teaching in Texas. Bob Youngs is the Associate Deputy for Research.

Einar Roget is the Associate for State and Private Forestry. Jack Deinema is the Deputy Chief for Administration.

Andy Gilbert, Chief of the Programs and Policy Analysis Division.

Ray Housley and Russ McRorey are the two associates for the national forest system; and Bill Campbell, our budget officer. In addition, Howard Banta, our chief mining engineer, is here today; and Warren Blight represents the Department's Office of Management and Finance.

All of us are sorry to learn that you do not plan to seek reelection. We have been very happy with the attention you have given to our

programs and your extensive knowledge of them, and we wish you well in the years ahead.

Mrs. HANSEN. Thank you very much. It has been a pleasure to work with the Forest Service. It has been a most responsible agency. Sometimes you are not as responsive as you should be because you don't request adequate funds, but I don't attribute that to the Forest Service. That is another agency that we will refer to a little later.

Mr. MCGUIRE. We are also sorry to learn Mr. Wyatt will not return. We will miss him because he has been a very capable, knowledgeable member of this committee.

Mrs. HANSEN. He has indeed.

Mr. MCGUIRE. We have greatly appreciated his interest in our programs too. It has been a pleasure working with both of you.

STATEMENT OF CHIEF, FOREST SERVICE

I have a detailed statement which I would like to brief, with your permission.

As I go, it may bring up some topics where you would like to interrupt me.

[Mr. McGuire's prepared statement follows:]

STATEMENT OF JOHN R. McGUIRE, CHIEF, FOREST SERVICE
U. S. DEPARTMENT OF AGRICULTURE
BEFORE THE HOUSE SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS
FOR THE DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES

Madam Chairman, it is a pleasure for me to have this opportunity to highlight some of our accomplishments and discuss with the Committee our fiscal year 1975 budget request.

I was sorry to learn that you do not plan to seek reelection, but respect your desire to return to the role of private citizen. The attention and dedication with which you carried out your responsibilities in the Congress and especially on this Committee, and your understanding of national forestry issues will be sorely missed. We all wish you well. I understand also that Mr. Wyatt will not seek another term. The Committee will lose another capable, knowledgeable member when Mr. Wyatt leaves. Mr. Wyatt, we have appreciated greatly your interest in Forest Service programs. It has been a pleasure working with you.

We made some shifts in top staff since we appeared before you last year. You know most of them, but some have changed jobs. Rex Resler continues as the Associate Chief. Tom Nelson is now the Deputy Chief for the National Forest System. Phil Thornton is now Deputy Chief for State and Private Forestry Cooperation, M. B. Dickerman is now Deputy Chief for Research, replacing Dr. Keith Arnold who is now teaching in Texas. Bob Youngs is now Associate Deputy for Research and Einar Roget is Associate Deputy for State and Private Forestry Cooperation. Jack Deinema is the Deputy Chief for Administration. Andy Gilbert, Chief of the Division of Program and Policy Analysis, Ray Housley and Russ McRorey, our two Associate Deputies for the National Forest System, and Bill Campbell, our Budget Officer complete my staff here today.

The demands of the public for natural resources and concern for the environment continue to increase. The shortage of energy will cause changes and impacts on the use and protection of the Nation's forests. While recreation patterns may change from remote areas to those located close to the more populated sections, we expect a net increase in visitor-days use. There will be great demands for mineral resources. These are two examples of the continuing changes taking place in our country. We are looking at every opportunity to meet demands in a responsive and efficient way which will be environmentally sound. For example, after considerable study, we are restructuring our Regional and Station headquarters organizations so that they will be more efficient and responsive to the demands of the times. We are also considering some changes in our national headquarters which will improve the overall coordination and effectiveness here in Washington. We are making every effort to strengthen our programs on State and private forest lands, to improve their economic productivity, and take some of the pressure off the public lands.

The Judicial arm of the government continues to play a major role in setting forest policy and in influencing Forest Service activities. At last count, we had some 25 major court suits in progress - mostly related to some aspect of protecting or managing timber resources of the National Forests. These occupy our time and attention, and all signs point to continuing activity. The effort required adds substantially to the ever-increasing cost of doing business.

There is a growing interest in land use planning and coordination, and there is a need for more intensive management of Federal, State, and private lands. Some States have passed, or are considering, legislative guidelines for land use planning. Congress is preparing legislation to establish a program of long-term planning for, and assessment of, our Nation's forest lands. For some time we have been developing a long-range plan for the Forest Service which I shall highlight now and be prepared to discuss in detail later.

THE ENVIRONMENTAL PROGRAM FOR THE FUTURE (EPFF)

Last year we were directed to provide the Committee a long-range multi-year budget and management plan (Report No. 93-322 of June 22, 1973). Last week we provided the Committee with copies of our long-range plan, an "Environmental Program for the Future."

In 1970 the Forest Service specified policy guidelines and objectives in the "Framework for the Future." Eleven major objectives were set forth to define the overall Forest Service mission. Forest Service responsibilities and interests go beyond forested lands. Forests and forest related rangeland, grassland, brush land, alpine areas, water areas and wildlife habitat illustrate the variety of natural resources involved in the scope of forestry. Forestry also involves the less tangible values such as scenery, air and water quality, recreation, open space, environmental quality, economic strength and social well being. These objectives are not static. The Environmental Program for the Future is a means to make Forest Service objectives more explicit. The Environmental Program for the Future includes an assessment of the effects of the program on the human environment. This was done in order to meet the intent of the National Environmental Policy Act that statements be prepared in advance of each major action or recommendation significantly affecting the quality of the human environment. This program is the product of a new, coordinated planning process which has been evolving over the past three years. The process examined the demand for forestry resources, cast opportunities within resource capabilities at the field level, molded them into Regional, and then into national program alternatives. The purpose of the Environmental Program for the Future is to chart a strategic course for the Forest Service for the next decade, a course that will have wide-spread public support. Such a national plan is needed to develop a hierarchy of planning within the Forest Service, to provide administrators, the Congress, and the people with a foresight of what today's actions imply for tomorrow, and to guide Forest Service annual planning activities.

This is the first time that a Federal agency has attempted to prepare a formal environmental assessment on an entire national agency's program. The assessment of environmental, economic, and social effects in this program will be necessarily broad. Not all the alternatives can be assessed because they are infinite; not all environmentally significant effects can be identified.

The program describes in one of the major chapters three alternative program directions or trends that the Forest Service can follow. One alternative is to continue the program at about the same as fiscal year 1974. That is, make no changes for the next ten years. A second alternative proposes changes parallel to trends in the past ten years with emphasis on extensive development and environmental safeguards related to increasing timber production. A third alternative is to significantly intensify programs in a balanced approach that would not only increase commodity production but also broaden the services and amenities provided. Obviously, there are many variations within these three alternatives that could be considered. However, a choice among these three will provide a reasonably definitive course for the Forest Service during the next decade.

It is our intention that this program-plan receive a wide range of review. Many people from both inside and outside government have already participated in the draft stage of the plan. Appropriate time will be available for involvement by any and all who are interested in the future programs and policy of the Forest Service.

ENERGY SHORTAGE AND ENVIRONMENTAL CONSIDERATION

The energy crisis is one issue facing the Forest Service and the American people which will certainly have wide-spread effects. Energy and other shortages have the potential for providing the balance, with public support, between the extremes of pure preservation and exploitation. We are examining this opportunity to capitalize on the potential benefits. Oil and gas leases, and transportation systems to utilize these resources, will cause pressure to exploit without necessary environmental safeguards and a public faced with continuing shortages will become more concerned about nonuse of our natural resources. This should tend to

counteract extreme pressures that are preventing use of vast areas of forest land. Our challenge is to balance the divergent pressures for the good of the country.

The precise effect of the energy crisis on Forest Service activities is, of course, yet unknown. As mentioned earlier, we anticipate that it will have an effect on the recreation habits of the American people. It is possible that the recreation facilities close to the metropolitan areas will get an extremely heavy amount of use and the remote areas relatively less use.

Notwithstanding this shortage of fuel, we anticipate over 200 million visitor-days of use for the National Forests in fiscal year 1975. This is a small increase over fiscal year 1974 and an increase of about 17% above use in 1970. We anticipate completing by September 1974 the primitive area review which was directed by the Wilderness Act of 1964. At the same time, we are initiating studies of roadless areas identified for possible future classification as wilderness. This will be accomplished within the next decade and will identify areas with wilderness opportunities.

The energy shortage will affect other activities as well. As alluded to above, mining has taken on a new importance in the last few months. As with most other Western Nations, the fear of becoming too dependent upon other Nations for mineral resources has grown geometrically with the present oil crisis. This means an almost certain rush to lands in all ownerships, not only to determine where more oil and minerals are, but to drill and mine for them. In December the Forest Service issued proposed mining regulations for 140 million acres of National Forest lands. They apply to both miners and prospectors, requiring them to file advance plans with the agency, describing what disturbances they plan, and how they expect to repair land areas disturbed. After reviewing public response, we will put the regulations in final form--hopefully this summer.

Also, the Forest Service has initiated a surface environment and mining (SEAM) research, development, and application program. From this program we hope to provide land managers, the mining industry, and the States with the planning and reclamation alternatives by which they can satisfy mineral needs, while also insuring that social and environmental needs are protected.

I want to emphasize that regardless of the strains and pressures brought about by any particular shortage or other type crisis, we will not lower our standards below acceptable levels of good land management.

LAND CLASSIFICATION

The Secretary of the Department of the Interior has recommended 18.8 million acres of new National Forest lands in Alaska. This will afford an opportunity to add to the National Forest base to help meet public needs. Congressional action is required within the next five years. Pressures building both for and against National Forest designation promise some very interesting times in the years ahead on the Alaska land issue.

Our appraisal of the Klamath Indian lands has been prepared and is now being reviewed by the Office of Management and Budget. We anticipate a request for the necessary purchase funds will be forthcoming soon.

TIMBER ACTIVITIES

We must maintain or increase available timber supplies within the constraints of energy conservation while maintaining environmental quality, including intensifying management of the 296 million acres on small woodland ownership. This includes emphasis on obtaining maximum utilization of timber from existing sale areas, increased salvage of timber mortality, accelerated use of residues, and intensification of STRETCH and similar research programs. We think that the FALCON (forest advanced logging and conservation) program is a good idea for developing additional logging technology.

In addition, we are faced with the task of acting and reacting to a series of overview analyses of our Nation's timber needs and how best to meet them. Our own "Timber Outlook Report," "The President's Advisory Panel Report and Timber and the Environment," and the congressional report of the National Commission on Materials Policy all indicate that with adequate financing and good management our future wood needs can be met.

Housing starts are likely to be up before the end of the year. Therefore, it is necessary to maintain and be ready to expand our level of timber sale activity. With respect to the 1974 timber program, we have been enjoined by the courts from offering the additional billion board feet of timber until and unless an environmental impact statement has been prepared according to the prescribed NEPA process.

We have reviewed our requirements for reforestation and find that it is most understandable if we stratify the requirements among several categories.

After many years of effort to get a small woodland or forestry incentives program, legislation was enacted last fall. This forestry legislation makes it possible for government to share the costs of tree planting and timber stand improvement with non-industrial private landowners. The program is being started this year and expanded in 1975. We are working very hard with State and local people to implement this program now. Within a few years we expect to more than double fiscal year 1973 accomplishments when 295,000 acres were planted or seeded and 266,000 acres were released or thinned on private lands.

Each year assistance is provided to about 110,000 small forest owners and to 7,200 forest products operators by the State service foresters and the State and Federal forest utilization specialists. The cooperative forestry programs are contributing to the timber supply solution by emphasizing the extension of present timber supplies through (a) better utilization of what is harvested in the round, and (b) better utilization in the conversion process - including sawing and integrated utilization aimed at highest use of each portion of the tree.

During fiscal year 1973, on the National Forests, 12.4 billion board feet (local scale) of timber was cut and 10.2 billion board feet (local scale) of timber was sold.

We continue to follow the guidelines included in the report on "Clearcutting Federal Timberlands" issued by the Subcommittee on Public Lands to the Senate Committee on Interior and Insular Affairs. These guidelines have been incorporated in the "Action Plan - National Forests in a Quality Environment."

In addition, 130,972 acres were reforested and 170,438 acres were treated with timber stand improvement cultural measures in 1973. We plan to reforest about 152,000 acres and thin or release 204,000 acres in 1975.

Last year on the National Forests we built the equivalent of about 527 miles of Federally-financed roads and provided engineering and some supplementation for about 6,700 miles of purchaser-built roads. In 1975 the timber purchaser will build about 8,000 miles. This rate of construction is enough to about maintain recent levels of cut and make additional timber available through such efforts as salvage and thinning.

ACCELERATED FOREST RANGE PROGRAM

The meat shortage that appeared in 1973 indicates a shortage situation expected to last for 5 years. In addition, increased demands on feed grains for worldwide human consumption will further emphasize an increased role for range forage. Articulating the role of National Forest Management, Research, and State and Private Forestry programs in meeting this public need by full and proper use of the Nation's forage resources is a task facing us in the year ahead.

FOREST PROTECTION

Almost 180,000 acres of Forest Service protected lands were burned during the year. Extreme burning conditions existed in Washington, Oregon, Idaho, Montana, and Northern California. The number of fires--12,335--is lower than last year but is a little higher than the 5-year average. There were 5,941 man-caused fires, a slight increase over last year and over the 5-year average. We spent more emergency fire funds this year than ever before.

Fortunately, we had no fatalities involving helicopters this season. However, there were two fatalities on separate fires in California. We continue to emphasize aircraft and on-the-ground fire safety.

We are constantly improving our initial attack forces and coordination during periods of high fire hazard to stop fires before they become large conflagrations. The support provided at Boise Interagency Fire Center by FS, BLM, and NOAA, was highly effective. The acquisition of the 10 modular airborne firefighting systems (MAFFS) during 1974 will increase this capability.

Fuels management offers a real opportunity to reduce acreages burned and the costs of suppressing fires, while at the same time helping to maintain the environment and achieving ecological benefits.

Although much has been accomplished in the fifty years since inception of the Cooperative Forest Fire Control program in reducing the damage from wildfire, a big job remains. June 7, 1974, marks the 50th anniversary of the signing of the Clarke-McNary Act. Sections 1, 2, 3, and 4 of this Act have greatly benefited the cooperative fire control and tree planting efforts on State and private forest lands.

We seem to be entering a new cycle in major pest problems. The tussock moth, gypsy moth, southern pine beetle, mountain pine beetle, larch casebearer, and spruce budworm impact are up sharply. We must find effective, environmentally safe controls for these insect pests. The Department is considering a comprehensive program to accelerate research programs to develop environmentally acceptable control systems for the Douglas-fir tussock moth, gypsy moth, and southern pine beetle. In the meantime, we are reprograming and rethinking our research program to direct as much effort as possible to finding alternatives for control of these pests. The EPA standby approval to use DDT on the tussock moth this year is only a temporary exception. Through research we must find acceptable alternative control methods for this pest and others. This is a challenge which we hope we will be able to meet even though the outlook at the present time is not encouraging.

BUDGETARY MATTERS

Fiscal year 1975 is the first year for which we are required to pay to the General Services Administration the cost of space rental in accordance with PL 92-313. We have shown this separately in our budget request. The total rental cost for 1975 is estimated to be $16,415,000. Pay Act increases are also included. This is the annualization of the Pay Acts which were passed in 1973.

Additional funds are included in the budget for the timber sales activity which includes landscape design, wildlife considerations, and other supporting activities to assure environmentally sound timber sales. Included in Forest Land Management is a reduction for non-recurring 1974 programs. We have not been able to continue some of the research programs which were added by the Congress in 1974.

Program increases are included for our important State and Private Forestry programs. An increase of $460,000 in the Cooperative Forest Management program will enable us to accelerate technical assistance to sawmill operators through system analysis. This activity could result in increased volume and grade recovery of lumber by an estimated 15% from these cooperative sawmills. In addition, an $840,000 program increase in our General Forestry Assistance program will provide technical assistance to loggers, landowners, and pulp companies in reducing wastes

and redirecting products to higher quality use. This could result in an additional 400 million board feet (local scale) of lumber on the market annually.

The budget also contains an increase of about $16 million in our Forest Roads and Trails program. This is primarily to strengthen the Forest Service effort in the survey, design, and location of permanent roads, purchaser support, and bridge replacement. All of the road increase is related to the timber support activity. We are funded at a level to accomplish 75% of the survey work and maintain control of the design and location as agreed upon last fall by the Appropriations Subcommittees and the Office of Management and Budget.

Public Law 93-81 amended the Land and Water Conservation Fund Act of 1965 by limiting the charging of special user fees to sites containing specified facilities. As a result, the number of charge sites on National Forest lands was reduced from 2,235 to 37. This results in an estimated reduction of $2 million in receipts which can be used by the Forest Service for outdoor recreation purposes--from $3.3 million in 1974 to $1.3 million in 1975.

Cash receipts from the sale and use of National Forest System resources amounted to almost $470 million in fiscal year 1973, a record high. This is an increase of about $120 million from the preceding year. For fiscal year 1974, receipts are estimated to be $417.3 million, and for 1975 $458.8 million. In 1974 we have increased the average grazing fees by 20 cents per animal unit month above the level existing in 1973, which is in keeping with the overall objective of grazing fee adjustments to reach their market value.

The Youth Conservation Corps again was one of our most popular human resource programs. The 3,513 young men and women who participated in the program last year accomplished valuable conservation work and, at the same time, increased their own appreciation of resource and social needs and problems. The Departments of the Interior and Agriculture share the program equally. The current authorization ends after the 1974 season. Legislation has been proposed to continue the program.

While there is a decrease in the Construction and Land Acquisition appropriation, the program will allow for pollution abatement improvements required under Executive Order 11507 (superseded by Executive Order 11752 of December 17, 1973). Financing is also included to initiate the necessary monitoring and surveillance of both point and non-point sources of discharge under Executive Order 11752. We are proposing that both the construction and pollution abatement requirements as well as the operating activities will be financed under this one appropriation in the Construction and Land Acquisition activity.

Our budget activities are not static and must be flexible to meet management requirements. Consequently, we are proposing some changes in our budget structure to assist us in the management of our overall program as well as to simplify the submission. We are proposing to combine the Water Resource Development Related activities with the National Forest Protection and Management, Soil and Water Management item. This work is closely related and is considered a part of the National Forest Protection and Management activity. We have broken out Minerals Management separately since it does present unique and individual problems which will be helped if we have a separate activity.

We have also merged some of the general protection and management activities into a single budget item. This includes claims, leases, and special uses (except minerals); land classification, adjustments, and surveys; maintenance of improvements; and the Payments to the Employees' Compensation Fund. We will continue to identify these items under the main category and feel that this will simplify and assist us in the management of these various programs.

Thank you for the opportunity to make these comments. We will be glad to answer any questions you might have.

COURT SUITS

Mr. McGuire. The courts are continuing to play a major role in influencing Forest Service policies and activities, as you know. At the last count, we had about 25 court suits in progress, most of them related to the timber program.

Last year you directed us to provide the committee with a long-range multiyear budget and management plan. Last week we provided——

Mrs. Hansen. Have the courts considered the long-range plan?

ENVIRONMENTAL PROGRAM FOR THE FUTURE

Mr. McGuire. The courts have not yet seen this plan.

Last week we provided the committee with preliminary copies of the long-range plan. It is called "Environmental Program for the Future."

The purpose of the program is to chart a strategic course for the Forest Service for the next decade. I believe this is the first time any Federal agency has attempted to prepare a formal program of this nature, including an environmental assessment covering all aspects of the entire agency's work.

Not all the alternatives could be assessed because they are infinite in number, but we hope that we have identified a range of possibilities for you.

The program describes three alternative program directions or trends the Forest Service might follow. One alternative is to continue the program at about the same level as fiscal year 1974. That is, make no changes for the next 10 years.

Mrs. Hansen. Mr. McGuire, what will be the net result of your program by the year 2000 if this course is pursued? As you are well aware, your budget shows a very small increase, in spite of the fact that the cost of operations has continued to increase. So if you were to continue at about the same level, what would be the status of the reforestation? What would be the status of our public recreation areas?

Mr. McGuire. There would be a continual decline. Our report shows a decline over the next 10 years, and of course, that trend would continue on to 2000. It would mean less acres planted, less timber cut, less recreation opportunities, and so on. Nevertheless, this is the bottom of the range, and we felt we ought to lay it out for your consideration.

A second alternative proposes changes parallel to the trend of the past 10 years, with emphasis on extensive development of environmental safeguards related to increasing timber production.

A third alternative is to significantly intensify programs in a balanced approach that would not only increase commodity production, but also broaden the services and amenities provided. Of course, there are many variations in these three possibilities that we have tried to bracket the range.

The alternative programs are derived quite differently from budget estimates, I want to point out, and they cannot readily be used as a basis for program financing because they are derived from planning indexes that come from our long-range projections. So they are not derived through pricing out a management plan as are the regular

budget requests. For example, they do not embrace a sufficiently broad range of output possibilities in terms of both input levels and output combinations. They do not involve a full assessment of the public versus private interrelationships, growing more timber on public land versus growing more on private land, for example. And most importantly, the estimates should not be interpreted as indications of economic viability, as the benefit/cost relationships have not yet been adequately assessed.

I want to emphasize that they are illustrative of the general magnitudes only and do not represent appropriation amounts that have been demonstrated to be capable of producing the output levels through a predetermined set of management plans. They give you a broad view, in other words.

It is our hope that this draft program will receive a wide review in and out of the Government.

On another topic, the energy crisis——

DISTRIBUTION OF LONG-RANGE PLAN

Mrs. HANSEN. What is now the current status of your long-range plan? Has the draft been sent to the people in the various agencies? Has it been sent to the public for review?

Mr. MCGUIRE. The draft has not yet been sent out for review. The committee received the first distribution.

We do want to take a look at this draft with the idea of possibly using it as a vehicle for carrying an environmental impact statement. We are talking to the Council on Environmental Quality about this possibility. We are not sure yet that it can do the job because it is so broad, but we hope this might serve the purpose of a programmatic environmental impact statement. That is one thing we want to look at.

Second, we hope that citizen groups, the industries involved and others, will look at the goals that we are indicating for the period 1975 to 1984, and advise us whether they think these planning targets are in the appropriate range.

Mrs. HANSEN. Does the 1975 budget provide for any implementation?

Mr. MCGUIRE. No; it does not, Madam Chairman.

Mrs. HANSEN. Why?

Mr. MCGUIRE. Well, for one thing, the plan itself was not ready at the time the 1975 budget was prepared.

Second, the overall budget looks at the entire range of national priorities and this program is concerned solely with Forest Service activities.

We are not in a position in the Forest Service to rank these programs in relation to the national priorities. That would have to be done by others.

Mrs. HANSEN. What others?

Mr. MCGUIRE. This is a matter for the President when he prepared his annual budget submissions and looks at all the other ways of spending Federal dollars.

Mr. WYATT. You mean the OMB, don't you?

Mr. MCGUIRE. The OMB brings all proposals together.

Mrs. HANSEN. There wasn't any feeling about their goal in life.

If you are going to proceed with public hearings and have discussions to inform the American people it will be necessary to have some budgetary funds for implementing that kind of discussion; will it not?

Mr. McGuire. Yes; it will but we haven't made such estimates.

The public is interested in how much timber we can produce, how much recreation we can provide, what we can do toward furnishing more range for livestock.

Until we get these targets nailed down with the public, it is difficult to put price tags on the activities. We have made some estimates.

COST OF PUBLIC HEARINGS

Mrs. Hansen. What will be the estimate of the cost of public hearings?

Mr. McGuire. We have not made an estimate, but I think much of the public review would be done by interest group meetings and by correspondence.

Mrs. Hansen. At the price of mail service that is not going to be inexpensive.

Mr. McGuire. We have asked, in the past, for various interest groups to give us their views. We have received quite a few suggestions by mail.

Mrs. Hansen. When do you plan to get the plan before the public?

Mr. McGuire. Well, it is public information now that it has been provided to you. The next occasion where it will be discussed, I presume, will be at the next meeting of the area of agreements committee, which is a committee chaired by the American Forestry Association.

On this committee are represented, for example, the timber associations, some of the environmental groups, wildlife groups, and so on.

The areas of agreement committee has been looking at our programs for several years and I am sure they will ask for a description of the 10-year plan now that it is public information.

MINERALS AREA MANAGEMENT

Another topic I am sure that will be of interest is the energy situation. This is an issue facing the Forest Service and the American people which will have widespread effects. With regard to one aspect of it, we have prepared a report entitled "Minerals Area Management of the National Forest System Lands."

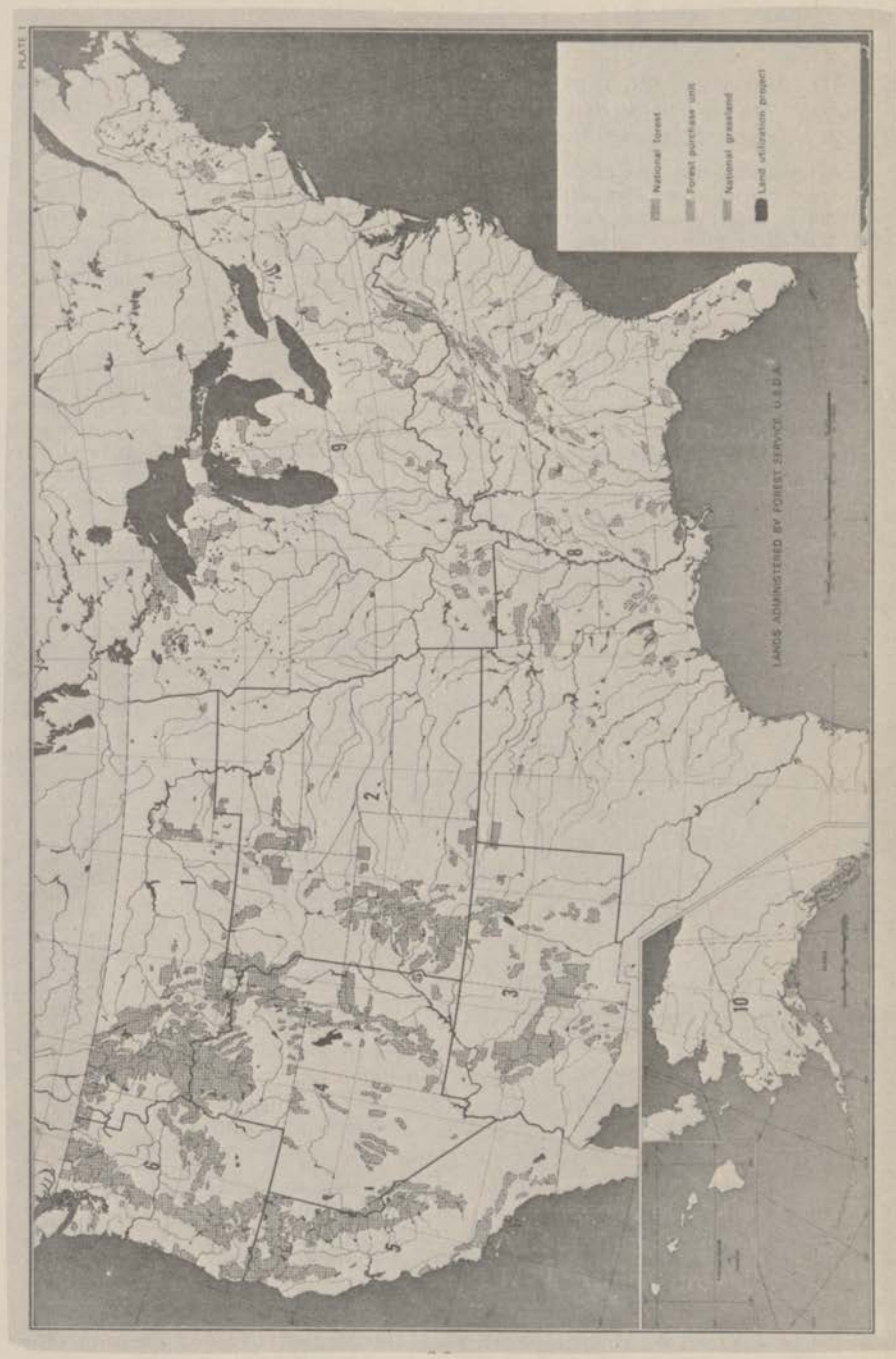
Copies are here for all the members of the committee and there are a few visual aids that you may want to ask us about.

The charts show the distribution of mineral activities on the national forests.

NATIONAL FOREST GRASSLANDS

The gray areas on this map, plate 1, show where the national forests and grasslands are located.

[The chart follows:]


PLATE I
National forest
Forest purchase unit
National grassland
Land utilization project
LANDS ADMINISTERED BY FOREST SERVICE, U.S.D.A.
1
2
3
5
9
10

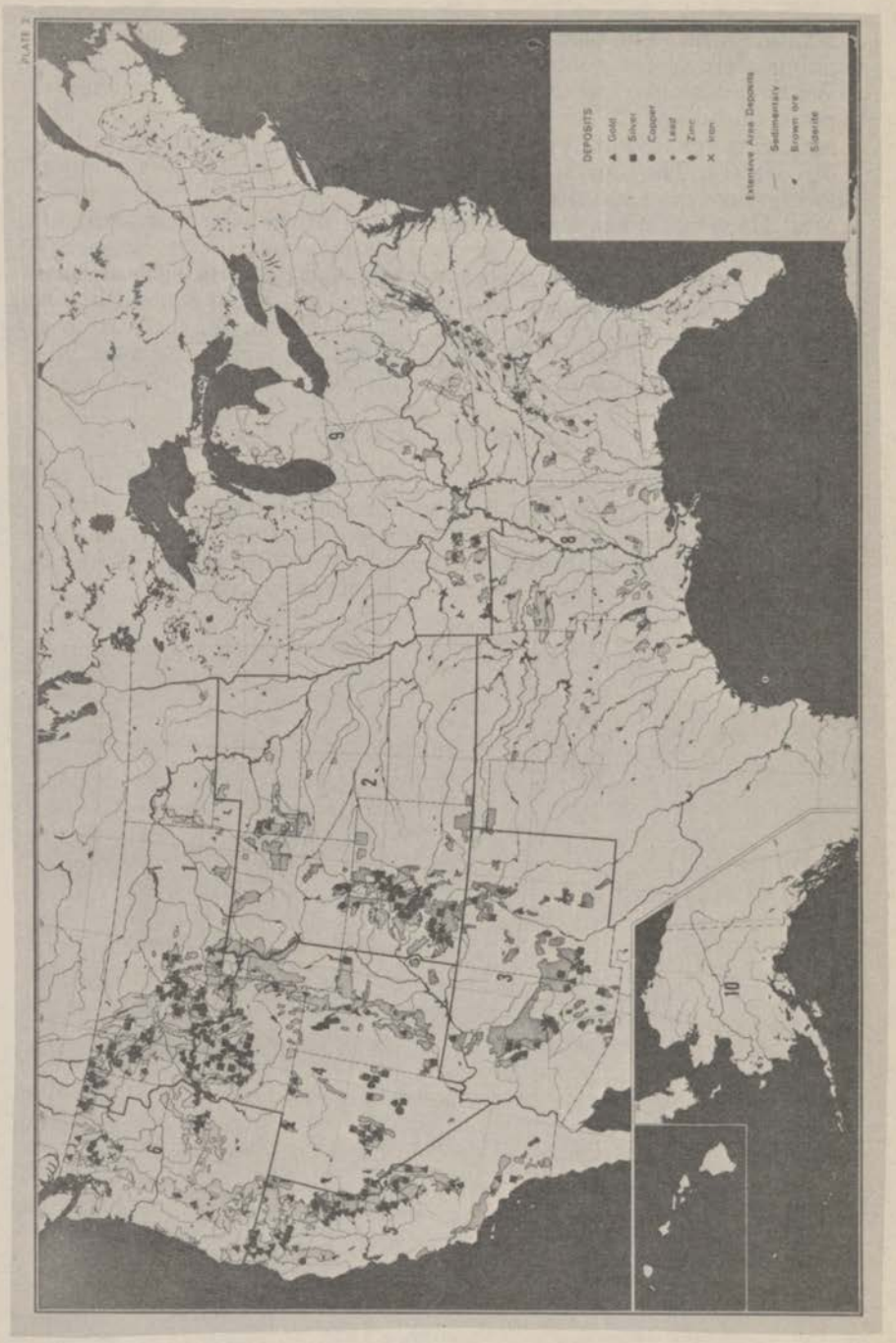
MAJOR METALLIC ORE DEPOSIT

Mr. McGUIRE. On this map, plate 2, we have indicated where the major metallic ore deposits are found.

[The chart follows:]

Major metal deposits on lands administered by Forest Service, U.S. Department of Agriculture.—8.4 million acres of national forest system lands are involved in mining of the major metals. Most national forest system lands lying west of the 100th meridian are subject to location and entry under the 1872 mining laws. The United States is a metal-short Nation and must expand its exploration efforts. This places a heavy impact on the national forests which have one of the more favorable geologic environments for future discoveries.

Titanium, manganese, chromium, and cobalt deposits on lands administered by the Forest Service, U.S. Department of Agriculture.—Titanium, manganese, chromium, cobalt, and nickel are important ferroalloys. The United States is almost completely dependent on foreign sources, mostly Canada, for nickel. Not shown on the map legend is a major undeveloped low-grade nickel deposit on the Superior National Forest in Minnesota and a number of low-grade nickel deposits on the Tongass National Forest in Alaska. Manganese is vital in steel manufacturing where it combines with sulfur and oxygen and removes them in the slag. The United States has few manganese reserves. Exploration on the national forests will increase the mineral area management workload.


PLATE 2
DEPOSITS
Gold
Silver
Copper
Lead
Zinc
Iron
Extensive Area Deposits
Sedimentary
Brown ore
Siderite
9
8
2
3
10

Mr. McGUIRE. The black areas indicate where there is some mining ongoing activity for gold, silver, copper, lead, zinc, and iron.

We have also marked on this map, areas where there are extensive deposits of some of the other ores.

Mrs. HANSEN. What type of ores are located in southeast Alaska?

Mr. BANTA. They are iron ores. Also, there are pretty good copper showings, and gold and silver are common.

Mrs. HANSEN. What ores are represented in the very few areas of the East?

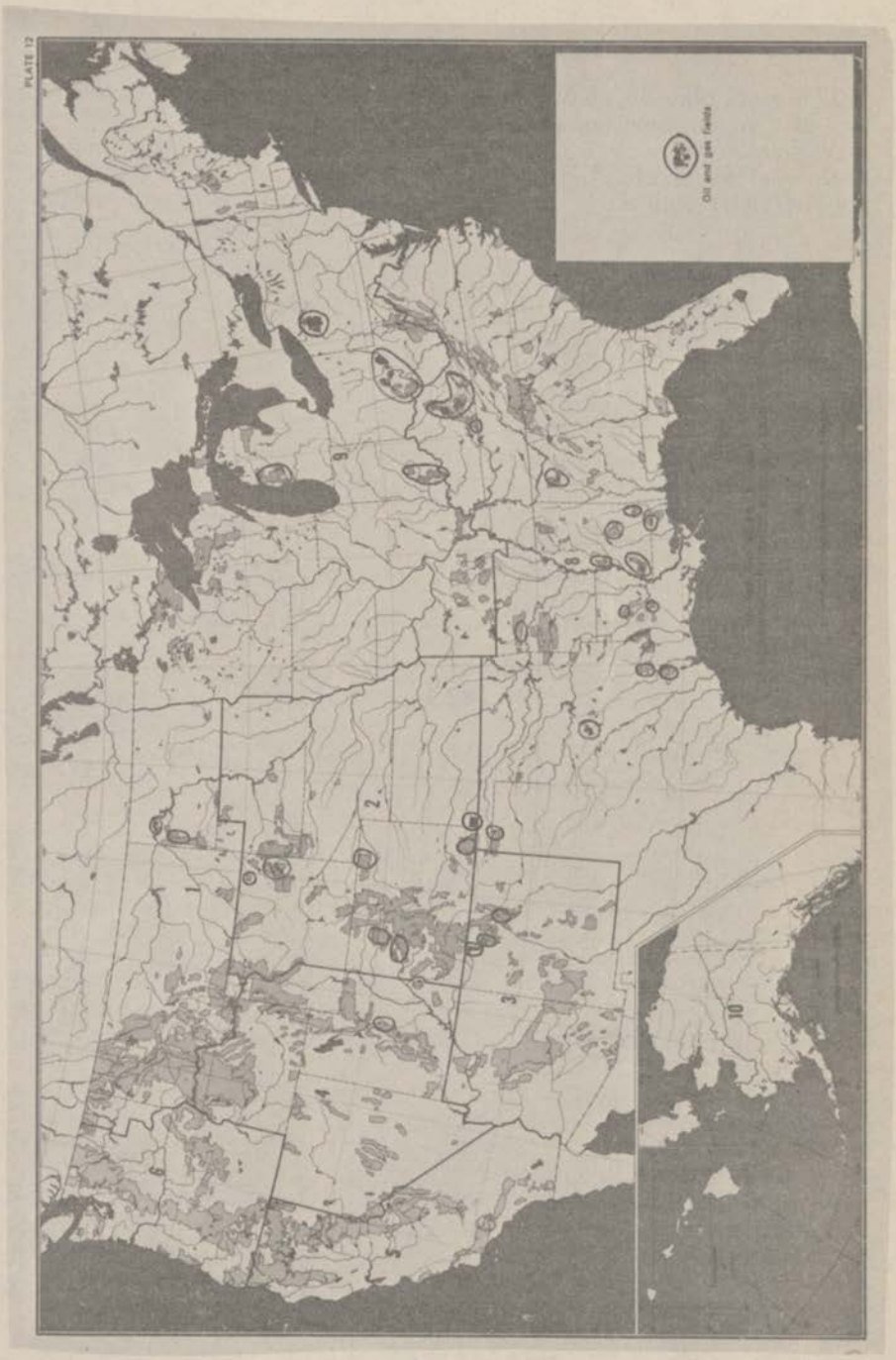
Mr. BANTA. The most important are the lead deposits, such as here in the Clark National Forest where an income of about $2.5 million a year from royalties is coming in. There is oil in the Wayne National Forest. In terms of metal deposits, I think, primarily, the most important would be the lead and the zinc deposits in Missouri and elsewhere in the East.

OIL AND GAS FIELDS

Mr. McGUIRE. This chart, plate 12, shows the oil and gas fields on lands administered by the Forest Service around the country.

The most active oil and gas area is in northwestern Pennsylvania on the Allegheny National Forest. There are many other places where oil and gas is found. This map is also in the report before you.

[The chart follows:]

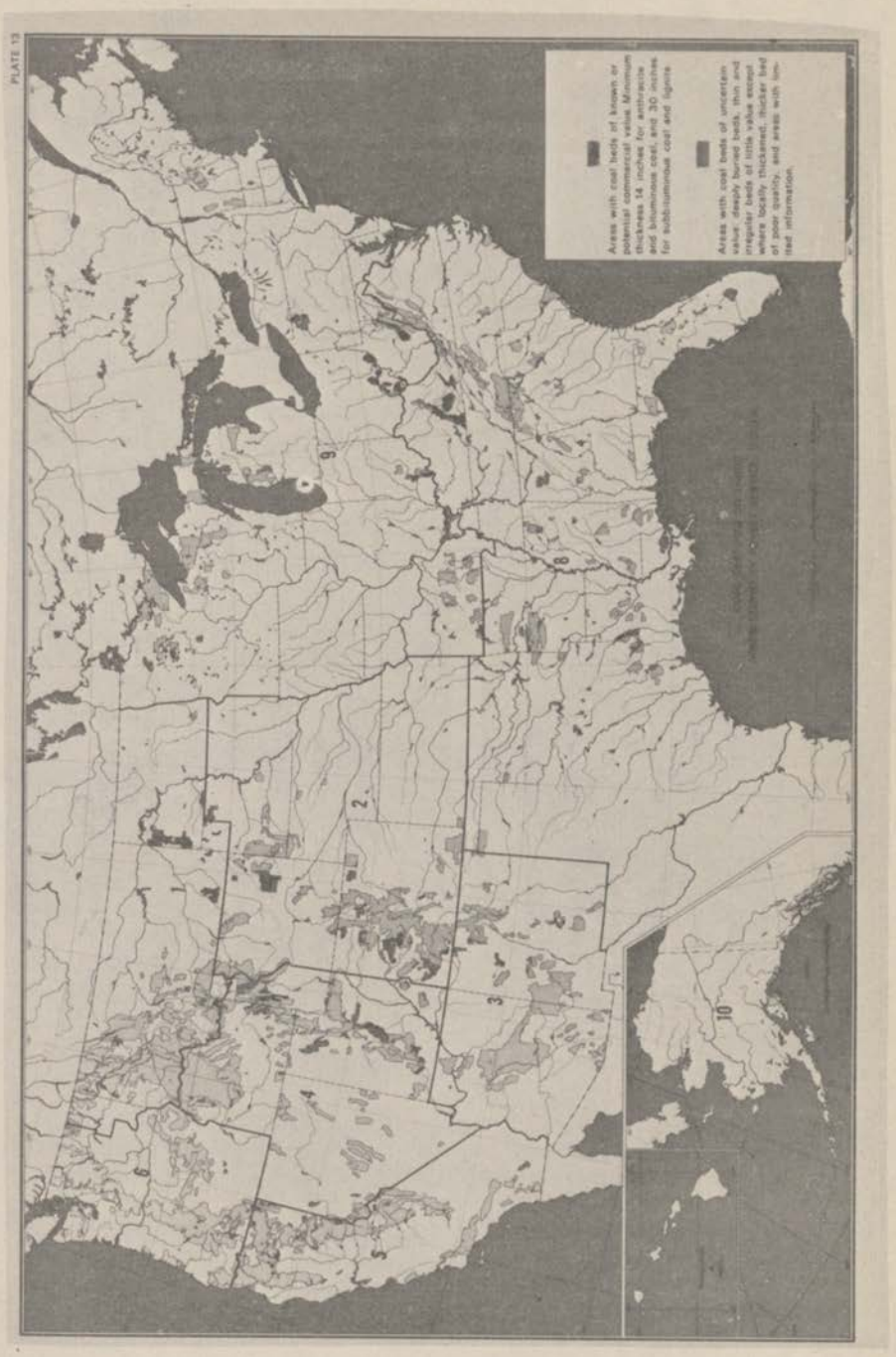

PLATE 12
Oil and gas fields
1
2
3
10

FOREST SERVICE COAL DEPOSITS

This map, plate 13, shows the coalbeds in the national forests. There are, of course, numerous places where coal is found.

As you know, we are concerned now with the potential development of the coal resources in the northern Great Plains.

[The chart follows:]


PLATE 13
Areas with coal beds of known or potential commercial value. Minimum thickness 14 inches for anthracite and bituminous coal, and 30 inches for subbituminous coal and lignite
Areas with coal beds of uncertain value, deeply buried beds, thin and irregular beds of little value except where locally thickened, thicker bed of poor quality, and areas with limited information.
2
3
10

Estimated Coal Reserves on National Forest System Lands - by State*

Location		Coal Reserves (tons)
State	National Forest and Grasslands	Estimated strippable at depths less than 150 feet
Alabama	Bankhead	2.5 million
Arkansas	Ouachita, Ozark	6.5 million
Colorado	--	Trace
Illinois	Shawnee	Trace
Indiana	Hoosier	50 million
Kentucky	Daniel Boone	500 million
Montana	Custer (Ashland Division)	6+ billion
New Mexico	Carson	Trace
Ohio	Wayne	187 million
Pennsylvania	Allegheny	Trace
Utah	Manti-LaSal	300 million
Virginia	Jefferson	15 million
West Virginia	Monongahela	100 million
Wyoming	Bridger, Shoshone, Teton	25 million
	Thunder Basin	6+ billion
	TOTAL	13.2+ billion

*Coal resources underlying lands administered by the Forest Service total approximately 6.5 million acres.

Mr. EVANS. Is this based upon developed, ongoing commercial production, or is this geological survey of minerals in place developed and undeveloped?

Mr. MCGUIRE. Some of each.

Mr. EVANS. Some are under development now?

Mr. MCGUIRE. Some are under development now and others are potentially developable.

Mr. EVANS. In regard to those that are potentially developable, who has made the survey as to what is in place and whether or not it is there in commercial quantities?

Mr. BANTA. The red areas are the ones where the coalbeds are known to be of economic value and the green areas are of marginal or uncertain values.

Mr. EVANS. Who makes the determination?

Mr. BANTA. Geological Survey, Department of the Interior.

Mrs. HANSEN. Do you issue all your leases yourselves?

Mr. MCGUIRE. No; we do not.

Mrs. HANSEN. Who does?

Mr. BANTA. All leasing of federally owned minerals is handled by the Department of the Interior, Bureau of Land Management. We do have an opportunity to recommend and usually get a stipulation for protection of surface resources on the national forest when minerals are leased. We get this opportunity before they are leased.

Mr. MCGUIRE. Also, we have the responsibility for administering the surface activities on the leased areas.

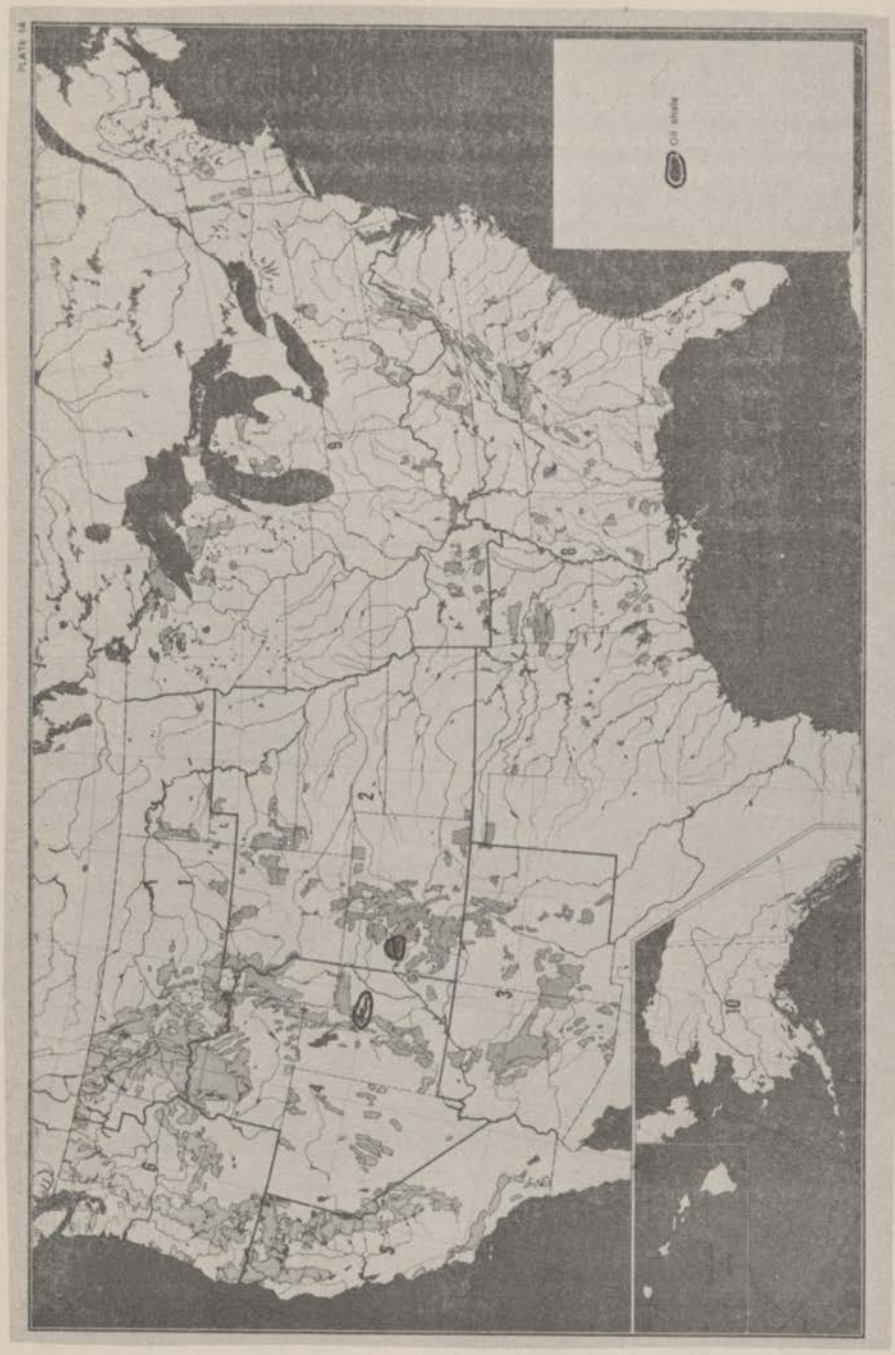
Mrs. HANSEN. How many of your lands do not have mineral rights reserved?

Mr. BANTA. In the neighborhood of 177 million acres are unencumbered by reserved or outstanding mineral rights. In other words, roughly 10 million acres are encumbered by reserved or outstanding mineral rights. These are mostly in the East.

FOREST SERVICE OIL SHALE LANDS

Mr. MCGUIRE. This map, plate 14, shows the area of oil shale in the national forest. As you can see, really little of the total resource is in the national forests.

[The chart follows:]

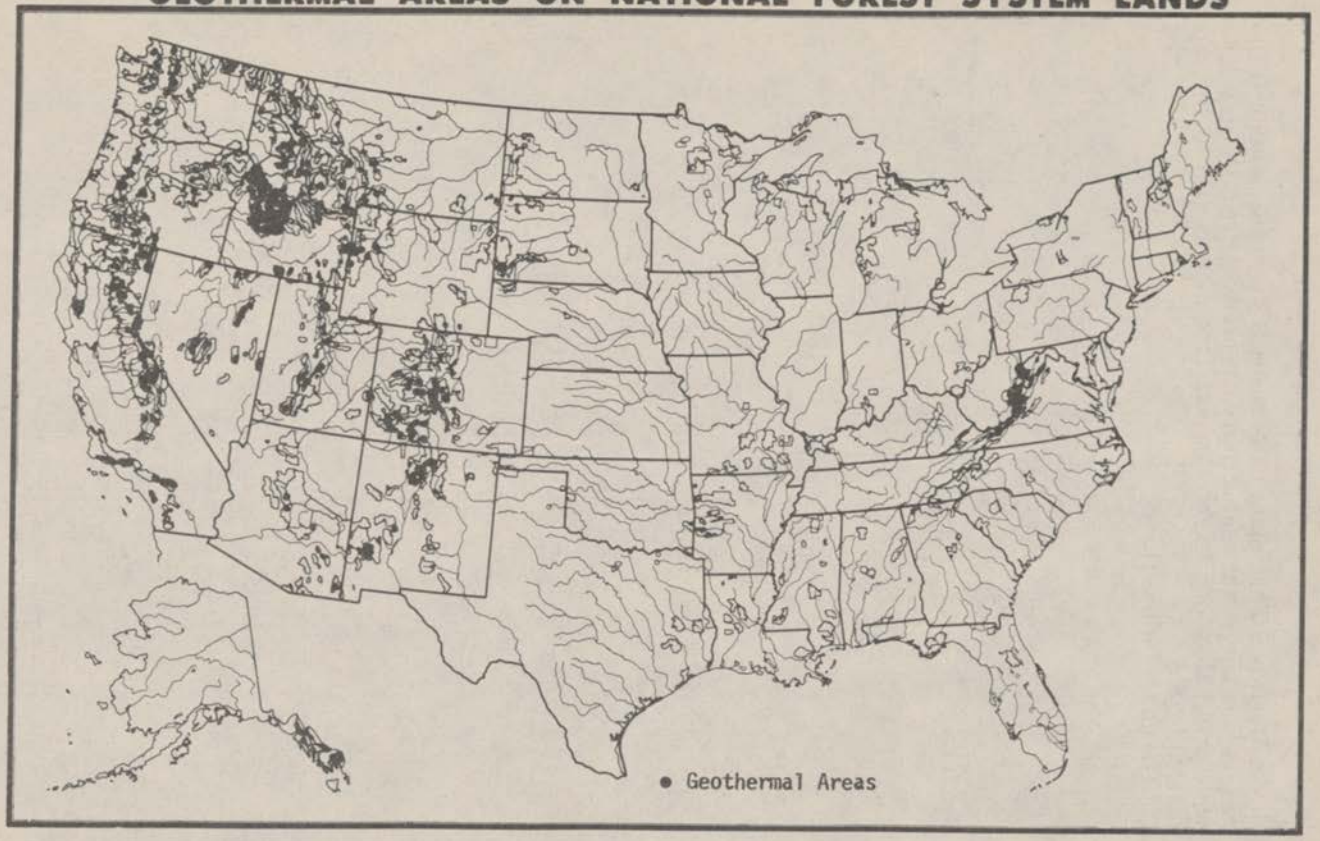

PLATE 14
OIL SHALE

GEOTHERMAL AREAS

Mr. McGuire. This, plate 15, is perhaps a surprising map. It shows areas where the geothermal activity has been detected. It is much more widespread than one might suspect. This map is also in the report handed to you.

[The chart follows:]

GEOTHERMAL AREAS ON NATIONAL FOREST SYSTEM LANDS



ESTIMATED POTENTIAL GEOTHERMAL SOURCE AREAS ON NATIONAL FOREST SYSTEM LANDS BY FOREST SERVICE REGIONS[1]

Region	States	Acres
Northern	Montana	36,500
Rocky Mountain	Colorado, South Dakota	10,500
Southwestern	Arizona, New Mexico	2,419,000
Intermountain	Idaho, Nevada, Utah	6,825,000
California	California	7,130,000
Pacific Northwest	Oregon, Washington	755,000
Alaska	Alaska	13,000
Total		17,189,000

[1] Data not available for southern and eastern regions.

Note: Geothermal areas on National Forest System lands—National energy shortages have greatly stimulated efforts to develop the geothermal resource. The national forests have considerable potential for this resource development. It is estimated that geothermal prospecting may occur on more than 17,000,000 acres of land administered by the Forest Service.

Mrs. HANSEN. A large proportion of the natural resources of this Nation are in the West.

Mr. VEYSEY. You say "detected." What are the criteria?

Mr. BANTA. What is here are anomalies. That is, where the temperature is anomalously high in the rocks, the elevated temperatures are usually associated with volcanics, or at least in geologic time, recent, intrusive rocks. Both conditions exist in Idaho. Other geothermal anomalies are pretty much associated with the volcanism along the Sierra-Cascade Mountain Range.

Mr. VEYSEY. It would be pretty much the temperature readings?

Mr. BANTA. Yes, sir. The readings are anomalously higher than what a normal background might be. In some places we know we have hot waters coming to the surface, such as in Yellowstone and herein the Invo National Forest in California.

Mr. MCGUIRE. Because of your earlier direction to us, Madam Chairman, we thought you would be interested in a brief rundown on this subject.

Mrs. HANSEN. We are.

Mr. MCGUIRE. Also in connection with the energy shortage, we expect an effect on outdoor recreation.

Mrs. HANSEN. There are funds in your budget for Project SEAM. Have you been allowed to request additional funds this year to properly take care of this program?

Mr. MCGUIRE. Madam chairman, actually the amount of money available for minerals management is probably decreased slightly, taking into account inflation.

Mrs. HANSEN. This is just what I suspected. What is the total estimated worth of the minerals on National Forest lands? Also what is the total amount of money in the budget this year for the management of these lands?

Mr. MCGUIRE. We can provide charts showing the amount of work required under the general mining laws, under the mineral leasing acts, for the administration of reserved mineral rights, and for surface mining and reclamation, in addition to geothermal steam.

[The information follows:]

We really cannot estimate the total worth of minerals in the national forests because no one knows where all of the valuable mineral deposits lie or what minerals they contain. There are undoubtedly tremendous mineral resources yet to be discovered in the national forests. Even as to those mineral deposits which

have already been discovered and which have had their economic limits defined, we cannot estimate their worth. This is because the necessary data are not available to the Forest Service. Ore and fossil fuel resource data are considered proprietary information by the owners of mining claims and Federal leases. On an annual basis, we estimate the worth (at the mine or wellhead) of minerals produced from national forest system lands at $100 million.

Besides $1,030,000 for Project SEAM, there is $3.6 million in the proposed budget for administration of mineral claims, leases, and permits, which includes an increase for space rental and pay costs. The budget situation did not allow a higher level of financing in 1975.

32-043 O - 74 - 6

MINERAL PATENT APPLICATIONS AS OF DECEMBER 31
NATIONAL FOREST SYSTEM LANDS

YEAR	APPLICATIONS PENDING	CLAIMS INVOLVED	CLAIMS COMPLETED
1968	86	599	341
1969	84	566	177
1970	85	489	231
1971	83	450	243
1972	78	316	138
1973	71	385	252

FIGURE 1

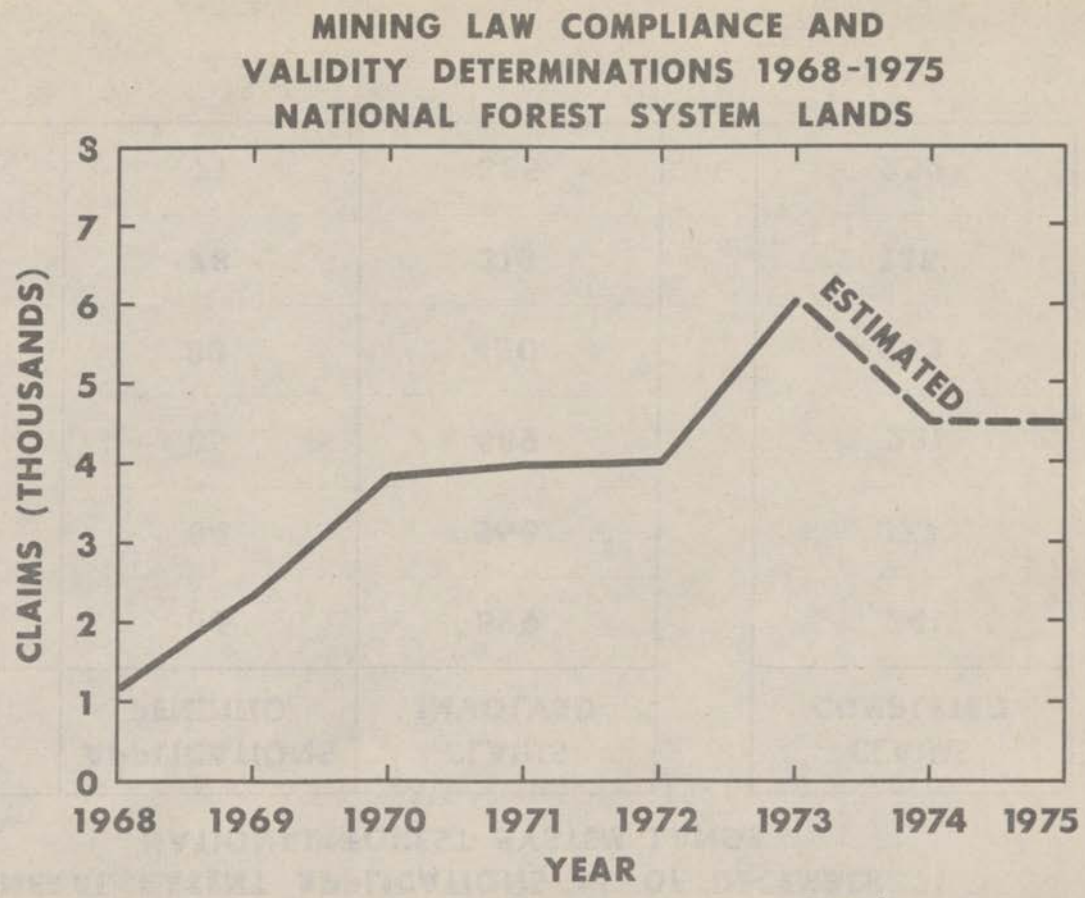

MINING LAW COMPLIANCE AND
VALIDITY DETERMINATIONS 1968-1975
NATIONAL FOREST SYSTEM LANDS
CLAIMS (THOUSANDS)
0
1
2
3
4
5
6
7
8
ESTIMATED
1968
1969
1970
1971
1972
1973
1974
1975
YEAR

FIGURE 2

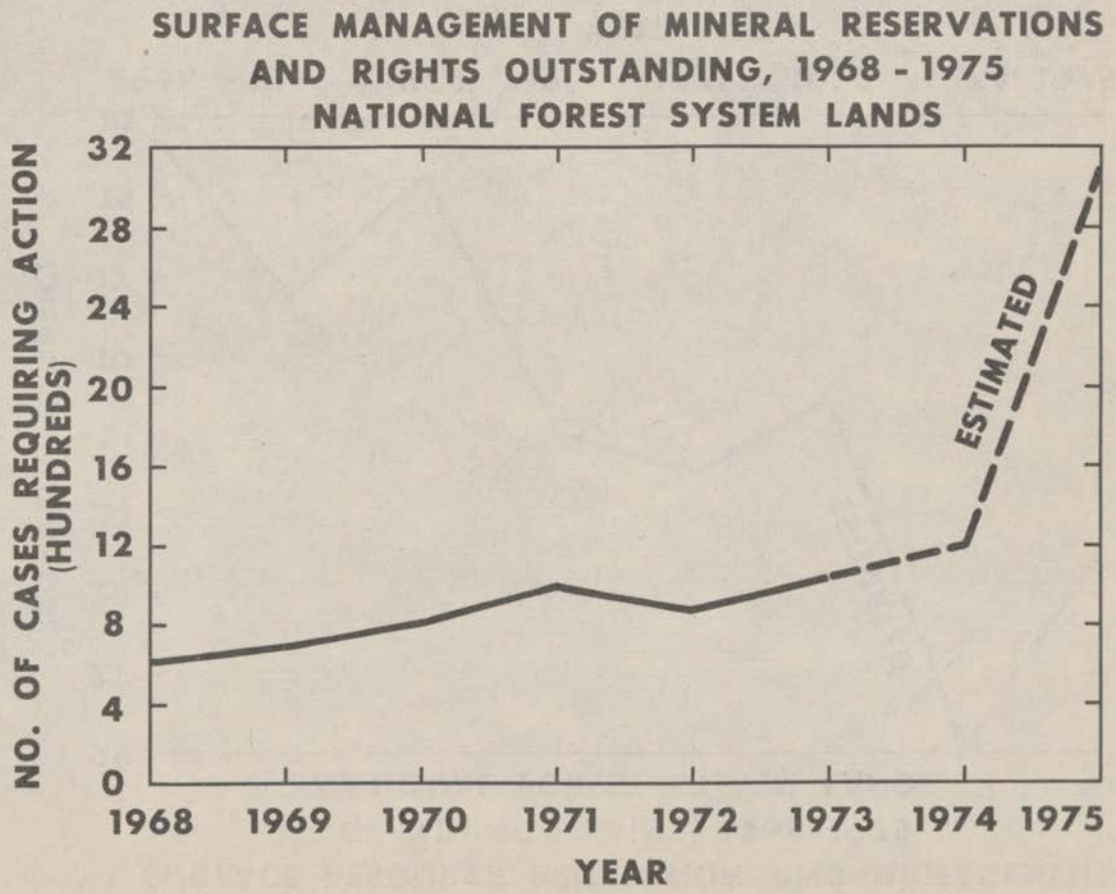

SURFACE MANAGEMENT OF MINERAL RESERVATIONS
AND RIGHTS OUTSTANDING, 1968 - 1975
NATIONAL FOREST SYSTEM LANDS
NO. OF CASES REQUIRING ACTION
(HUNDREDS)
32
28
24
20
16
12
8
4
0
ESTIMATED
1968
1969
1970
1971
1972
1973
1974
1975
YEAR

FIGURE 3

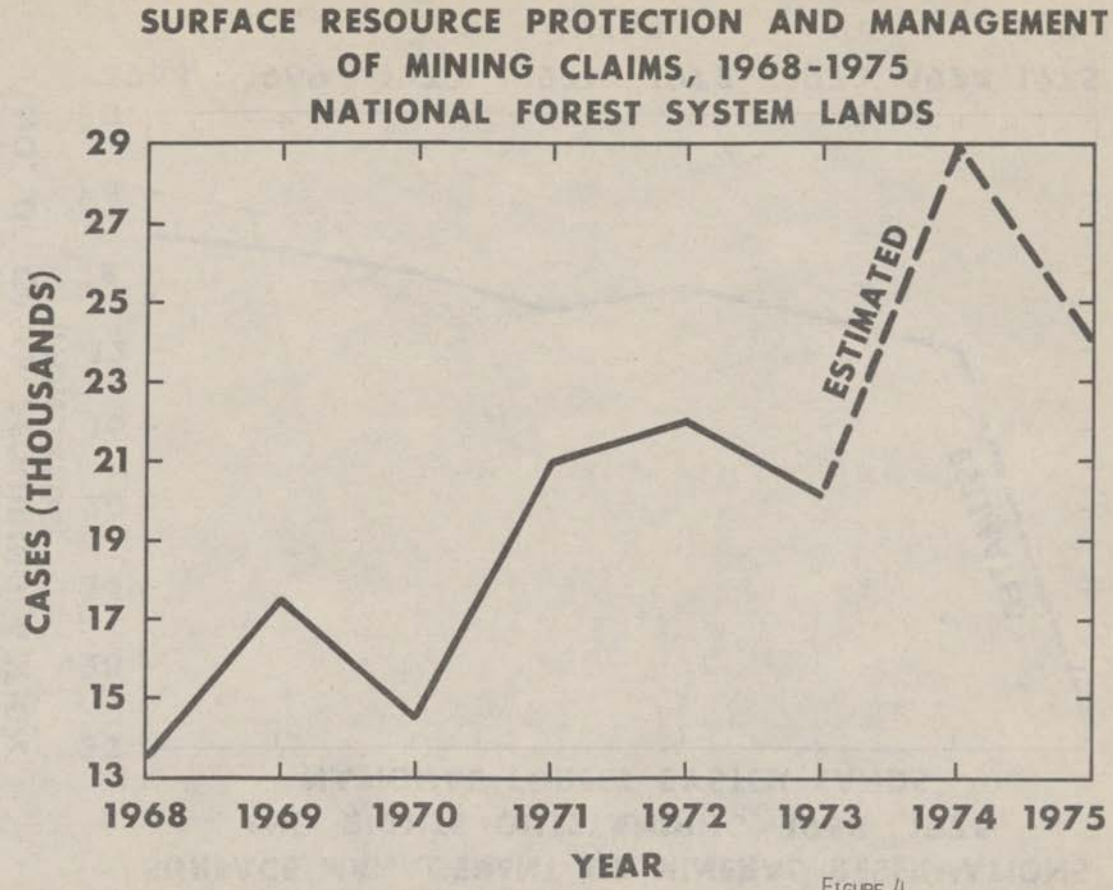

SURFACE RESOURCE PROTECTION AND MANAGEMENT
OF MINING CLAIMS, 1968-1975
NATIONAL FOREST SYSTEM LANDS
CASES (THOUSANDS)
29
27
25
23
21
19
17
15
13
ESTIMATED
1968
1969
1970
1971
1972
1973
1974
1975
YEAR

FIGURE 4

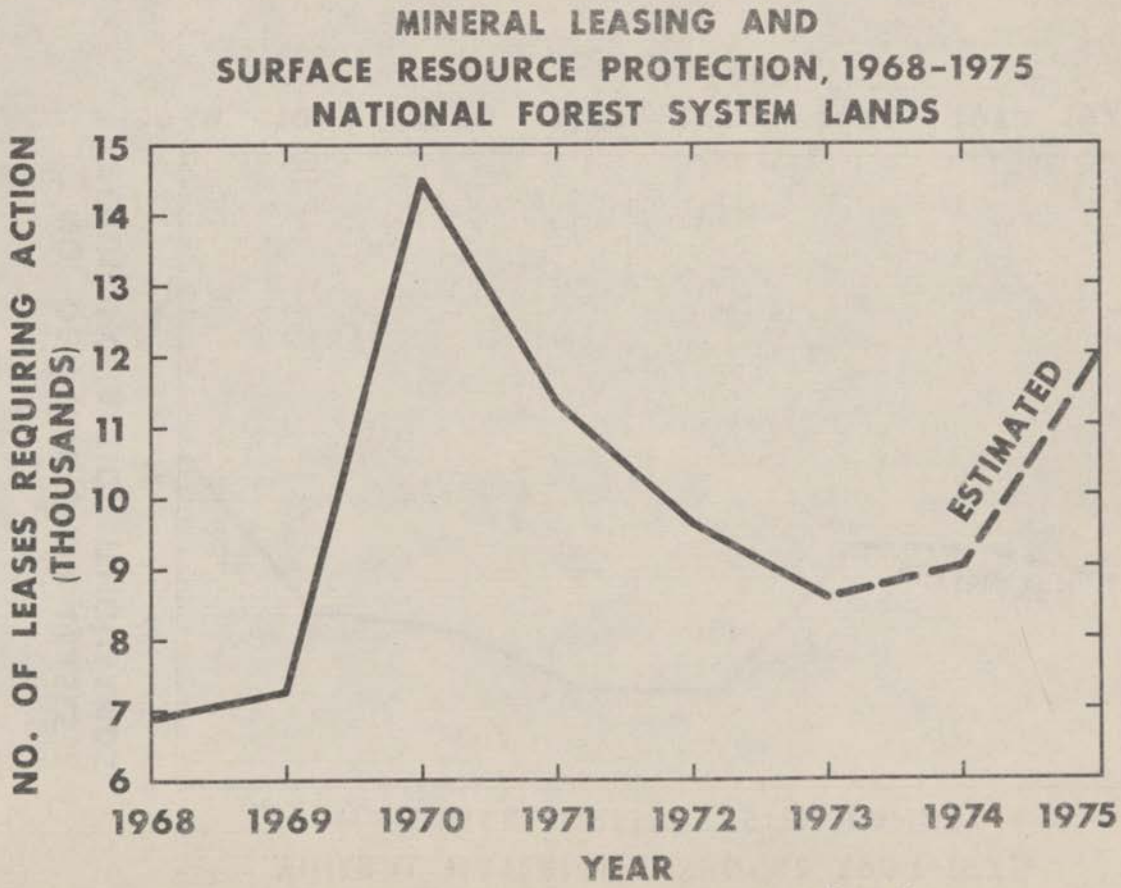

MINERAL LEASING AND
SURFACE RESOURCE PROTECTION, 1968-1975
NATIONAL FOREST SYSTEM LANDS
NO. OF LEASES REQUIRING ACTION
(THOUSANDS)
15
14
13
12
11
10
9
8
7
6
ESTIMATED
1968
1969
1970
1971
1972
1973
1974
1975
YEAR

FIGURE 5

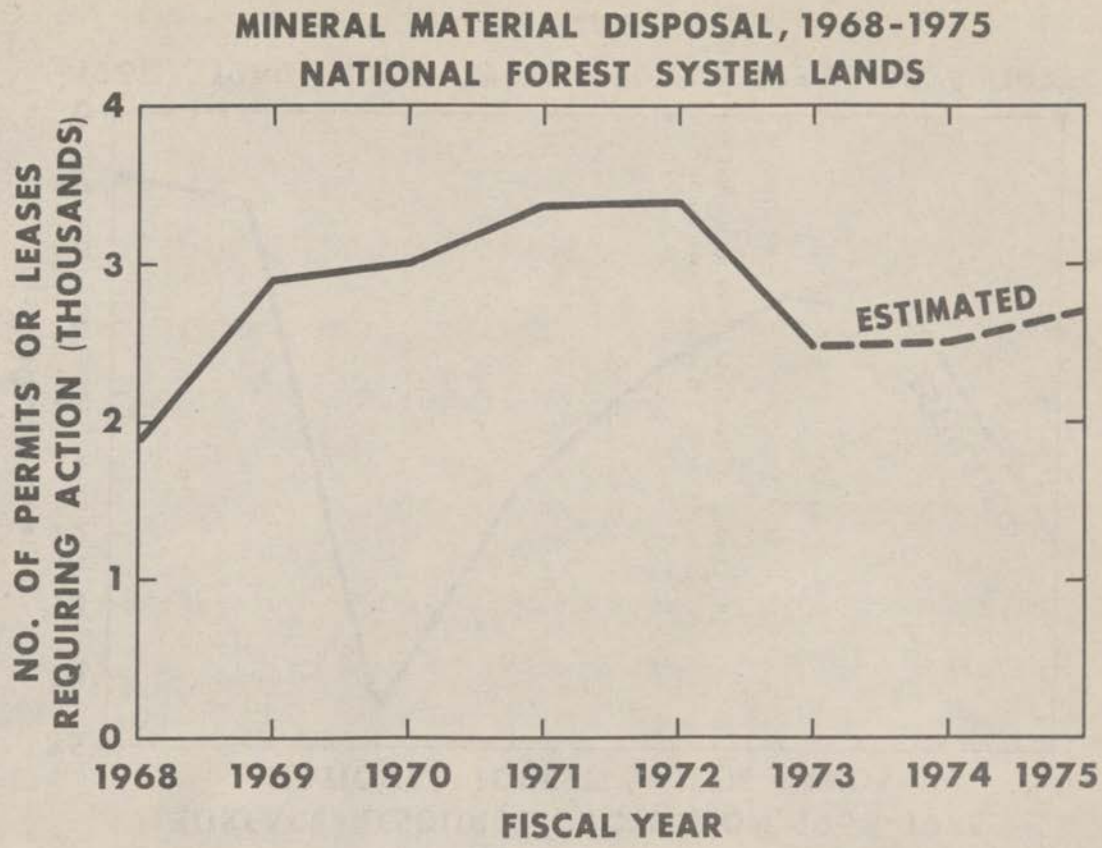

MINERAL MATERIAL DISPOSAL, 1968-1975
NATIONAL FOREST SYSTEM LANDS
NO. OF PERMITS OR LEASES REQUIRING ACTION (THOUSANDS)
4
3
2
1
0
ESTIMATED
1968
1969
1970
1971
1972
1973
1974
1975
FISCAL YEAR

FIGURE 6

EFFECT OF GASOLINE SHORTAGES ON RECREATION

Mr. McGuire. Recreation undoubtedly will be affected by gasoline shortages. It is possible that the recreation facilities close to metropolitan areas will get an extremely heavy amount of use and the more remote areas will get less use next year. Nevertheless, we do anticipate over 200 million visitor days of recreation use of the national forests in fiscal year 1975. This is a small increase over fiscal year 1974, and an increase of about 17 percent above the use of 1970.

WILDERNESS AND ROADLESS AREAS

We anticipate completing by September 1974, the primitive area review which was directed by the Wilderness Act of 1964. At the same time, we are starting studies of roadless areas identified for possible future classification as wilderness. This will be accomplished within the next two decades or so, and we will identify other areas with wilderness opportunities.

RECREATION

Mrs. Hansen. Mr. McGuire, in the past campers have moved from one area to another. Do you think the energy shortage will result in campers staying longer in one particular area?

Mr. McGuire. We think that is going to happen. We have been looking at what has been happening with winter sports so far this year as sort of an indication of what is likely to come.

People are spending longer times on each visit and reducing travel time overall. Instead of going to a ski area three or four times a year, they might go once or twice and stay longer each time.

Mrs. Hansen. This does not lessen the amount of usage in a particular recreation site.

Mr. McGuire. That is what the signs are pointing to. Apparently the usage will stay about the same. The number of trips may be less.

Mr. Nelson. There probably will be a difference in the various sites that are used. Those closer to areas of population will probably be used more. Those that are quite some distance from populated areas will probably be used less, according to the information we have been able to get.

Mrs. Hansen. Mr. McGuire with regard to your recreation problem, how much additional facility maintenance and management is due to the increased kind of sophisticated visitation, that is, the need for providing the lines for television and so on that these campers carry with them?

You would think it was a sudden village that sprang up in a national forest.

RECREATION FEE CHARGES

Mr. Nelson. I think the best thing I can tell the chairman on this is that we do not have too many areas that have the full range of facilities that were provided in the charge law that was passed by the Congress. In other words, after this law was passed, we had only 37 areas that provided the facilities necessary for fee charge. So, in large measure, most of our areas do not have the electrical hookups and things of that nature.

Mrs. HANSEN. What do you charge per day, at one of these sophisticated sites?

Mr. NELSON. We have various charges.

Mrs. HANSEN. Sometimes I think people are trying to obtain a $30 motel room in a forest for about $2.

Mr. NELSON. About $3 a day is the charge that we use in the type of area you are describing, Madam Chairman.

Mrs. HANSEN. That is what I thought. People with campers need water, firewood, lights, and the power to run their equipment, so for $3 they are receiving a $30 place. Isn't that correct?

Mr. NELSON. I don't know about $30, Madam Chairman.

Mrs. HANSEN. You haven't had very many experiences with some of the motel owners around the country.

Mr. MCKAY. Do you have a day restriction?

Mr. NELSON. We have about a week to 2 weeks.

Mr. MCKAY. There are a number of people who now retire and they get pretty cheap rent. If they could they would stay there the whole season in one place and nobody else would get in.

Mr. NELSON. That is correct.

Mr. WYATT. Mr. McKay, the chairman and I don't agree that that is a bad thing.

Mrs. HANSEN. Mr. McGuire, I would call to your attention that I think the average person feels they have paid their share of taxes. There is not a great deal of relationship between what they pay and the service they demand, and that service they demand is becoming increasingly sophisticated. Isn't this correct?

Mr. MCGUIRE. That is correct. I think we need to rely on the private sector to provide these more sophisticated facilities. In the national forests we stay with the more primitive types of facilities in most places. People who do want hookups and concrete slabs to park next to, and this sort of thing, probably will have to go to private campgrounds.

Mr. MCKAY. Are you making a policy that you will not be providing any of those types of sources?

Mr. MCGUIRE. Our policy is to encourage private firms to put in those kinds of facilities where there is a demand for them. We have very few and our policy is not to increase the number except in some special cases.

For example, where there is no private land and where we have an outstanding beach or lake, perhaps we would have to put in some bathhouses and boat-launching facilities.

COMPLAINTS OF KOA

Mr. MCKAY. I have had considerable complaint from people like KOA and these other groups who feel you are competing with the tax dollar for this group who come in to purchase the service and they can get it for little or nothing within forest-built facilities.

Mr. MCGUIRE. We believe KOA and other groups have a good point. We have been working closely with those organizations pointing out places where they may wish to consider development. Their principal complaint has been the removal of the charge system in the last year. I think they have a point. I think that the charge system in the past helped to equalize.

Mr. McKay. Charge on what?
Mr. McGuire. On camping.
Mr. McKay. Just the area itself, without the developed facilities?

EFFECT OF LEGISLATION ON CAMPING FEES

Mr. McGuire. Where there is any kind of competitive development. We do have areas that have crude noncompetitive developments, such as those limited to sanitary facilities and drinking water, places to park the automobile, and pitch a tent. Even so, we think there should be charges for such types of development. But there is no charge at all now, and this is why some of the private groups——
Mrs. Hansen. Mr. McGuire, explain why you don't currently have fees in some of your areas.
Mr. McGuire. In past years we had provision for charging for the use of the public recreation facilities where there was any kind of development at all.
Mr. McKay. You leased those or had somebody operate them?
Mr. McGuire. We tried some of that. Where it is possible to make it a commercial venture, we try to go that route.
Mr. Nelson. Prior to August 1, 1973, we had charges on 2,235 of our areas. Following the passage of Public Law 93–81 there were only 37 areas that qualified for charge.
Mrs. Hansen. What is the status of the legislation to correct this law?
Mr. Nelson. The Senate has held hearings on a proposed change in legislation. To my knowledge there have not been hearings on the House side as yet.

FIFTIETH ANNIVERSARY OF WILDERNESS CLASSIFICATION

Mr. McGuire. The year 1974 marks the 50th anniversary of wilderness classification in the national forest system. It was 50 years ago in 1924 that the first wilderness was established in a national forest.
I might mention two items with regard to——
Mrs. Hansen. What was that first wilderness area?
Mr. McGuire. The Gila in southwestern New Mexico.

ALASKA FORESTS

As you know, the Secretary of the Interior has recommened 18.8 million acres of land in Alaska for new national forests Congressional action will be required on this proposal and others dealing with Alaska in the next 5 years.

KLAMATH INDIAN LANDS

The Forest Service has reappraised the Klamath Indian lands. Our appraisal is now being reviewed by the Office of Management and Budget. We anticipate a request for the necessary purchase funds in the near future.
Mr. Wyatt. That reappraisal is $49 million.
Mr. McGuire. That is right.
Mr. Wyatt. You would anticipate, I assume, if there is no sticky problem that develops there will be a request from the Office of Man-

agement and Budget to the committees in the House and Senate for this amount so that this amount can be deposited with a notice of taking with the courts?

Mr. McGuire. That is my understanding.

Mr. Wyatt. That is my understanding from correspondence with Roy Ash and from the comments in the body of the President's budget this year also.

Do you have any indication what the time frame is on this? Mrs. Hansen and I only have about 9½ months to go.

Mr. McGuire. We do not know what time frame is being contemplated.

Mr. Wyatt. I will be contacting you probably in about 2 or 3 weeks to see if you have heard anything further.

Thank you.

TIMBER ACTIVITIES

Mr. McGuire. With regard to timber activities, we feel we must maintain the level of national forest timber supplies within the constraints of energy conservation and environmental quality. We must also help to intensify the management of the 296 million acres of nonindustrial private forest ownerships.

Mrs. Hansen. How are you supposed to provide this intensified management?

Mr. McGuire. There are several ways. One is to try to reach these owners through the Extension Service and in other ways—many of them are nonresidents, city dwellers. Another is to provide technical assistance to them through the State foresters, and to provide incentives to them to plant trees, thin out the stands——

FORESTRY INCENTIVES

Mrs. Hansen. What kind of incentives are now available?

Mr. McGuire. This year there is a new program of forestry incentives, which is funded in the budget of the Agricultural Stabilization and Conservation Service, under the rural environmental conservation program. The amount available in the current fiscal year is $10 million. The amount requested for next fiscal year is $25 million.

Under this new program the costs of tree planting and other timber production measures are shared by the Federal Government and the landowner. We believe these financial incentives will result in much more acreage being planted on these private lands.

Mrs. Hansen. As you well know, Mr. McGuire, the past practice of the small timber owner was to cut and not reforest depending on the market condition.

Mr. McGuire. That has been true in the past. However, the situation is changing. The Under Secretary is a small timberland owner and I believe he typically replants the areas he harvests.

Mr. J. Phil Campbell. Mr. McGuire and I have quite a common interest in that respect. There are many small forest landowners in the South where we have fast-growing timber. Very frankly—I might use this means of conveying to the Chief that there is a great difference in the prices the industry pays for the pulpwood there. In my home State it will vary all the way from $8 to $40. With this great variance

in what the landowner can expect, the price sometimes destroys a little bit of the incentive.

This pricing is a result of where the pulpwood plants are located and the transportation network. We really shouldn't have that much variance. We still have some way to go to consider timber as a crop the same as corn, soybeans, oats, and wheat, where on any given day the seller of that crop can come within about 10 percent of the price received by any other seller anywhere in the United States. We have seen lately, because of transportation tie-ups, more variance in the price of some of our basic commodities than there should be. This is an inhibiting factor with regard to some of the landowners' return, as Madam Chairman has pointed out.

By the time the landowners pay their taxes, the returns scatter and are gone.

I do believe in the next 10 or 20 years, in Southern United States, there will be a better situation because the State Forestry Departments are working on this with the Federal Forest Service to bring about a correction of this problem.

I think the situation will improve. We find under the incentive program a good reaction where the forest landowners are getting a good return, say, $16 per unit for pulpwood. There is very little incentive where they get only $8. We think this price is going to improve in time. We think the incentive program has come about just at the proper time to take advantage of a rising demand and a rising market for the next 10 to 20 years.

The Forest Service has given great leadership in this area with the State departments.

MAXIMUM UTILIZATION OF TIMBER

Mr. McGuire. We also want to give emphasis to increased utilization of the timber that is harvested, to increased salvage of trees that die, and to the use of residues, both in the woods and at the mill, and to intensify——

Mrs. Hansen. There have been a lot of articles and comments that Federal-owned timber is being wasted at the rate of 200,000 homes a year.

When you sell your timber do you stipulate in your contracts that salvaging of the timber must be performed?

What are you doing about that phase of the timber operation?

Mr. Nelson. Our new contracts require the removal of much of this timber which was not included in the contracts previously, Madam Chairman. We are getting rid of part of this material via that route. In addition, in fiscal 19——

Mrs. Hansen. In logging, how much of the timber is completely salvageable?

Mr. Nelson. That is a very hard figure to come up with, Madam Chairman, because it depends on the cull, the amount of cull, the decayed material in it, the species involved, and the terrain.

Mrs. Hansen. This would be helpful in comparing a pine forest in Montana and a Douglas fir forest in Oregon and Washington. As you are aware you have two different sets of problems.

Mr. Nelson. That is correct.

In addition, Madam Chairman, we are planning to increase our volume of salvage sales during fiscal 1975.

Mrs. HANSEN. I want to know what are the built-in costs factors of removing the timber, and what are your limiting factors?

You have a lot of restrictions currently on burning. What are you doing and what are the mills doing to process that timber? How much is still left?

Mr. NELSON. We will provide that for the record.

Mrs. HANSEN. Do you have an idea?

Mr. RESLER. Madam Chairman, on your earlier question the typical Douglas fir stand will run 30 to 55 percent defective, which leaves a tremendous burden of residue on the ground. Dr. Nelson has pointed out that the new contracts contain provisions that require removal of certain classes of material, but again only that which is considered economic at that point in time.

In addition to that, of course, our contracts have for several years carried provisions that allow the remaining "unmerchantable" material to be removed free of cost, or at very limited cost. In other words, such material is sold on an acreage basis. What we are finding is that there is a general trend toward more complete utilization as markets develop.

SALVAGE OF CHIPPABLE MATERIAL

I had a call from eastern Oregon just late last week that indicates that material that has been considered cull, white fir in the pine type, and in the associated species type in eastern Oregon, is now being re-logged from material that has been on the ground several years because it contains chippable material. As the markets develop in the export trade for chips and also for domestic use, new markets open up. That is, of course, the key to better utilization in the long run.

Mrs. HANSEN. How much domestic demand is there for chips?

Mr. RESLER. It is increasing now.

Mr. WYATT. Mr. Resler, isn't it a fact that the price of chips has risen dramatically in the last year? The demands, both domestically and foreign, are very substantially increased over what they were a year ago?

Mr. RESLER. That is correct.

Mr. WYATT. This certainly tends to make it more economic and desirable on the part of the operator to almost sweep the forest clean of anything that has fiber in it because it is chippable and the demand is very, very high.

Mrs. HANSEN. Why haven't the timber producers been using more of this type of wood fiber? Is it due to lack of research, or is it due to lack of development of a market? What is the cause of it?

Mr. RESLER. Madam Chairman, I would express the opinion it has not only been lack of research. Technology is fairly well developed for use of some kinds of residues in various types of particle board as well as pulp processes.

I think what we are seeing primarily is utilization by industry of the most accessible, and therefore the cheapest, materials first and those, of course, come from the larger commercial ownerships which are at the lower elevations and closer to the plants.

With the improved market situation, they are able to move further from the mills and are moving progressively on to the National Forests and other public lands.

Mr. McKay. What part of the timber, if any, is nonchippable? The reason I ask that question, I was up in Alaska a couple of years ago—Ketchikan—to a mill they have up there and as I recall—and I can't verify it, but indications were there was a considerable amount of those logs that they were chipping that they had to throw away. As much as 50 percent if I remember the figure.

What makes it nonusable for chips and so on? The implication here is that you can use almost everything, but I got the impression that isn't true at all.

Mr. Resler. That is true. There are certain types of rots that are not usable, where the wood completely disintegrates. But on most of the logs, the exterior is usable, and is being used now. They chip the log and the sound and rotten materials are separated through shakers. They can recover the usable material on the outside, or the rind, of the log.

I would say in a lot of logs you would find from 50 to 75 percent unsound material, some of course are completely cull.

Mr. McKay. Do you have any figures that would indicate, if we went with the timber and then the chippables, what percentage would still be left as residue, unusable?

Mr. Resler. I believe the forest residue study in the Pacific Northwest would give that.

Mr. Wyatt. How recent was that study?

Mr. Resler. Two years ago, I believe.

Mr. Wyatt. There has been quite a change in those 2 years.

With that study you might include any comment that you have as to what effect market conditions have had upon that report in order to update it.

[The information follows:]

In western Washington and Oregon logging residues amount to a volume equal to approximately 20 percent of the volume removed. Of these residues about 75 percent would be chippable. This means that if the timber and all chippables were removed, 5 percent to 10 percent of the tree wood would remain in the forest as residues.

Demand and prices for pulp chips have risen significantly in the past 2 years, particularly since mid-1973. Average prices in the South and West have risen about 50 percent which has encouraged a trend toward chipping and use of material that was formerly left as residue. Research can support this trend through development of harvesting and utilization systems to make more intensive residues utilization economically feasible.

Mr. McKay. Is it possible some of this residue not usable for chips could be used, where they have big quantities, for fertilizers? You see a lot of chips in the area used on plants for mulch and so on. Is there a market for the rest of this stuff? Is that what you are talking about?

Mr. Wyatt. No; really, I was talking about the fact that they are now chipping material they wouldn't have chipped a few years ago. They go back into the woods farther and they are taking more of the fiber now. Mr. Resler says they can't take the rotten portion of the log. I think that is really about all they can't take. There is the economic factor of how far they have to go to get it.

Mr. McKay. Wouldn't it be possible to use that for mulch?
Mr. Wyatt. The rotten portion?
Mr. McKay. Yes.
Mr. Resler. Our Pacific Northwest station has been working on the whole question of residues. They have explored the possibility of utilizing residues for a combination of sawn, chip, or pulp products combined with the use of the poorest grade material for fuel for power generation. They have done considerable work on the economic feasibility of the combination of chips plus power. That study has been partially updated and, quite recently, we have had inquiries about the feasibility of using some of these residues in methanol production. An economic analysis of that process has been developed fairly recently too.

FOREST RESIDUES

Mr. Long. Last fall, I asked about the Forest Service practice—cited in a Government Accounting Office report—of leaving large amounts of usable felled wood on forest floors. In 1969, 2.4 billion board feet were wasted in this way. You answered that this practice was still in effect, largely because this wood was suited only as so-called waste products—wood chips, and so forth.

A recent Christian Science Monitor article, Oct. 5, 1973, entitled "Using Every Splinter," points out that there is a great demand for such wood products—that chips are used for particleboard or paper; sawdust for acoustical tiles; hardboard fibers for newsprint or chemicals; bark for garden mulches or charcoal briquets; and other uses.

What has Forest Service done about eliminating the problem of billions of board feet of timber being wasted by leaving it on forest floors? In light of paper shortages and new uses for such wood, does Forest Service persist in characterizing such wood products as "waste" for which there is no demand?

Mr. McGuire. The Forest Service has taken the following actions designed to reduce the volume of forest residues:

1. A new contract has been placed into use which requires removal of all timber meeting specified standards. Previous contracts permitted some material to be paid for and left.
2. Research to find ways to better utilization of small, low-grade logs and to find new uses for residues is being conducted.
3. A comprehensive forest residue research and development program has been established in the Northwest to find ways of reducing residues.
4. Techniques which permit better determinations of quantities and character of residues are being developed. These techniques will permit accumulating information to help potential users of residues make decisions on plant locations.

Obviously, where demand exists for wood fiber it cannot be called waste. However, there are some areas in our country such as the Pacific Northwest where the demand for logging residues is not sufficient to utilize the available supplies. To the extent that residues are not used because of lack of demand, we do consider such material waste.

However, the picture is changing and increasing quantities of residues are being removed. Increasing national and worldwide demands

for fuelwood, pulp, paper, and related products will, no doubt, lead to the construction of new plants designed to utilize fiberwood. The Forest Service, in all of its programs, is endeavoring to encourage and accelerate this process.

Mr. LONG. I will insert at this point in the record the full text of the article entitled: "Using Every Splinter."

[The article follows:]

[From the Christian Science Monitor, Oct. 5, 1973]

USING EVERY SPLINTER—LUMBER MILLS MEND WAYS, NOW CHOP AND PROCESS ALMOST EVERY TREE IN FOREST, EVEN SAWDUST, AS TIMBER SUPPLIES SHRINK

(By Peter Tonge)

ASHLAND, MAINE.—Every few seconds a giant hydraulic loading device speeds a log on its mechanized journey through the Pinkham Lumber Mill near here.

Just 15 minutes later it emerges as so many pieces of cut and trimmed timber—boards, perhaps 12 or more inches wide, plus several 2 by 4 and 2 by 6 pieces of structural timber or studs as they are frequently called. The trimmings, meanwhile, have passed through a chipper on the first stage toward becoming paper.

It is a process that goes on all day long throughout the year. Today it might be spruce and pine for the construction industry; tomorrow maple destined for furniture factories around the United States or for distant Japan to satisfy the seemingly insatiable appetite of the bowling industry there.

RAPID CHANGE

A shortage of timber and prices that threaten to go through the roof have brought rapid changes to the lumber industry in recent years. New technology is moving in to update an industry notoriously wasteful and inefficient in the past.

The accent now is to use all of the tree and to process it much more speedily; to calculate the value of a forest stand more in terms of its fiber content than in available board feet of timber.

Thus species never dreamed of as useful away from the fireplace in the 1950's are now sought-after commercial timber. Aspen is a case in point. It is a very fast grower and is short lived. Not so long ago it was considered a "weed tree." Now it is a staple of the paper industry in the Great Lakes States.

Western Hemlock, once considered very inferior, now fetches almost as much on the market as the highly prized Douglas fir.

Less dimensionally stable its remarkable strength is now prized in the construction industry where a little warping among 2 by 4's is of no consequence. It also makes good plywood.

Then there is the large pole pine and the western larch. In fact, says the National Forest Institute's James Plumb, "only a handful of several hundreds of species and subspecies are now considered to have little commercial value."

A TREE PER PERSON

Current demand is such that every man, woman, and child in the United States uses a tree a year—one about 16 inches in diameter and roughly 100 feet high. That's about a ton of wood.

All this timber provides a range of products from toothpicks to large laminated roofing trusses that span 350 feet, plus plywood, particle board, chemicals, some food flavorings, and a whole range of paper products from strong kraft wrapping to see-through cellophane.

Each person, in fact, uses 569 pounds of paper a year. That is 10 times what it was in 1900 and not much more than half what it is likely to be by the turn of the century.

Overall the demand for forest products could double in the next 25 years. Hence the need for maximum utilization of whatever is hauled in from the forest.

EVERYTHING USED

Thus chip waste is being turned into particle board or paper; sawdust is included in things such as acoustical tiles; hardboard is being turned into newsprint, or yields up chemicals; bark becomes garden mulch and is sometimes

converted into charcoal briquets which fuel barbecue pits around the country.

Today 24 percent of all U.S. paper comes from residual waste which the timber industry once burned. And particle board, made exclusively from waste, contributes close to 3 billion square feet of usable "timber" to industry.

Old mills are modernizing and new mills are including the very latest in technological advances. A computer scanner is making its appearance, too. It can size up a log and direct the first cut in a fraction of the time it takes a man to do the job.

That initial cut is important because it dictates how much and what size of lumber can be taken from a log.

IMPROVEMENTS

Improved cutting techniques and better saw blades (they are thinner and stronger today) all mean more timber and less sawdust.

Advances in plywood manufacture have been particularly impressive. Until little more than a decade ago it could be made only from large logs—3 and 4 feet in diameter—only from such stable and sap-free woods as Douglas-fir.

Now improved bonding techniques mean dozens of different species can be utilized in plywood. New lathes, which peel the wood from a log (rather like unrolling paper toweling), can now handle logs as small as 12 inches in diameter—smaller than the waste core left by previous peeling techniques.

These advances made possible a whole new industry in the South where the large pole pine—a long but skinny tree—feeds the plywood mills there. The South, in fact, now produces 25 percent of the Nation's softwood plywood where a decade ago it produced none.

All the time research and development continues. Ultimately, says Pinkham's Pete McConnell, "The only thing in the forest we won't be able to process, is the shade."

METHANOL PRODUCTION

Mr. VEYSEY. What are the economics of methanol production out of wood?

Mr. YOUNGS. There are two broad questions. One is that of economics and one is that of supply. The two are obviously closely related. At this point even with elevated prices of coal and fuel oil, the economics is such that it is not attractive to use any appreciable amount of residues for this purpose. It is a much lower value use under the present economic conditions than to use this residue for particle board, or other such uses.

Related to that is the question of providing enough material to assure a steady supply to warrant making the plant investment that would be required for this sort of production. Under the present economic conditions, this is rather uncertain and not particularly attractive to potential investors. However, with greater price increases in either coal or fuel oil, this could change. One thing we are determining at this point is just how much these other sources would have to increase in price in order to make it really attractive to use large amounts of wood residue. In other words, to attract residue from other uses such as particle board or pulp. It would be a matter of competition.

Mr. VEYSEY. When the coal people were here the other day, they indicated a project to study the production of methanol from coal. How would the economics of that compare with using forest residue?

Mr. YOUNGS. I am afraid I do not have the figures on the economics of producing methanol from coal. We could get this for the record. I do not have it readily in mind.

Mr. VEYSEY. Could you furnish that for the record?

Mr. YOUNGS. Yes, sir.

[The information follows:]

To compare the cost of producing methanol from wood with the cost of producing methanol from coal, the following assumptions are made: (1) Wood residues have roughly two-thirds the yield potential of subbituminous coal for equivalent weight; (2) sawmill residues and plywood plant residues could not be accumulated in sufficient amounts in any one particular area to support an economical methanol plant; (3) residues from logging operations accumulated over a large area might be made available in sufficient quantities to make a plant feasible; (4) subbituminous coal would be available close to a mine at a price of about $4.86 per ton; (5) if logging residues were removed as a part of logging operations, and if current slash disposal costs were credited to the residue recovery operation, forest residues might be made available at a cost of $11.50 per ton. With these assumptions, it would cost about 3½ times as much to make methanol from wood as to make it from subbituminous coal.

WOOD UTILIZATION RESEARCH

Mr. McGUIRE. In addition to the items we have been discussing, we feel there is also a need to intensify research in wood utilization. The STRETCH program is an example.

We also think that the FALCON program—forest advanced logging and conservation—is needed for developing logging technology.

Housing starts may be up before the end of the year, and therefore it is necessary to maintain and be ready to expand timber sales.

REFORESTATION

We have reviewed our requirements for reforestation and have submitted an updated report on the situation.

Mrs. HANSEN. How many acres do you have at the present time that have not been reforested? This means those acres that are capable of timber production, or for the wide variety of uses.

Mr. McGUIRE. Madam Chairman, we now have a total of 3,318,000 acres.

Mrs. HANSEN. How much has this been reduced in the last 5 years? The total used to be about 5 million.

Mr. McGUIRE. We can put a table in the record, Madam Chairman, explaining the difference between the 4.8 million acre estimate and the 3.3 million acre figure that is our current estimate.

[The information follows:]

	Acres
Estimated reforestation needs 1968	4,788,254
Areas restocked naturally	−803,026
Areas withdrawn from timber utilization through statute or administrative designation, such as for the Wilderness System	−107,357
Reduction due to revised objectives such as changes in approach to hardwood management, reforestation feasibility analysis, adjustments for additional coordination with other uses	−1,372,369
Additions to reforestation needs because of fire, disease, and other occurrences	+812,418
Current estimate of area in need of reforestation	3,317,920

Mr. WYATT. Madam Chairman, at this point I asked the Forest Service for a breakdown of their recomputation of this backlog and there has been a substantial reduction, not primarily because of reforestation that has been accomplished, but because of recalculation of what is economically reforestable. The Chief wrote me under date of March 15 a letter explaining this in detail with some tables and I

think it would be of great interest and appropriate to have this letter in the record at this point.

Mrs. HANSEN. We will place it in the record at this point.

[The document follows:]

DEPARTMENT OF AGRICULTURE,
FOREST SERVICE,
Washington, D.C., March 15, 1974.

Hon. WENDELL WYATT,
House of Representatives.

DEAR MR. WYATT: In response to the provisions of Public Law 92-421, we recently submitted to the Congress a report of current national forest reforestation needs. A summary of these needs is attached. The report indicates a significant difference between the reforestation backlog as estimated in 1968 and current estimates. Because of your long time interest in the reforestation needs of the national forests. I am sure you will want to know the reasons for this difference in the backlog estimate.

The 1968 estimate showed that 4.8 million acres of national forest land were unstocked or inadequately stocked and needed reforestation work. Although based on the best and most current estimates we had at the time, the national total did not accurately reflect changing conditions. Since that time, we have developed inplace data gathering through intensive on-the-ground resource inventories and examinations to increase the reliability of our data for planning. That data now shows we have a reforestation backlog of 3.3 million acres which can and should be reforested as rapidly as resources can be made available to do the job.

Subsequent to 1968, with the additional moneys appropriated by the Congress for reforestation and timber resource inventory, examination, prescription, and management planning work, we have been able to reinventory nearly half of the commercial forest acreage in the national forests and do more intensive resource data gathering through silvicultural examinations of some 10 to 12 million acres. Although the inventories and examinations have not as yet provided detailed inplace information on all the commercial forest land in the national forests, we do feel we have a much sounder and strengthening base from which to project reforestation needs. Our annual review and report to the Congress of national forest reforestation needs each succeeding year will reflect a more accurate assessment of the situation as well as indicate current changes.

The current reforestation need, as you will see from the attached table 1, is some 1.5 million acres less than the old backlog estimate which was based on 1968 inventories. Specific reasons for the difference are discussed below and depicted in table 2, also attached:

1. During the period 1968-73 the Forest Service was able to complete all phases of reforestation on 600,000 acres with appropriated funds. This acreage does not include any reforestation done with funds collected under the Knutson-Vandenberg Act on normal timber sale operations.

2. An additional 203,000 acres have been found to have restocked naturally. The bulk of these lands may have been already restocked at the time of the inventory for the 1968 total. However, much of that work relied on aerial photos with a minimum of on-the-ground sampling. Lands then covered with brush higher than young trees were inventoried as brushlands. More intensive ground sampling and new aerial photos have now brought this fact to light. Also, additional research information and experience in the management of some species have shown that fewer healthy seedlings are required to adequately stock certain areas than we had previously considered acceptable.

3. In 1968 there was no market for a considerable number of species that are now commonly used or that will be used in the near future. Many of these are hardwoods that came in naturally after severe fires, or, in the case of the eastern national forests which were largely purchases from private owners, after lumbering activities and prior to acquisition. Since 1968, more and more commercial use is being made of all tree species. As a result, we now consider most areas satisfactorily stocked with a commercial species as being acceptable for national forest purposes. In the case of a species that provides less wood fiber than some other preferred species, we will go through to maturity with the less desirable species and replace it at the time of harvesting. In fact, some areas may be at or barely above minimum

acceptable stocking, but for economic reasons and other resource values, we feel we should concentrate reforestation efforts on the inadequately stocked lands.

4. During the 5-year period a total of 107,000 acres of unstocked commercial timberlands were withdrawn from timber use. This was mainly due to new wilderness areas, powerlines, roads, clearings for reservoirs and similar land-use decisions.

5. Out of the original 4.8 million acres a net total of 2,506,000 acres now need to be reforested through use of appropriated funds. Timber values have changed since 1968. Many old burns and insect and disease infested stands in the West have a scattered residual of old-growth timber that survived the original fire or insect and disease attacks. Because of the increased values of this timber, we now find on many areas there will be adequate funds to provide for reforestation at the time of sale through the use of funds deposited by timber purchasers under the authority of the Knutson-Vandenberg Act. A total of 880,000 acres is in this category. A decline in market values could affect these areas. However, our annual reports will apprise the Congress of the current situation.

6. During the 5-year period the adequately stocked young timber stands deforested by such elements as fire, insects, and disease amounted to 812,000 acres. This addition to the reforestation backlog represents only these areas in the national forest damaged by those agents where timber salvage operations would not generate enough Knutson-Vandenberg funds for reforestation. The unfortunate relationship here is that this addition to the backlog from causes other than timber harvesting exceeded our reforestation with appropriated funds by 212,000 acres. Also, current losses to insect epidemics such as the tussock moth in Oregon and the spruce budworm in Minnesota are not adequately reflected at this time.

In summary, our latest inventories indicate there are now 3.3 million acres which should be reforested as rapidly as resources for doing the job can be made available. This is as accurate a figure as current levels of inventory procedures permit. As we are able to extend our inventory work, we will be able to reflect increased accuracies as well as break the totals into more meaningful components. Our objective remains to invest our reforestation funds in areas with the greatest possible return.

I am pleased that this latest review of national forest reforestation need shows a substantial reduction in the total reforestation needs since 1968. I must point out, however, that the changes are due largely to an increasing shortage of timber reserves in the United States which has substantially increased the values of previously uneconomic species. There remains little opportunity for changes of such magnitude in the future. It is increasingly important to complete reforestation work on the national forests.

Since 1968 over 4 million acres of commercial forest land in the national forests has been withdrawn from timber production or reclassified for other resource uses. Yet, the Nation's timber needs, which the national forests must help supply, are increasing steadily. Planting and seeding the existing 3.3 million acres needing reforestation, plus a substantial increase in intensive silvicultural treatments such as thinning, fertilization, and genetics, will enable the national forests to sustain timber production on a high level on the reduced commercial forest land base.

Sincerely,

JOHN R. MCGUIRE, *Chief.*

Enclosures.

TABLE 1.—*National forest reforestation needs, June 30, 1973*

	Acres
Current reforestation needs [1]	3,318,000
Cutover or poorly stocked—Knutson-Vandenberg funds available now or in 5 years [2]	—880,000
Net reforestation needs requiring appropriated funds [3]	2,438,000

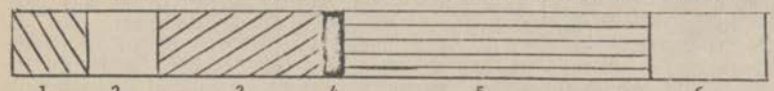
[1] Commercial forest land only.
[2] Money deposited by timber purchasers for reforestation and timber stand improvement work pursuant to provisions of the Knutson-Vandenberg Act of 1936.
[3] Funds appropriated by the Congress for national forest protection and management.

Forest Service
Timber Management

TABLE 2

NATIONAL FOREST REFORESTATION NEEDS
(June 30, 1973)

Current Status of Acreage Reported in 1968 with Subsequent Additions*



		Acres
1.	Restocked w/Appropriated Funds (1968-1973).....	600,000
2.	Naturally restocked.....	203,000
3.	Occupied by species or stands unmerchantable in 1968 but now merchantable or not to be reforested now because of economic or other factors and other resource values.....	1,372,000
4.	Withdrawn from commercial timber land base (Wilderness, power lines, etc).....	107,000
5.	Reforestation still needed in 1973.....	2,506,000
	(Economic change will enable residual merchantable timber to pay reforestation cost after harvest by purchaser deposits under Knutson-Vandenberg Act.)	(880,000)
	TOTAL	4,788,000
6.	Deforested fire, insects, etc., 1968-73.....	812,000
	Net National Forest acreage requiring reforestation as of June 30, 1973 (item 5 + 6).....	3,318,000

*Chart not to scale. All figures rounded.

CHANGE IN REFORESTATION ESTIMATES

Mr. EVANS. It might also be appropriate to explain why it is you missed by 20 percent.

Mr. MCGUIRE. The letter will go into detail on this, but one of the principal changes since the earlier survey in the 1960's is the higher price of standing timber. Formerly there were many areas where we felt we had to clear off the remains of the old stands in order to replant. Now it turns out, the timber values may be enough to carry the cost of replanting. We think the receipts from the logging can cover planting on those areas.

Another change is that some of the trees that were regarded as weed species now have enough commercial value. We think we should carry them on through to maturity instead of taking them off and putting in a new crop.

Mr. EVANS. The 4.8 figure was acres of land that should be reforested, as I understood it. That has been overestimated now apparently by 20 percent roughly.

Mr. WYATT. If my colleague would yield, before pursuing this question further, you might like to look at the Chief's letter which explains in detail how the recomputation has been figured. In addition to some of the things the Chief has pointed out, you have some acreages that have been reclassified into areas other than commercial forest land. That is another factor.

Mrs. HANSEN. You also have some species that at one point in time were considered weeds and now they are harvested and sold.

Mr. WYATT. It is a new look, a current look at the 4.8 million acres which previously had been considered the target for reforestation to see how feasible and how necessary it is in light of the current economic situation, and all other factors, to reforest that total.

Mr. EVANS. This is based on an on-the-ground survey?

Mr. MCGUIRE. That is correct, with use of aerial photographs and on-the-ground examination.

The earlier estimate was correct for its time, which was 1967 or 1968. The present estimate is correct for its time. Congress now requires an annual report. So we will update the estimate year by year and take into account each year these changing conditions. It really was not an overestimate at the earlier time. It was rather an estimate that reflected the conditions at that point in time.

Mr. LONG. A GAO study dated February 14, 1974, concludes that the Forest Service should implement a more intensive reforestation and timber stand improvement program.

The Forest Service's own recent report to the Congress indicates that "we have a reforestation backlog of 3.3 million acres which can and should be reforested as rapidly as resources can be made available to do the job."

However, the Forest Service proposes to reforest just 152,260 acres in fiscal year 1975—13,000 acres fewer than fiscal year 1974 and only about 5 percent of the backlog.

The reforestation program has had a history of impoundment and underfunding. Why doesn't the fiscal year 1975 budget acknowledge the reforestation backlog cited by both Forest Service and GAO by proposing a viable program for reducing the backlog?

What proportion of all the Forest Service timber lands does the 3.3 million acre backlog represent?

Mr. McGuire. Reforestation of national forest lands is just one of the several public needs which must be treated. Within a budget that will not be unduly inflationary, the funds and physical resources which can be allocated to one of several high priority needs must be adjusted relative to the other. As a result, in 1975 only enough appropriated funds to accomplish 152,260 acres can be obligated for reforestation. We hope that the reforestation can be increased to a higher level in the coming years.

With respect to your second question, the 3.3 million acre backlog represents approximately 4 percent of commercial forest land in the national forests, that is, the lands capable of producing timber in commercial quantities.

Mr. Evans. As I read the figures for acres reforested with appropriated funds on page 26, I see a total of 115,000 acres reforested, which are apparently not related to ongoing timber sales. On page 27 you have 214,000 more reforested with K–V funds, presumably related directly to ongoing timber sales. I have two questions: (1) How many acres of land were cut last year—I would like to know this to get some relation between that and the number of acres reforested with K–V money. And, (2) since we have about a 3.3 million acre backlog of lands which are not properly reforested, how do you ever expect to catch up with that backlog? Why have you not requested more money from us to accomplish this important work?

Mr. McGuire. In fiscal year 1973 about 1.5 million acres were cut-over. About .5 million acres were harvested by group, patch, stand, or strip methods where the complete timber canopy was removed. Some of this area will be reforested naturally from seed sources on adjacent areas.

On March 15, 1974, a planned 10-year program for liquidating the 3.3 million acre backlog was submitted to the Congress.

The administration must limit the total amount of money to be spent governmentwide. When this is done, some needs cannot be fully funded in the light of other high priority work.

POTENTIAL OVERCUTS

Mr. Evans. I am concerned about a statement you make on page 26 wherein you say "the proposed reforestation and stand improvement program will contribute to the long range goal of improving the total net growth and sustainable harvest volume on the national forests." What you are saying here apparently, is that the more you reforest, the more you will be able to cut. And of course, since you are not cutting the young trees. what you are really saying is that the more saplings you plant, the more giant old trees you can cut down.

The thing that bothers me about all of this is that we all know of many examples of reforestation projects which have not "taken"; that is, they may grow for awhile, and then get killed off. Or, they may not grow out at all. But in the meantime, we may have already increased our cutting somewhere else, based only upon the assumption that we are going to have that growth.

My question is: How long do you wait to see if a reforestation project has "taken" before you begin to increase the cut in that particular

area? If you don't do this, it seems to me that we are going to have the most dangerous sort of situation in the future, possibly an overcut.

Mr. McGuire. On those national forests which still have sizable volumes of old-growth timber, for example, in the Pacific Northwest, additional volumes can be made available as soon as examinations show the new timber stand on the area is successfully established. This is usually 3 to 5 years after planting or seeding.

COURT DECISIONS

Mr. Evans. Would you summarize the several court decisions of the past year that have had major impacts on the Forest Service programs and set forth what these impacts are and what you are doing as a result of each decision?

List the other litigation pending and what the impact of this might be.

In the West Virginia case the court found that you were selling trees other than "the dead, matured, or large growth of trees." Can you successfully manage the forest if you are held to such standards?

Mr. McGuire. Court decisions of the past year which have had a major impact on Forest Service timber programs are:

(1) *Minnesota Public Interest Research Group* v. *Butz, et al.*—Suit challenged 11 existing timber sales within the Portal Zone of the Boundary Waters Canoe Area on the Superior National Forest in Minnesota. Basis of suit is contention sales violated the Wilderness Act and the National Environmental Policy Act. District court enjoined Forest Service from permitting logging in portions or all of seven sales pending completion of management plan and filing environmental impact statement.

The Forest Service has completed a draft management plan and environmental statement. These have been circulated for comments and a final environmental statement should be out shortly. This suit does not set precedents for actions outside of the Canoe Area.

(2) *Izaak Walton League, Sierra Club, et al.* v. *Butz.*—Suit challenges entire timber sale program on the Monongahela National Forest in West Virginia. Basis of suit is contention that the Organic Act of June 4, 1897, authorizes only the sale of timber which is dead (physiologically), mature, or large growth. Federal district court issued a permanent injunction in December limiting the sale of timber on Monongahela to dead, mature, or large growth trees. The injunction also requires the Forest Service to mark or designate each individual tree selected for harvest.

The Justice Department filed a protective notice of appeal on March 22, 1974. Elsewhere in the country, we are proceeding with planned sales as before, pending final resolution of this issue.

(3) *Sierra Club* v. *Butz.*—Suit challenges Juneau Unit Timber Sale in Alaska. This is the largest sale in the history of the National Forests. Manufacturing facilities for lumber and pulp would provide needed support for the economy of Alaska. Suit contends sale violates Multiple Use-Sustained Yield Act of 1960 and other laws. District court in Alaska upheld the decision to make the sale, in 1971. In March 1973, the Ninth Circuit Court of Appeals remanded the case to the district court for consideration of possible new evidence.

A decision from the district court is pending. The Forest Service is now waiting for this decision before planning further action.

(4) *Natural Resources Defense Council* v. *Butz et al.*—Suit claimed that increasing National Forest timber sale goals, above the level presented to the Congress in the President's budget, constituted a major Federal action and therefore requires an environmental impact statement. In January, the district court enjoined the sale of more than the originally budgeted volume, unless an environmental statement is filed.

Time remaining in the fiscal year is inadequate for the preparation and review of an environmental impact statement; therefore, the planned fiscal year 1974 National Forest timber sale program will be reduced by 1 billion board feet.

(5) *Wyoming Open Space Coordinating Council* v. *Butz et al.*—Suit challenged two outstanding timber sales on the Teton National Forest in Wyoming. Sales are within a roadless area. Suit claims sales violated NEPA because an environmental impact statement was not prepared. District court upheld Forest Service action in selling the sales, but the appellate court ruled an environmental statement was required.

This environmental impact statement is now being processed. Because of the particular circumstances of these sales, we believe the suit sets a precedent for very few sales.

A summary of litigation pending which will have an impact on Forest Service timber program would be as follows:

1. *Fibreboard Corp.* v. *Schlapfer et al.*—Suit asks for an order enjoining the initiation of a small business set-aside program on the Siskiyou National Forest in Oregon. Action on the suit is awaiting the outcome of an administrative appeal. Outcome of the suit could have implications for the application of the Forest Service's small business set-aside program.

(2) *Brand S. Corp.* v. *Schlapfer et al.*—Suit asks for declaratory judgment regarding the small business set-aside program on the Siuslaw National Forest in Oregon. Suit involves approximately 80 million board feet. It has not delayed sales. Outcome could also have implications for the application of the Forest Service's small business set-aside program.

(3) *Miller et al* v. *Mallory et al.*—Suit claims sales in Bull Run Watershed, Mt. Hood National Forest in Oregon, are a breach of public trust and will adversely affect water quality. Suit cites failure to file environmental statements. Following decision on the suit on the Monogahela Forest in West Virginia, this suit was amended to incorporate the arguments in that case. No dates for hearing have been set.

If the suit is successful, the result would be that the Forest Service be enjoined from making timber sales in the Bull Run Watershed. Because of the particular circumstances surrounding the establishment of the Bull Run Watershed, we do not believe that the suit would set a precedent for other identified watersheds on National Forest lands.

(4) *Duke City et al.* v. *Butz et al.*—Suit challenges the small business set-aside program. Also cites failure to comply with National

Environmental Policy Act. Depositions are now being taken. An adverse decision might halt the small business set-aside program.

In responding to the third question, the district court in West Virginia accepted Webster's definition of "mature" as meaning, "Brought by natural process to completeness of growth and development. * * * full grown; ripe." It accepted Webster's definition of "large" as meaning, "Exceeding most other things of like kind in bulk, capacity, quantity, superficial dimensions, or number of constituent units; of considerable magnitude; big; great. * * *"

Limiting the cutting of trees to only those which would meet these standards would preclude the use of any of the professionally accepted, scientifically based silvicultural systems which are applicable to the management of forests for high-level, sustained yields of timber and other resources. Therefore, we do not believe that we can successfully manage the timber for current objectives under these standards.

Mrs. HANSEN. If these 3,318,000 acres were reforested, when would they come into production, at current price levels and what would be their value?

Mr. NELSON. That question will probably require us to go back to the survey data.

As you know, over a 10-year span of planting, none of this material would be in the market before the year 2000. Possibly some of it in the South, but certainly very little. We would expect the values at that time to be much higher than the current values today.

Mrs. HANSEN. If no effort is made to reforest these areas you are not going to have these trees available in the year 2000, and the loss in the productivity is going to be reflected in the future. Isn't that correct?

Mr. NELSON. That is correct. I might add that in some of the places, specifically in the West, we will get some allowable cut effect. Where we have an age class distribution that will allow it, we can take credit for the planting as soon as it does occur on the ground and is established. In some areas of the West we can perhaps increase our allowable cut by some amount.

Mrs. HANSEN. But in other areas, you can't?

Mr. NELSON. That is correct.

FOREST ROADS

Mr. MCGUIRE. Last year we built 527 miles of federally financed roads and provided engineering and some supplementation for about 6,700 miles of purchaser-built roads.

In 1975 timber purchasers will build about 8,000 miles of roads. This rate of construction is enough to maintain the recent levels of cutting and make some additional timber available through salvage and thinning.

Mrs. HANSEN. How many roads will you be building?

Mr. MCGUIRE. We will not be building any roads with Federal funds. The budget does not provide for construction with appropriated funds.

Mrs. HANSEN. I am going to say the same thing I said to the Bureau of Land Management, with this policy what you are doing is barring

the small timber operators from bidding on your sales. Isn't this correct?

Mr. McGuire. This could have an effect.

Mrs. Hansen. Because he has to have capital enough to build a road.

Mr. McGuire. That is correct, Madam Chairman.

Mrs. Hansen. Your appraised price will have to decrease because it will have to incorporate the cost of the road construction. Is that correct?

Mr. McGuire. That is correct.

Mrs. Hansen. I cannot understand the philosophy of this policy. We are spending money in a great many places in this world through foreign aid and yet we can't afford money for our own roads.

TIMBER PURCHASER-BUILT ROADS

What is the timber purchaser going to spend on this 8,000 miles of roads?

Mr. Nelson. The purchasers will spend about $161 million on construction and about $26 million on road maintenance.

Mrs. Hansen. How long do they have to maintain the roads—until they remove the timber?

Mr. McGuire. That is correct.

Mrs. Hansen. After the timber has been removed the Government then would maintain the road?

Mr. McGuire. If we accept the road and if we keep it open. Of course, many of these roads are closed up after the harvesting.

Mrs. Hansen. Some of them are kept open for fishermen, hunters, recreation, and for fire purposes, isn't this correct?

Mr. McGuire. That is correct, and this is what we call "supplementation." That is, we provide additional money for permanent culverts, for example, so the roads can be kept open for those purposes.

Mr. McKay. Do you have any money for building any roads in the Northeast?

Mr. Nelson. No; we do not. We have sufficient funds for supplementation on about 250 miles of road.

Mr. McKay. You have quit building roads as far as forests are concerned?

Mr. McGuire. With appropriated funds, that is correct.

RECREATION ROADS

Mr. McKay. How do you get roads into these areas that you are developing for recreation? Who pays for that?

Mr. McGuire. Unless we can get the road constructed in connection with the sale of timber, the road cannot be built. We haven't the money to build such roads for recreation.

Mr. McKay. What happens to the development of the areas which you classify as potential recreation areas? Are you going to just close them up?

Mr. McGuire. If they are open now, of course, we will try to keep them open, but we cannot open new areas for recreation purposes if appropriated funds are required to build a road to get in. We will just have to put off that kind of development.

FEDERAL ROAD CONSTRUCTION

Mr. WYATT. How does this year's budget for road construction vary from the agreement which I thought we had last year on this point, or does it vary?

Mr. NELSON. The answer to your question is that the program will provide for the Forest Service to handle the engineering and road survey work. This includes survey on at least 75 percent of the total volume of timber that is scheduled for sale in the fiscal year, and to retain control of the location and design work on the permanent roads. We believe this was the instruction of the Congress.

Mr. WYATT. You think that is as far as the agreement that we reached last year?

Mr. MCGUIRE. We think that is the extent of the agreement, but we recognize the committee also urged the administration to request funds for an appropriate level of federally-financed construction.

Mr. WYATT. Federally-financed road construction?

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. Mr. Wyatt is well aware, as is the rest of the committee, that the committee was very unhappy to see the bids going to only those companies that had sufficient capital to be able to bid.

Also your first roadbuilding proposal wouldn't even have involved the engineering work. That seemed to be a very poor investment. Another aspect is that you have to depend on a current timber shortage to increase the price, in order to have any receipts return to the Treasury because of the lowering of the bids due to the cost of the road construction.

This is a very unsatisfactory fiscal arrangement.

Mr. WYATT. My point, Madam Chairman, was that I think an integral part of the compromise which we worked out last fall was that there would be a request in the budget this year for substantial forest trails and roads money.

Mrs. HANSEN. That is right.

Mr. WYATT. You eliminate by the purchaser road construction obligation some of the areas that are really not feasible to bid on. You might have minus bids.

You also reduce the 25 percent of the cost of these roads that would otherwise go to the counties, to the local jurisdictions.

Mrs. HANSEN. Did you go to OMB with our request?

Mr. MCGUIRE. Yes, we did, Madam Chairman.

Mrs. HANSEN. What happened to that request?

Mr. MCGUIRE. Our request was denied.

You will recall we did discuss the 75-percent problem. That is taking care of the engineering.

Mrs. HANSEN. To prevent the dismantling of the Forest Service engineering capability on the roads.

Mr. MCGUIRE. The Office of Management and Budget at that time told us that it could make no commitment on the 1975 program levels.

FISCAL YEAR 1975 ROAD BUDGET REQUEST

Mrs. HANSEN. How much money did you request for roads this year, Chief?

Mr. McGuire. This year the direction was to propose budgets at the zero-increase level and at a 5-percent increase level.

Mr. Nelson. $174 million at the 5-percent increase level for construction and maintenance. That would be less, of course, the 10-percent fund.

Mrs. Hansen. This current policy is going to lead to one thing, eventually only a few of your private operators are going to be bidding on national forest lands.

Mr. Wyatt. The very large ones.

Mrs. Hansen. The very large ones.

Mr. Evans. Have you received any explanation of their reasoning?

Mr. McGuire. Only the general reasoning that because of inflation there is a necessity to hold down Federal expenditures and this is one place——

Mrs. Hansen. Considering the foreign-aid budgets that is the most unlikely reason of all. That just doesn't make good sense.

Mr. Wyatt. Last year what we did—if it hadn't been for this committee, your road engineering capability would have been destroyed. We saved that by the 75-percent compromise, but we certainly never contemplated that they would reduce your roadbuilding capability.

Mr. McGuire. There is growing recognition, though there has been no change in the policy, that we are, in effect, buying these roads with timber instead of with cash. We simply pay for them with the timber.

ROADBUILDING BY TIMBER OPERATORS

Mr. Wyatt. You do that either way, one way or the other. It is a question of whether the big timber companies pay for it or whether small- or medium-size operators pay.

Mr. Veysey. What percentage would that run of the whole operation?

Mrs. Hansen. The large companies have their mills at certain locations. The smaller contractors are usually at some other location so what you are actually phasing out is some of these smaller mills which depend to a large extent upon forest timber because they do not own their own woodlands like the large ones, like Georgia-Pacific, Crown, Weyerhaeuser, and so on. So it is not only the small logger, but your small mills which are going to get squeezed out in the operation.

Just take a typical big operator. He is going to ship to his own mill. He has his own area, et cetera. He has everything. But the small operator, a combination of small operators even, are supplying the smaller mills. So what you are saying is, "Goodbye, Mr. Small."

Mr. Veysey. Could you give us a breakdown by size of operator—I don't know whether you judge it by numbers of employees as you suggested or total capitalization or something like that—over several years. It might indicate what is happening, to the small and the large operator under this changed policy. I would be very interested in understanding that.

Mr. McGuire. We will be glad to provide that. This policy has been going on for a couple of years now.

[The information follows:]

We do not have statistics available that relate directly to the question of purchases by size of operator. The closest breakdown available is the volume and percentages of timber purchased by large and small business according to the SBA size classification. Small business is defined as less than 500 employees. The 3-year percentages for the Pacific Northwest region and the percentages for the six western regions indicate no significant variation in small business purchases over a 3-year period, although there was a drop in 1973.

	Pacific Northwest		6 western regions total	
	Million board-feet sold	Percent small business	Million board-feet sold	Percent small business
Calendar year:				
1971	4,914.7	54.3	7,718.5	50.6
1972	4,635.6	56.3	8,744.6	47.6
1973	4,488.8	46.6	8,176.7	49.7

Mr. VEYSEY. Do you feel this policy really eliminates the small operator in the field? Is it impossible or impractical for him to continue operation in the national forest?

Mr. MCGUIRE. There is much variation. We do have several provisions to protect the small operator. For example, we use a system of small business set-asides. Admittedly the definition of small is rather large—500 employees.

In the East there are quite a few places where little roadbuilding is required and I think the small operators can usually handle it.

Mrs. HANSEN. What Mr. Wyatt and I are talking about is where there is the major timber production. What you are saying is that you have to have the capital to go in before you can bid; you must have sufficient capital to build x number of miles of road, and it is becoming increasingly expensive. You are blocking out many small timber producers.

Mr. VEYSEY. Is it possible to build the roads by stages and avoid the heavy capital layout at the very start? I just don't know how that works.

Mr. MCGUIRE. I would say our typical timber sale in the West runs about 3 years. The road is built the first year so the operator must have enough capital to carry that cost for about 2 years.

Mr. VEYSEY. All the roadbuilding?

Mr. MCGUIRE. Nearly all of it. At least his main stem road. He usually builds some spurs for logging off from his main road and may extend his main stem some the second year. The third year he usually winds up the harvesting. I think in many cases he uses the same crew for both roadbuilding and harvesting. He tries to get the road in first and then uses his labor force to harvest the timber thus made accessible.

Mr. VEYSEY. There is, then, a substantial investment in roadbuilding at the very start.

Mr. MCGUIRE. And a carrying cost because he has to carry that road expenditure through the 3-year period, that is, until he logs enough to pay for his investment.

In relation to your earlier question, I might point out that last fiscal year the Government in effect purchased new roads with timber at the sum of about $70 million. The cash receipts were over $400 million. That gives you some kind of an average. I am sure on some sales the

road cost or the allowance for road construction runs up to 50 percent or so.

Mrs. HANSEN. You will get down to a few big timber purchasers and you will have the same kind of cartel on prices that you have with the oil companies. Let's face it, the same thing is going to result.

I think the OMB ought to have their heads examined.

BIG VERSUS SMALL OPERATORS

Mr. MCKAY. They just wiped out every timber operator in the State of Utah. There isn't one that will come within 100 employees of this kind of category and if you are not providing any funds they are dead.

Mrs. HANSEN. You have to be very big to have 500 employees, as you know.

Mr. EVANS. Whose figure is this, Madam Chairman, the 500?

Mr. MCGUIRE. The Small Business Administration.

Mr. EVANS. All by themselves they have decided this or did they do this in consultation with you, or what?

Mr. MCGUIRE. We have frequent consultations with the Small Business Administration but I think this particular classification of big versus small is made in relation to a number of industries.

FUND NEEDS FOR ROAD CONSTRUCTION

Mr. WYATT. Across the board.

May I ask this question: If the Forest Service were to continue its roadbuilding activity in the national forests for all purposes, on the historic basis that it has prior to 1974 fiscal year, what would the dollar figure be this year?

Mr. NELSON. I think perhaps the best answer, Congressman Wyatt, would be that we are going to have a lapsing of authorization in fiscal 1975 of $63.6 million.

Mr. WYATT. So really you would require approximately that much money in order to continue on the previous basis?

Mr. NELSON. That would be a good answer.

Mr. WYATT. Thank you.

Mrs. HANSEN. As you know, there are a lot of operators who could care less about a lot of things like erosion control and drainage. They want the road to last during the time they are hauling the timber and beyond that time they are not interested. If you are going to keep any of those roads open, which I strongly suspect you are going to want to do for a wide variety of programs, you are going to have to do the reconstruction.

Mr. NELSON. That is correct.

Mrs. HANSEN. And that is going to be a costly item.

Mr. MCGUIRE. It is also a problem from an environmental point of view because you have two disturbances. One is from the original construction and one from the reconstruction.

This Federal construction is essential to develop many areas for thinning and salvage. Thinning and salvage sales seldom offer enough margin in the values at stake to finance road construction. As a result, without federally financed roads, we cannot go ahead with thinning and salvage that ought to be done.

Mr. WYATT. What is the result of your failure to have adequate thinning and salvage sales?

Mr. MCGUIRE. The failure to thin, of course, results in a loss of growth. Stands stagnate because there are too many stems per acre. I don't know that we have a precise figure on that.

Mr. WYATT. You just have a very poor growth in the area that is not properly thinned.

Mr. MCGUIRE. That is true.

Mrs. HANSEN. In other words, at the time the committee directs the Forest Service to develop better management programs and to come up with a long-range program, the Office of Management and Budget decreases salvage sales as a result of this road program?

TIMBER MORTALITY

Mr. WYATT. What results from your failure to be able to offer salvage sales as a result of this road program?

Mr. MCGUIRE. Every year we lose billions of board feet of timber due to natural mortality, insect mortality, and growth losses.

Many of these dying or dead trees, of course, are so scattered that it will be impossible to capture all losses, but with an adequate road system I would expect we could capture several billion more board feet than we are harvesting now.

Mr. WYATT. Would this figure be comparable to what we are exporting abroad, Chief?

Mr. MCGUIRE. Yes, it would.

Mr. WYATT. Actually it would exceed it, wouldn't it?

Mr. MCGUIRE. It could exceed it.

Mr. NELSON. The best estimate we have on softwood timber mortality in the national forests is about 5.5 billion feet.

Mr. WYATT. Is that insect and disease principally?

Mr. NELSON. That is insect and disease loss, fire loss, and some of the other natural losses which occur as the stand gets older.

HELICOPTER SALES

Mr. EVANS. Could you give us an estimate of the feasibility of harvesting timber by means of helicopter?

Mr. NELSON. We actually have quite a number of helicopter sales under way at the present time.

Mr. EVANS. On an experimental basis?

Mr. NELSON. It has gone beyond the experimental basis to some production logging by helicopters.

Primarily the helicopter logging is done in those terrains where it is not possible to remove the timber by normal logging operations where the impact on the environment would be too great, and where we can get in with helicopter logging, not requiring the building of roads, which is the primary factor that tears up the country. We have been able to get out volumes by helicopter sales that ordinarily would not be available.

Mr. EVANS. Are these experimental sales or are they sales for profit?

Mr. NELSON. These are sales for profit—operational sales.

Mr. EVANS. Are they profitable?

Mr. NELSON. We think they are, yes, sir; we have adequate bidding on our local helicopter sales at this time.

Mr. EVANS. In what parts of the country is this being done?

Mr. NELSON. Most of this, of course, is in the West. We have helicopter sales underway in California and in the Pacific Northwest. We have some salvage operations in South Dakota and Idaho.

Mr. MCGUIRE. The Denver Post had a pretty good article a few weeks ago.

Mr. EVANS. I read that article and wondered to what extent this was becoming a feasible way of logging without building roads and thinning without building roads.

What are your thoughts about the future of this? Is it going to become more and more a means used?

Mr. NELSON. We think that it is a feasible alternative for a larger number of sales in the future. We do know that the costs of helicopter logging are higher than those with conventional methods. Of course, now in the energy crunch, the costs of helicopter operations are probably higher than with normal logging operations. We think there are possibilities for gradually increasing the amount of material that we take out by helicopter; also by new methods of balloon logging, and the like.

FOREST RANGE PROGRAM

Mr. MCGUIRE. Madam Chairman, I would next like to mention our forest range program. The meat shortage has indicated a need to increase the production of forage on the public lands. There are increased demands for feed grains for worldwide human consumption.

Mrs. HANSEN. Does the budget reflect this?

Mr. MCGUIRE. The budget does not reflect any increase in range management on the national forests.

Mrs. HANSEN. Who made that decision?

Mr. MCGUIRE. Well, again I think it was——

Mrs. HANSEN. Did you request increases in this activity?

Mr. MCGUIRE. Yes; we did.

Mrs. HANSEN. And it was denied by the Office of Management and Budget?

Mr. MCGUIRE. Our proposals were denied.

FOREST FIRE PROTECTION

With regard to the forest protection item, almost 180,000 acres of Forest Service-protected lands were burned during the year. We are trying to improve our initial attack forces and to improve coordination during periods of high fire hazard.

Mrs. HANSEN. Will you place in the record at this point the number of board feet that burned, the value of that timber, and the number of houses this timber could have built?

Mr. MCGUIRE. I will be glad to do that.

[The information follows:]

Approximately 18 million board feet of timber burned this past summer. It is estimated the value of this is $1.44 million, and would have supplied enough lumber for 1,800 houses.

MODULAR AIRBORNE FIREFIGHTING SYSTEMS

Mr. McGUIRE. The acquisition of the modular airborne firefighting systems for which this committee appropriated money in the first supplemental request will increase our capability to stop fires before they become large conflagrations.

Mr. VEYSEY. What is the status of the acquisition of the MAFFS system at the present time?

Mr. NELSON. We have been working with contractors on the acquisition of the MAFFS units. We have determined that this can be a sole source contract. We expect to have the contract consummated on these pieces of equipment this week, Congressman.

Mr. VEYSEY. So they will be ready for use during this coming fire season?

Mr. NELSON. We expect several of the units will be available for use in the 1974 fire season.

Mr. VEYSEY. Several but not all?

Mr. NELSON. No, sir. It is just impossible to get all of these pieces on line during the major 1974 fire season.

FUEL MODIFICATIONS AND FIREBREAKS

Mr. WYATT. Chief, at the request of the chairman and several of the members I visited the Angeles National Forest about a year ago, and I just wondered if your program of providing fuel modifications and firebreaks down there had any perceptible impact on the fire season in 1973 calendar year as compared to the previous years?

Mr. McGUIRE. I am sure it has.

Mr. NELSON. We have some examples of where fuel modification and firebreak work in fact did stop large fires from developing. These were very striking examples, but it has been rather difficult to get this on a statistical basis because you are dealing with different weather conditions and different conditions of the fuel and so forth. We have a number of case histories that definitely do point to the validity of this type of effort.

Mr. WYATT. Thank you.

MAFFS

Mr. VEYSEY. How many of these MAFFS units will be available, say by September?

Mr. NELSON. We expect to have two of the MAFFS units on line by late August or early September.

Mr. VEYSEY. When you say "on line," do you mean in the field ready to use?

Mr. NELSON. Yes, sir.

Mr. VEYSEY. Two out of ten only?

Mr. NELSON. Yes, sir.

Mr. EVANS. When do you expect the other eight to be completed and on line?

Mr. NELSON. I believe we can say these should be completed by the end of the calendar year.

Mr. WYATT. Are you short of funds?

Mr. NELSON. No, it has been a matter of negotiating with the contractor and making sure that the Government interests, as well as his, were protected.

Mr. WYATT. I would like to see the number speeded up if there is any human way of doing it. It is still March and that gives you 6 months, Mr. Nelson, to get more of the units on line. If you can go through two examples, it seems to me you ought to be able to speed up the others, using the experience you have obtained in getting the two ready. I would encourage you to give it top priority.

Mr. NELSON. We certainly will do that, Congressman.

Mr. MCGUIRE. You will recall when we testified on this subject a while back our hope was to get all of the units out in time for this next fire season. The company tells us it is going to take longer to manufacture them than they estimated earlier.

Mr. MCROREY. One of the problems in connection with the construction of the unit is, you will recall, the first units. There is one operational now; it is owned by the Air Force. This was a first generation system. We are now working on a second generation. It is not a piece of equipment you can draw off the shelf and build. This is the basic reason for the necessary time to gear up to get them on line.

CLARKE-M'NARY ACT

Mr. MCGUIRE. 1974 also marks the 50th anniversary of the Clarke-McNary Act. The budget does not provide any additional funds for the programs carried out under this act.

Mrs. HANSEN. Why not?

Mr. MCGUIRE. I think the reasons again are those I mentioned earlier. Under this act the cost of fire fighting and tree planting on State and private lands is shared by the States and the Federal Government. When costs go up, the States simply have to bear a larger share of the cost.

Mrs. HANSEN. What is your authorization?

Mr. MCGUIRE. $40 million, Madam Chairman, for forest fire control.

Mrs. HANSEN. What are you requesting for this activity?

Mr. MCGUIRE. $20.2 million.

INSECT PROBLEMS

We seem to be entering a new cycle in major pest problems. The tussock moth, gypsy moth, southern pine beetle, mountain pine beetle, larch casebearer, and spruce budworm impact are up sharply.

Mrs. HANSEN. To what do you attribute this?

Mr. THORNTON. The main reason is the weather factor. We have had unusual weather patterns that have led to buildup beyond normal levels of the number of pests. Five in particular—Douglas fir tussock moth, gypsy moth, southern pine beetle, mountain pine beetle, and spruce budworm. These five are causing most of the current and prospective difficulties.

INSECT AND DISEASE RESEARCH

Mr. MCGUIRE. We must find more effective and environmentally safe controls for these insect pests. The Department is formulating plans to develop environmentally acceptable control systems for the Douglas fir tussock moth, gypsy moth, and southern pine beetle.

Fiscal year 1975 is the first year for which we are required to pay the General Services Administration for rentals.

Mr. EVANS. Excuse me, may I interrupt? You said you were contemplating accelerating research programs. Do you mean there is a question in your mind about whether you ought to accelerate? Those were your very words, "contemplating accelerating." It surprises me there is any doubt.

Mr. MCGUIRE. What I meant by that is the details and the total level of the program have not yet been finally decided. There is no question that we will have to accelerate but the decision has not yet been made as to how fast and how much money to ask for.

Mrs. HANSEN. How much is your research budget up?

Mr. MCGUIRE. The research program level is actually down this year.

Mr. WYATT. Does that answer your question, Mr. Evans?

Mrs. HANSEN. Would you suggest to the Office of Management and Budget that they take up residence in one of the areas where this gypsy moth is rampant.

Mr. EVANS. What was asked for in research in this area?

Mr. MCGUIRE. In insect and disease research, at the 5 percent level, we asked for $12.1 million.

Mr. EVANS. What did they give you?

Mr. MCGUIRE. The budget is $10.9 million. However, that includes provisions for rent and salary increases.

Mrs. HANSEN. I notice they weren't economical about their rent requests.

Mr. WYATT. Referring back to your testimony of last week in the supplemental where we went into the tussock moth matter in some detail. I would like to at this point ask you if you feel that the $2-plus million you asked for for tussock moth control in your judgment will adequately provide for the treatment of tussock moth with DDT in the event you determine to go forward with that this spring?

Mr. THORNTON. Yes, sir; we believe we have adequate funding in the supplemental, if it is granted, to do that.

Mr. VEYSEY. In spite of your statement, you say we are in a new cycle of major pest problems and they are on the increase and that the money is actually decreasing?

Mr. MCGUIRE. The program money for insect and disease research is actually going down by $360,000. Although the absolute total is going up to take care of rent and salary costs, the program level is declining.

Mr. VEYSEY. What is the rationale for decreasing that?

Mr. MCGUIRE. I think that decrease was the amount the committee added last year to the budget request. The budget proposal this year is the same as it was last year minus the addons. That is the only rationale that I know of.

Mr. DICKERMAN. There is one other factor here. The rapid development of the tussock moth infestation, the southern pine beetle, and the gypsy moth as influenced by the weather came into being after the budget estimates were prepared. It wasn't possible to reflect the full magnitude of the problem.

SUPPLEMENTAL REQUEST FOR INSECT CONTROL

Mr. VEYSEY. Does that mean you will come in with a further request then?

Mr. MCGUIRE. Yes, sir.

Mr. DICKERMAN. As to the tussock moth, the field examinations had not been completed at the time that the budget was submitted. Subsequently, late in 1973, and early this year, we began to get the field material reflecting the extension of the insect's range into Idaho and to some extent adjoining States. The same is true with gypsy moth where our egg mass counts have reflected a very broad extension of the range of which we were not aware a year ago.

Mr. WYATT. Yet the Forest Service has to suffer through the charge by the Administrator of the Environmental Protection Agency, that you have been negligent to the point of dereliction in your research.

Now, I would only suggest that it is the OMB that has been negligent. This committee has added everything we could get away with on the floor of the House and in the context of the framework in which we have to work.

The factors that are present now were present last fall. They are present now when the EPA is making its criticism of the Forest Service, and they were certainly present last fall. The factor being that DDT is probably the only agent now than can control the tussock moth.

Mr. VEYSEY. Do you expect to come in with a further request in this area in view of the weather conditions?

Mr. MCGUIRE. Yes, we expect to come in with a further request for accelerating research on the tussock moth, gypsy moth, and southern pine beetle, which are the three most pressing problems at the present time. This may come in as a budget amendment or it may come in as a supplemental request. The decision has not yet been made.

RESEARCH ON USE OF CHEMICALS

Mr. J. CAMPBELL. I would like to make just a few remarks in this area, Madam Chairman, because this is something that is not a problem only to the Forest Service, but it is a problem for our general agriculture production across the board with regard to our crops and our livestock. Research cannot find the answers that quickly. It happens I attended a 2-day seminar in Gainesville, Fla., with a group of ecologists. I don't know how I happened to chair the meeting because I was not on their side from the standpoint of my opinion, but these were scientists from all over the United States. Their thrust and their effort is to find biological means of pest management rather than chemical means. On two or three different occasions in presentations, conversations, discussions, questions, and in questioning that came about through the discussion period, it was brought out that in not over one or two instances, in all of the research that had been done, have biological means been found to really control a major insect pest.

We really have quite a problem here in our research. We can't expect our researchers to find ready, quick answers on nonchemical means of control. I don't know whether we have come to the crossroads yet of actually making a decision as to continued use of chemicals, but this is

of great concern to Agriculture generally, not only to the Forest Service. Although you may increase your research budget, the question is how will it be used and how long do you think it will be before answers will be forthcoming. We are really in a quandary as to how to use research money, and how long it would be before we get answers if we do have research money, if the answer is to be in the use of nonchemicals.

Mr. WYATT. Mr. Secretary, in that connection, the principal basis, as I recall, for the incredible error that the EPA Director, Mr. Ruckelshaus, made in prohibiting the use of DDT last year, which led to a destruction of somewhere between 600,000 and 800,000 acres of timberland, was the dependence largely upon the biological destruction of the tussock moth, which did not, for one reason or another develop.

Mr. J. CAMPBELL. That is correct.

Mr. WYATT. So I very much appreciate the dilemma you are in, and what you are saying.

Mr. J. CAMPBELL. Secretary Butz, of course, took a very strong position with regard to this.

Mr. WYATT. Secretary Butz and Secretary Morton took very strong positions in regard to the use of DDT last year and they were apparently overruled by an agency that has no responsibility for research and apparently doesn't understand that it can't be done overnight.

Mrs. HANSEN. Please proceed Mr. McGuire.

TIMBER RECEIPTS

Mr. MCGUIRE. Cash receipts from the sale and use of National Forest System resources amounted to almost $470 million in fiscal year 1973, a record high. This is an increase of about $120 million from the preceding year.

For fiscal year 1974 receipts are estimated to be about $417 million; for 1975, about $459 million.

GRAZING FEES

In 1974 we have increased the average grazing fees by 20 cents per animal unit month above the level existing in 1973.

Mr. EVANS. What percentage increase is that?

Mr. NELSON. The increase in grazing fees would be somewhat in the neighborhood of 20 percent.

YOUTH CONSERVATION CORPS

Mr. MCGUIRE. The Youth Conservation Corps, again, was one of our most popular human resource programs; 3,513 young men and women who participated last year, accomplished valuable conservation work and at the same time increased their own appreciation of resource and social needs and problems.

The Department of the Interior and the Department of Agriculture share this program equally. The current authorization ends after the 1974 season. Legislation has been proposed to continue the program.

Mrs. HANSEN. What is the status of that legislation?

Mr. DEINEMA. It has passed the Senate and the House has held hearings. It is in the full Committee of Education and Labor at this time.

Mr. EVANS. If it has passed and become law, will you contemplate coming in for a supplemental?

Mr. MCGUIRE. We already have a provision in the budget on the assumption that authorization will be continued. It would continue at the $10 million level next year, the same level as in the present budget.

Mr. EVANS. What did you ask for?

Mr. DEINEMA. We testified when they had hearings on the YCC program that between the Department of the Interior and the Department of Agriculture, plus the States with 30 percent of the program, we could handle a $43 million program.

Mr. EVANS. How much would come out of this—would be represented in this budget?

Mr. DEINEMA. It would be entirely represented in this budget. The full financing comes through this Forest Service budget.

Mr. EVANS. Your share would be the $40 million?

Mr. DEINEMA. The Federal share would be $30 million. The States' share would be $13 million. The Forest Service would get half of the $30 million, or $15 million. The Department of the Interior would also get $15 million and the States would get $13 million.

Mr. MCGUIRE. That is in our testimony. The budget before you, however, only provides for $10 million.

Mr. EVANS. How many youngsters would you be involved with if you got what you asked for?

Mr. DEINEMA. We could take care of 21,360 youth in the Federal portion and 15,660 youth in the State portion.

Mr. MCKAY. Under the present budget, how many would you be able to handle?

Mr. DEINEMA. Approximately 4,000 in the State program and 6,000 in the Federal program.

POLLUTION ABATEMENT

Mr. MCGUIRE. While there is a decrease in the construction and land acquisition program, the program will allow for pollution abatement provided under Executive Order 11507. Financing is also included to initiate the necessary monitoring and surveillance of both point and nonpoint sources of pollution discharge. Under Executive Order 11752 we are proposing that both——

Mrs. HANSEN. Are you going to meet all the deadlines that were set out in that Executive order?

Mr. NELSON. We will meet the dates in Executive Order 11507.

Mr. MCGUIRE. We are proposing that both the construction and pollution abatement items, as well as operating expenses, be financed under this one appropriation for construction and land acquisition.

Thank you for the opportunity to make these comments, Madam Chairman. We will be glad to answer any questions.

Mrs. HANSEN. Thank you very much, Mr. McGuire.

Mr. McKay, do you have any questions at this point?

Mr. MCKAY. I have a number, but we will be back this afternoon.

Mrs. HANSEN. The committee will adjourn until 1 p.m.

AFTERNOON SESSION

REALINEMENT OF REGIONAL BOUNDARIES

Mrs. HANSEN. Mr. McGuire, last year there was some talk of a proposal to realine your regional boundaries and regional cities and the committee put a prohibition in the 1974 bill. What is the status of these plans and are there any changes contemplated in fiscal year 1975?

Mr. MCGUIRE. Madam Chairman, the plans discussed last year have been completely dropped. However, we are contemplating asking the Congress for permission to make two specific changes. One would move the boundary between the northern region and the Pacific Northwest region of the Forest Service to the State line between Washington and Idaho and put the Colville National Forest in the region headquartered at Portland.

Mrs. HANSEN. Has that been in the Montana region?

Mr. MCGUIRE. Yes, ma'am. We think it would be better to have the regional boundary on the State line.

Second, we are proposing to handle all of our State and private forestry work with the State of Idaho out of Missoula instead of dividing it between Missoula and Ogden the way it is now.

This is because that kind of work is primarily concerned with the State forester and the State government. It would seem more logical to have just one office deal with the State.

Mrs. HANSEN. It is more logical geographically also, isn't it?

Mr. MCGUIRE. Yes; that makes more logic.

If you continue the language you now have in the bill, we would write to you and other committee chairmen—the other alternative would be to modify the language and permit the modifications.

Mrs. HANSEN. Would you send us a letter so we have it for our files?

Mr. MCGUIRE. We will be glad to do that as soon as we have our proposal ready.

NATIONAL FOREST AREAS

Mrs. HANSEN. The area within national forest boundaries is equivalent to 10 percent of the area of the continental United States.

What do you feel would be the ideal percentage of land that should be under the jurisdiction of the national forest system?

Mr. MCGUIRE. I don't think there is any one good answer to that. In part it depends on what the States are able and willing to do. For example, in my personal opinion, there are more lands in the Appalachian region that ought to be in public ownership for watershed protection and recreation and to keep them from being developed or overdeveloped for second homes and that sort of thing.

Mrs. HANSEN. There is a very small amount of land at the present time in that entire watershed that is in the public domain.

Mr. MCGUIRE. That is right, or in public ownership.

The gross area in the East is about 46 million acres now within the national forest boundaries, but the Government owns only about 23 million acres, or 50 percent. I would think that over time it would be worth the public investment to put perhaps three-quarters of this 46 million acres into public ownership in those areas.

TIMBER DESTROYED BY FIRE

Mrs. HANSEN. You say in the justifications: "The national forest supplied 12.4 billion board feet of timber in fiscal year 1973." How many houses is that equivalent to?

Mr. MCGUIRE. It would be about 1,240,000.

Mrs. HANSEN. How many board feet of timber were destroyed by fire?

Mr. MCGUIRE. We will provide that, Madam Chairman.

[The information follows.]

Approximately 18 million board feet of timber burned this past summer. It is estimated this would have supplied enough lumber for 1,800 houses.

DOMESTIC LIVESTOCK

Mrs. HANSEN. About 3.3 million head of domestic livestock are grazed on national forest lands. How much beef or lamb does this supply and what percentage is this of the total?

Mr. NELSON. Madam Chairman, for each adult animal there is usually about one young and I believe the figure on sheep is 1.7 million, so there would be approximately 1.7 million lambs.

Mr. MCKAY Sheep usually produce a little heavier than 100 percent.

Mr. NELSON. This is true, but I believe some of these are not lamb-producing units.

Mrs. HANSEN. How much beef?

Mr. NELSON. We have 1½ million head of cattle and horses, primarily cattle, under permit. These are usually cow/calf operations, so it would be about the equivalent of calves to that number of adult head.

WATER

Mrs. HANSEN. Your lands also provide about 390 million acre-feet of high quality water. What is the population figure which this supplies?

Mr. NELSON. As I recall the figures, Madam Chairman, about 90 percent of the water used for humans in the Western United States comes off the national forests. We can get those population figures for the record.

[The information follows:]

Based on an analysis made by the Forest Service in 1968, it is estimated that about 34 million people are served directily by water flowing from the national forests.

COUNCIL BLUFFS AND EAGLE LAKE IMPOUNDMENTS

Mrs. HANSEN. What impoundments are currently in effect in the Forest Service?

Mr. MCGUIRE. There are only two items that are currently impounded. One is for a construction project in Missouri—Council Bluffs—and the other is Eagle Lake.

Mrs. HANSEN. Eagle Lake is in West Virginia, isn't it?

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. What is the reason these two are impounded?

Mr. MCGUIRE. We have been asked to provide more detailed cost/-benefit analyses to justify the release of these funds.

Mr. NELSON. That is correct.

Mrs. HANSEN. You know a great many members of the Missouri delegation are interested in this Council Bluffs program. What is the amount of money involved there, Mr. McGuire?

Mr. W. CAMPBELL. It is $500,000 for Council Bluffs; $815,000 for Eagle Lake.

Mrs. HANSEN. Isn't this in a recreation area?

Mr. MCGUIRE. Yes, ma'am. Both of these would provide substantial recreation benefits.

Mrs. HANSEN. What urban population does Council Bluffs serve?

Mr. MCGUIRE. This is in southeastern Missouri, accessible to the cities of St. Louis and Memphis, for example, as well as to many of the local populations.

Mrs. HANSEN. When were the releases of other impounded funds made?

Mr. W. CAMPBELL. Most of them were released on March 1. Some, however, were released before that. We were given assurance they would be released so that we were able to go ahead with the planning and some other preliminary things that needed to be done to get the job done, before March 1.

Mrs. HANSEN. When did you present the material to OMB for Council Bluffs?

Mr. W. CAMPBELL. It has been provided to OMB.

Mrs. HANSEN. How long ago?

Mr. W. CAMPBELL. More than a month ago. They are considering and analyzing the information.

Mrs. HANSEN. Are there any items for which funds were appropriated in fiscal year 1974 that are now scheduled for reprograming or transfer, either in 1974 or 1975?

Mr. W. CAMPBELL. The funds appropriated in 1974, with the exception of those two projects, are being used for the purpose appropriated. None of the 1974 funds have been proposed for reprograming next year.

GAO REPORT ON REFORESTATION AND STAND IMPROVEMENT

Mrs. HANSEN. I have a GAO report dated February 14 entitled "More intensive reforestation and timber stand improvement programs could help meet timber demand."

Mr. MCGUIRE. We are in general agreement with the findings of that report, Madam Chairman. Perhaps Dr. Nelson would have a specific comment.

Mr. NELSON. We feel that the GAO report was an excellent job. In fact, by the time the report was issued on February 14, we had taken action on most of the problems that had been highlighted by the GAO report. We expect to complete full action on the GAO report, Madam Chairman.

Mrs. HANSEN. It goes on to indicate a need for: "Increased regular appropriations from the general fund of the treasury." What steps have been taken in your budget this time to meet this goal?

Mr. MCGUIRE. The budget this time is actually down about $42,000 at the program level from last year. The actual amount is up over 1974 to provide for pay costs and rent, but didn't quite provide for all of them so the actual program level must drop by $42,000.

GSA RENTAL COSTS

Mrs. HANSEN. What percent of the budget—I think it is about 3.2—of the total budget is in the $16 million-plus rental item?

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. How many facilities does this cover and how many facilities do you own?

Mr. DEINEMA. I do not have the exact figures, Madam Chairman, but approximately 55 percent was covered under this system. The remainder are our own facilities.

Mrs. HANSEN. What was the amount paid in lease or rental costs last year for this same $16 million?

Mr. DEINEMA. This is the first year we will be under this rental rate system.

Mrs. HANSEN. What was their basis for the rental costs?

Mr. DEINEMA. They established the cost, as I understand it, by making a survey in metropolitan areas and charging on a per-square-foot basis for all space that is controlled by GSA. They went to metropolitan areas like Denver to establish these rates.

Mrs. HANSEN. $16 million of your budget is for GSA rental costs, $28 million for environmental impact statements, and you have added costs due to inflation, which includes postage and a few other items.

You actually have a sizable reduction in your budget because of these costs, isn't this correct?

Mr. MCGUIRE. That is correct, Madam Chairman.

Mrs. HANSEN. You have had no diminution in the number of acres that you manage.

Mr. MCGUIRE. No, ma'am. In fact, they have gone up a little.

MANAGEMENT COSTS

Mrs. HANSEN. What do you estimate you spent per acre, per year for management?

Mr. MCGUIRE. Our total appropriation in the last year was about $280 million and we managed 187 million acres, so it would come out to over $1 or about $1.50 per acre.

Mrs. HANSEN. Have you an idea what private industry spends per acre for management purposes?

Mr. MCGUIRE. I think on the commercial forest land portion—that would be about 50 percent—private industry undoubtedly would be spending two, three or five times as much, depending on the site. Some of our acres, however, probably could not be easily held in private ownership.

Mrs. HANSEN. No, but in the comparable acreages.

Mr. MCGUIRE. In the comparable acres I suspect most private landowners would spend three or four times as much as this.

Mr. WYATT. Do you have any idea what liability would be incurred by the members of a board of directors of a private corporation if they managed their corporations' land the way the Forest Service is required to manage its lands because of these restrictions?

Mr. MCGUIRE. Some one has pointed out that the Forest Service, if it were placed on the Fortune list of the 500 largest corporations, would probably fall about midway. But it is quite a bit different. We have no

company comptroller; we have a very large board of directors; we have a large number of finance committees.

Mr. WYATT. It is getting larger all the time too.

Mr. MCGUIRE. I doubt that the management would survive if it were a private venture.

Mr. J. CAMPBELL. I agree with the line of questioning wholeheartedly that is going forward, but, on the other hand, I think it would be very difficult to compare this to a private corporation. The private corporation has the land value on the balance sheet which takes into consideration appreciation. We can't do that.

I think the line of questioning is appropriate, however.

Mr. WYATT. On the other hand, the private corporation is charged with making prudent investments in their resource which really I don't think——

Mr. J. CAMPBELL. I have no objection to the line of questioning. I think it is very appropriate.

RESPONSIBILITIES OF LANDOWNERS

Mrs. HANSEN. The committee for several years has been trying to get the message through to the fiscal managers that if the Government owns land it has direct responsibility for its well being. It has a direct responsibility to the people of the United States for the management of its watershed, for the management of its grazing land upon which the productivity depends, for a large segment of the agricultural industry. It has a responsibility to provide recreation, a responsibility for the survival of wildlife habitats, and a very sizable influence on the economy of the timber industry. Inadequate management practices in the long run will be as disastrous to the United States as some of the lack of foresight in the management of our energy resources.

I think better management in the energy field could have prevented many of the things that are happening today.

Mr. J. CAMPBELL. I don't disagree with your point at all, Madam Chairman. I think the success of the Forest Service is due to an intense interest on your part and that of your committee. As I said in my opening remarks, they had been buffeted from pillar to post from each side of the spectrum. I think they have come through in mighty fine shape under trying circumstances.

Mrs. HANSEN. They have, Mr. Secretary. This is not a criticism of the professional employees of the Forest Service. The Forest Service prepares what they consider an adequate budget developed upon their professional good judgment, upon the demands of the people of the United States, and then they are confronted with reductions based on "national priorities." I can't understand why more is spent on defoliating trees in Vietnam, for example, than on planting forests in the United States.

There is nothing on Earth that can produce a mature tree in a short span of time.

So, when you need more trees for watersheds, when you need more trees for management of erosion, and you need more sources of timber for a wide variety of reasons, it is going to require a long leadtime.

Mr. J. CAMPBELL. You can't shorten the time lag.

Mrs. HANSEN. I just wish the Office of Management and Budget had to face the consequences of their shortsightedness. I think that the

citizens of America in the year 2000 are going to be very critical of a nation that had a Bicentennial celebration for their 200th anniversary and did not make a firm commitment to the third century of our life by doing the kind of things that need to be done in the field of our natural resources.

COAL MINING

There has been much discussion recently about the energy crisis in the committee. Please review the current situation with respect to coal mining on Forest Service lands and what changes you anticipate in the near future.

Mr. McGuire. We have a map which I would like to refer to, Madam Chairman.

In the Eastern United States much of the coal is in private owner ship, in outstanding rights where the Government owns the surface and the subsurface is owned by private interests. Most of the red areas you see in the eastern part of the map are those where we now have some coal mining going on, or where we anticipate there will be coal mining.

In the West the situation is entirely different. Here, as you know the coal beds, especially in the northern Great Plains, are much thicker than they are in the East. The coal is of low sulfur content and part of it can be mined by strip or surface mining, but most of it will have to be mined by underground methods.

We are working now on an evaluation of this situation, along with the Department of the Interior and the Environmental Protection Agency, to determine what areas can safely be mined and by what techniques; how the mined areas can be restored and what areas should not be mined at all.

Decisions have not yet been made. We are anticipating, however, that we will have to do a great deal more work to determine where transportation routes can be located; if powerplants are to be built, where they might be placed; where the transmission lines might be allowed to cross the public lands; and so on. This whole situation at the moment is still under intensive study. We expect some decisions to be coming forth soon, but it is too early yet to say what is going to happen.

FORESTRY INCENTIVES PROGRAM

Mrs. Hansen. Last year, Congress passed the forestry incentives program. Please describe how this program is now operating in the Agricultural Department. Are you satisfied with this arrangement?

Mr. Thornton. We are very satisfied. This comes under the rural environmental conservation program. The State foresters work with other agencies. The $10 million program this year will plant 180,000 acres of trees and improve 180,000 acres of timber stands. We have, for the first time, a major effort to get at this motivation of private landowners such as you referred to this morning. The outlook for 1975, as the Chief said, is $25 million for cost sharing. The cost sharing is normally about 75 percent. The law allows 50 to 75 percent of the cost to be shared with the owner.

In brief, it is moving very well. We have great expectations for it in fiscal 1975.

Mrs. HANSEN. Are you receiving cooperation from the Extension agents throughout the country?

Mr. THORNTON. Yes, they are one of the agencies of the Department working with us and calling to the attention of the forest landowners this new program.

Secretary Campbell heads a policy board for the whole RECP program, and this has given us a new opportunity to bring together the various agencies.

Mr. J. CAMPBELL. Madam Chairman, if I may elaborate just a little bit, as far as the Extension Service is concerned, I think that their degree of interest will vary greatly from county agent to county agent. They are local employees. They do not take direction from Washington, D.C. They are hired by the local county officials, most of whom are elected. The county agents are the Extension Service and the Federal Government pays a part of their salaries.

[Discussion off the record.]

LOG EXPORTS LIMITATION

Mrs. HANSEN. What is the current status of your implementation of the log export prohibition?

Mr. MCGUIRE. Madam Chairman, we have recently issued regulation which would prevent substitution of private logs for Federal logs, in accordance with the instruction you gave us last year. The existing appropriations bill, of course, prohibits the sale of timber where logs will be exported, but we do have some sales that were made before the present year, where export is still continuing.

We have also announced we are going to hold hearings in the immediate future on the question of cants. Present rules permit an exporter to manufacture cants no more than eight and three-quarter inches in thickness. There are other alternatives we think might be looked at, including the British Columbia system, or perhaps going to squares, but we are not sure how these alternatives would affect the trade. We want to get the views of all parties before we consider again whether to change from our present restriction on cant sizes.

Mrs. HANSEN. Please insert in the record what your exports have been for the last 5 years?

Mr. MCGUIRE. We can provide that.

[The information follows:]

Softwood log exports, 1969–73

Year	*Million Board Feet Log Scale*
1969	2,316.8
1970	2,684.1
1971	2,233.4
1972	3,049.4
1973	3,107.2

Source: U.S. Department of Commerce, Bureau of Census. U.S. Exports, Commodity by country. FT 135 (annual).

FOREIGN OWNERSHIPS OF LAND

Mr. MCKAY. Perhaps foreign countries are purchasing, either private land or perhaps they have taken leases as corporations on public

land and taken forest materials off to ship to Japan, for example, out of Alaska. Do we have any information on that type of activity, which may come under what you are talking about here in the way of restrictions?

Mr. McGUIRE. The industry in Alaska, of course, is largely controlled by Japanese ownership. We occasionally hear of a foreign owner acquiring an interest in land or in manufacturing facilities in the Pacific Northwest, but so far we have not been able to detect any particular trend in this. It has been very minor. There have been probably a few examples but I don't think there is any trend.

We have tried, in announcing our regulation changes, to head off such a trend by warning those that might be interested that there might be some more severe restrictions on what could be shipped abroad.

Mr. McKAY. Have you any figures about where private lands are being bought up and the products shipped out? Do you have any knowledge of that?

Mr. McGUIRE. I don't know that we have any figures. However, we might see if we can find something that would answer your question more specifically.

Mr. McKAY. You indicated there were some of these, for example, the Japanese in Alaska.

Mr. McGUIRE. In Alaska, yes. We know about the situation in Alaska very well. Here the ownership is in the manufacturing facilities, though, not in the land.

Mr. McKAY. To what extent have the Japanese purchased land in Alaska with timber?

Mr. McGUIRE. Very minor because most of the timber-bearing land is now in public ownership.

Mr. McKAY. Could you provide some figures on that?

Mr. McGUIRE. We would be glad to do that.

[The information follows:]

We have not found any known substantive basis for reports that any groups or persons have been buying timberland on the Pacific Coast in significant amounts with export of the timber in mind.

Less than 1 percent of the commercial forest land in Alaska is in private ownership. We do not know how much of this privately owned land is held by Japanese corporations or individuals. Inquiries to our regional people and to other government agencies lead us to believe that the amount is not significant.

Mr. EVANS. I note that you are requesting an increase of $210,000 to help with enforcement of the Log Export Act. We know that log exports from private industry land in the west coast States have stayed at a very high level. Is the rate of log exports from private lands resulting in any increase in industry pressure on the national forests in those States to cut more from public lands?

Mr. McGUIRE. Log exports from private lands will result in some increased demand to harvest more timber from the national forests. As more and more private timberlands are purchased by the larger companies, this tends to make less private timber available for the numerous smaller mills. Also, in the 1972 and 1973 period when prices and consumption were up, the pressures on both the private lands and national forests were for increased harvest. There are several factors that result in demands for increased harvest from the national forests and log export is not more significant than some of the others.

EXPORT POLICY IN ALASKA

Mr. WYATT. If the present regulations on cants are to be changed after the public hearings in Seattle and in Portland, I would assume that the present regulations would remain in force in Alaska. There would be no particular problem about having a different rule in Alaska in view of the historic Alaskan cant trade.

Mr. MCGUIRE. It has always been our policy to handle Alaska as sort of a separate problem. However, if we did go to more restrictive rules in the lower 48 States, then I think it would raise a question about whether the rules should not be equally restrictive in Alaska. It has been the other way around up until now.

Mr. WYATT. If there is a serious problem on this, I would like to be advised on it because, No. 1, I don't think we should change the policy in Alaska. It can probably wipe out a good part of their economy by doing so.

Second, I wouldn't like to see the policy for the lower 48 States determined by what is necessary in Alaska because I think you then have a situation where the tail is wagging the dog.

Mr. MCGUIRE. I agree with that.

MANAGEMENT OF FORESTS

Mrs. HANSEN. I have a news clipping from Business and Finance regarding lumber. This is something we talked to you about with regard to the management of the forests, the planting of trees, et cetera. Weyerhaeuser is going to plant a total of 400 million trees in the 3 years to follow. This is an example of what we discussed a little while ago that business enterprises feel it is mandatory in the management of their forests to continue to replace the raw material.

Do you have any comment? When you have to depend on presenting your requests to the Office of Management and Budget, you are not getting the kind of management that I suspect you need.

Mr. MCGUIRE. Of course, most of the lands held by the private timber industry are intensively managed for timber production. The harvesting techniques are different than those we would use or do use in the national forests. The interest with any landowner who is trying to grow more timber is to get his trees into the ground just as quickly as possible and not wait several years after harvest because he would be losing money and time if he did so.

In the national forests, the problem is different. First, because on the lands we harvest we must wait for the harvesting to be completed in order to use the deposits of the purchaser to perform the reforestation work. For the lands that are not within the timber sale areas, we must rely on appropriated funds to get those areas planted. It is quite a bit different than the problems faced by the industry.

Mrs. HANSEN. But you face one problem in common and that is the supply of trees, yours for a variety of purposes and theirs for one purpose, and yet they have some responsibility and obligation to watershed management.

Mr. MCGUIRE. That is right, and they must obey the State and Federal laws dealing with water pollution.

Mr. EVANS. If we changed our method of financing and reforestation, would this advance our reforestation program? Couldn't we

advance it by as much as 3 years? Assuming you can get the money?

Mr. McGUIRE. There are some possible changes in the Knutson-Vandenberg Act, I suppose, which could make moneys available for all sale areas rather than specific sale areas. That might help to advance the process like you say.

Mr. EVANS. Would it advance it by as much as 3 years in those timber sales?

Mr. McGUIRE. Yes; it could well do that.

Mr. EVANS. Have you suggested and recommended such legislative changes?

Mr. McGUIRE. No, we have not.

FREE FIREWOOD PROGRAM

Mrs. HANSEN. I have a news clipping entitled: "National Forest Open for Free Fuelwood." What success have you had with this program?

Mr. NELSON. Madam Chairman, from all reports that we have had, this is working out exceedingly well. The number of free use permits that have been requested have doubled. We think it helps to get rid of some of this residual material that is on the ground, and in essence, helps clean up the forests.

We think it has been a good relationship with the local public in the fuel crisis period. I think we can say this has been an excellent program that has been well received.

Mrs. HANSEN. They have taken out exactly what you told them to take out?

Mr. NELSON. Yes, ma'am.

Mrs. HANSEN. Then they have done a better job than the people who cut Christmas trees on my land. People would cut one tree and then they see another one bigger and better and they would cut that one. By the time they would get through you would have 11 or 12 trees lying on the ground.

Mr. NELSON. We have designated areas for removal of firewood.

Mrs. HANSEN. Have you checked to see how they cleaned up after themselves?

Mr. NELSON. Yes, we have. Of course, there are always exceptions in cases like this, but I think we can say we are well satisfied with the results we have had from this firewood program.

TIMBER SURVEY CYCLES

Mrs. HANSEN. The committee has received a lot of letters from people interested in the timber survey program. I have one from the Commissioner of Economic Development in Minnesota. Are you aware of that?

Mr. McGUIRE. I believe that refers to the periodic surveys we make in each State of the area and volume of the timber resource, the rate at which it is growing, and the rate at which it is being cut.

The funds for this activity have kept the survey cycle in excess of 10 years. The resurveys have not been made rapidly enough to satisfy those who use this information, so I believe the proposal that you refer to here is to speed up the cycle.

In the South where forest resource situations change even more rapidly than in Minnesota, the cycle probably should be down to about every 5 years. Countrywide probably about every 10.

Mrs. HANSEN. There is no budget provision?

Mr. DICKERMAN. That is correct. There is no increase.

BOULDER-GROVER ROAD

Mrs. HANSEN. I have received a letter from Congressman Owens. He says: "For over 50 years, the only road connecting the Utah towns of Boulder and Grover has been an unpaved, sharply curved, and rocky stretch 28.5 miles in length."

Mr. McKay may want to ask additional questions about this road. Are you familiar with this, Mr. McGuire?

Mr. MCGUIRE. Yes, we are, Madam Chairman.

Mr. NELSON. Madam Chairman, on the Boulder-Grover Road, we are cooperating with the State and counties by accomplishing the planning and the preliminary engineering work for this route.

It is across the Dixie National Forest. As we assisted the local authorities in this effort, we found that the road primarily serves regional needs in Utah and Arizona. After the existing primitive dirt road between Boulder and Grover is reconstructed, it is our judgment that its primary purpose would no longer be as a forest development road providing access to the national forest. Rather, it would be more appropriately a forest highway system, or a public lands highway, serving the highway traffic between these communities.

Mrs. HANSEN. Isn't there money in the budget each year for the public land highways and for the forest highways?

Mr. MCROREY. That is correct, there is, Madam Chairman.

[Discussion off the record.]

Mrs. HANSEN. Please insert in the record what was authorized by the Federal-Aid Highway Act of 1973 for fiscal year 1974 and what was requested for the Federal forest highway system in fiscal year 1974.

Mr. NELSON. Yes, ma'am.

[The information follows:]

These two programs are under the administration of the Federal Highway Trust Fund as a part of the Federal Aid Secondary System.

Authorized by the Federal-Aid Highway Act of 1973 for fiscal year 1974:	
Forest highways	$33,000,000
Public land highways	16,000,000
Appropriated for fiscal year 1974:	
Forest highways	18,000,000
Public land highways	10,000,000

ROADLESS AREA STUDIES

Mr. EVANS. How many roadless areas are you planning to study this next year? And how much do you estimate that this will cost? I am referring to the wilderness study area announcement you made last October, wherein you set up 274 specially designated areas.

Mr. MCGUIRE. Of the 274 new wilderness study areas, 23 studies will be completed prior to fiscal year 1975 and 59 will be worked on in fiscal year 1975. Only about one-half of the 59 will be completed at a cost of about $600,000.

WILDERNESS ADMINISTRATION

Mr. EVANS. I noticed that you were asking for a decrease of $25,000 in your wilderness administration program. What is the basis for this? I am concerned about this, because it seems to me that the Forest Service is always complaining about overuse of wilderness areas, and the need for more funds to properly administer it. It is true that you are asking for an overall increase in the whole program, but the increase is the pay costs and for space rental, not for the program itself.

Mr. MCGUIRE. As part of the continuing effort to hold down governmental spending the budget includes a small increase in the total recreation use activity. The $25,000 decrease in wilderness administration is the result of program adjustments within this budget line item. For example, it is proposed that there be a program increase of $261,000 in operation and maintenance. To cover this increase it was necessary to make adjustments in other parts of the program.

DEVELOPMENT OF BOULDER-GROVER ROAD

Mr. MCKAY. Do you see no further development on this Boulder-Grover road?

Mr. NELSON. About as far as we can go on a forest development road is to help the State and counties. This we are doing in planning, and the engineering work.

Mr. MCKAY. You are not putting up any money to put the road down?

Mr. NELSON. No, sir.

Mr. MCKAY. Do you have any other funds aside from forest development?

Mr. NELSON. This is where we were talking to the forest highway and public lands highway funds.

Mr. MCKAY. Will you be able to extend some funds for that purpose in this case?

Mr. MCRAREY. In the use of the forest highway system funds, Mr. McKay, the priority setting is established by the State, by the Federal Highway Administration, and by the Forest Service. The State is a prime participant in the determination of the priorities.

Mr. MCKAY. At the present time we have a specific priority as far as Utah is concerned, and they are not getting enough funds out of that because of the impoundment of funds so they can finish that priority and go to this other one.

You are just telling me in effect there are no funds and will be no funds available to build that road.

Mr. NELSON. Under the forest roads and trails allocation, that is correct, Congressman.

ARIZONA WATERSHED PROGRAM

Mrs. HANSEN. The Arizona Water Resources Committee has written Congressman Rhodes about the Arizona watershed program. Do you have any comments in this regard?

Mr. NELSON. I am not specifically acquainted with that.

May we furnish an answer for the record?

Mrs. HANSEN. Please do.

[The information follows:]

ARIZONA WATERSHED PROGRAM—APACHE, COCONINO, AND TONTO NATIONAL FORESTS, ARIZ.

Appropriation activity	In fiscal year 1975 budget request	Additional increment for fiscal year 1975
Forest protection and utilization:		
Subactivity:		
Soil and water management	$439,000	$121,000
Reforestation and stand improvement	78,000	

1 *Feasibility and desirability.*—The Arizona watershed program was started in the late 1950's to evaluate land management measures designed to increase water yield. In addition, changes in forage and timber production, wildlife populations, recreational values, erosion, and sediment were also to be evaluated.

In 1971, the objectives of the program were revised based upon recommendations of an interdisciplinary team. Current major objectives are: (1) to develop multiple use production data for alternative land management practices and determine their ecological and environmental impacts; (2) develop, test, and refine physical product models that estimate responses to management activities; (3) develop and test an economic evaluation and planning model; (4) pilot-test and demonstrate on an operational scale the physical product and evaluation planning models thus developed (the Woods Canyon Watershed); and (5) develop from the physical and economic models a series of management models for use in other areas outside the Southwest.

Because competing demands for resource and uses as well as for maintaining or improving the environment continue to increase, it is necessary to develop and test new analytical procedures to aid land managers in allocating resources in a systematic manner. Furthermore, these procedures must provide quantification of product output so that more accurate predictions can be made regarding consequences of management decisions.

A pilot-test on a large scale watershed is considered to be an essential part of this program so that the developed analytical procedures can be verified in a carefully controlled setting prior to making broad use of the techniques in other areas.

2. *Description of work.*—The initial phases of the project consisted of calibrating watersheds and making measurements of resources to determine present output without treatments. This was followed by carefully designed prescriptions or treatments with subsequent measurements to determine responses of various resources such as water yield, sediment, timber and forage productivity, wildlife, esthetics, and other values.

Using data from the various treatments, models for predicting physical outputs are being developed. Also, basic economic data are being collected to develop economic and planning models. These models will then be used with national forest inventory data to predict and evaluate responses to a mixture of treatments on a large scale watershed.

The prescribed treatments would have wide applicability and would meet requirements of economic efficiency, environmental quality, and public acceptability.

3. *Time required for project.*—This is a continuing program, but the treatment phase of the Woods Canyon pilot test is expected to be completed by approximately 1980. Thereafter, maintenance and other projects will be programed in logical sequence in the watersheds during an evaluation period.

4. *Estimated total cost.*—Total protection and management funding needs for this project, fiscal year 1975 through fiscal year 1980, will be $4,720,000. Of this amount, only $3,107,000 is expected to be available at present funding levels. Thus, an estimated $1,613,000 is needed to complete the total program over this 6-year period. After 1980 the program will be continued at a lower funding level to allow adequate evaluation and extension of results.

5. *First-year cost items.*—Total cost in fiscal year 1975 will be $638,000. Of this amount, only $517,000 is expected to be available at present funding levels. Additional funds in the amount of $121,000 are needed to fully implement the fiscal year 1975 program. These funds will be used for detailed planning, for land treatment, and for operation and maintenance of special project facilities.

6. *Additional personnel.*—One and one half additional scientific man-years.

BLANCHARD SPRINGS CAVERNS

Mrs. HANSEN. Congressman Mills has written about Blanchard Springs Caverns.

He states:

I have learned * * * the forest people here in Arkansas put their facts and figures on paper and sent them up through channels. Unfortunately for some reason unknown to me, the report on fiscal 1975 capability did not reach Washington in time to be included in the President's budget. It is my understanding the budget includes only $748,000 for operation and maintenance of the caverns. If the department were asked, it could report a construction funds capability over and above that of $1,272,000 for construction and land acquisition and $259,000 for forest roads and trails.

Mr. NELSON. I believe, Madam Chairman, that the figures you are talking about are $748,000 in operation which are in the budget. It is my understanding that the $1,272,000 and the $259,000 are not in the budget. I think perhaps those are projects that could be constructed during fiscal year 1975.

Would you like me to elaborate for the record?

Mrs. HANSEN. Please do.

[The information follows:]

To accommodate increasing use, additional tour and overnight facilities are needed at Blanchard Springs Caverns. As these facilities are developed, the work center should be expanded to allow for adequate operation and maintenance. The items are summarized as follows:

Item	Recreation public use construction	Forest roads and trails
Construct 2nd cave tour	$862,000	$11,000
Expand sewer system from 40,000 to 80,000 gallons per day	80,000	
Construct interpretive trails, level parkways, and design campground	160,000	136,000
Expand work center	122,000	
Construct new entrance station and road	48,000	112,000
Total costs	1,272,000	259,000

RESEARCH RANCH IN ARIZONA

Mrs. HANSEN. Congressman Udall has written the committee about the southern Arizona Environmental Laboratory known as the Research Ranch. This involves studying an 8,000 acre area to see whether nature recovers from man-made uses. The Forest Service, the State of Arizona, the Atomic Energy Commission and other agencies support this project. What does this involve?

Mr. DICKERMAN. There is a proposal to initiate some research in the area relating to nongame species of birds, mammals, and other wildlife. The proposal is to use this area for research purposes.

Mrs. HANSEN. What have you done to implement the proposals?

Mr. DICKERMAN. We have, at this point, been discussing with the people the type of a program that is needed. We have no item in the budget to initiate this research at this time.

Mrs. HANSEN. Congressman Udall has quoted a figure of $250,000.

Please insert in the record the feasibility of this project and what you hope to accomplish.

[The information follows:]

This research would be headquartered in Tucson. It would provide information on protection and management of habitats for nongame wildlife resources of the Southwest. Special problems and questions have arisen in management of nongame wildlife in southern Arizona and New Mexico. This unique area supports an unusually large number and variety of birds, mammals, and reptiles. Some of these species are in danger of extinction and do not occur elsewhere in the United States. Many strange and wonderful species, some from South America, are at the extreme northern limit of their range. Effects of land management practices on habitat for these animals must be determined if we are to maintain the unique wildlife resource. The research would be carried out by scientists from the Forest Service and cooperators from the University of Arizona at Tucson and other universities.

RESEARCH AT DURHAM, N.H.

Mrs. HANSEN. I have received another letter from Congressman Cleveland relative to the Northeastern Forest Experiment Station located in Durham, N.H. He is requesting an additional $400,000 to implement needed research in forestry and watershed improvement. What is your comment in this regard?

Mr. DICKERMAN. This program is related to the research in the Northeastern States and the back country, mountain areas. Our laboratory at Durham, N.H. would handle the research. It relates to the increasing recreational use of the back country and the water quality problems that we get through increased recreation use.

RESEARCH AT BEREA, KY.

Mrs. HANSEN. I have received letters from Congressman Mazzoli and Congressman Stubblefield of Kentucky relative to the Forest Service unit at Berea. Have the funds appropriated last year for Berea been released?

Mr. MCGUIRE. They have been released, Madam Chairman.

Mrs. HANSEN. How much did this involve?

Mr. DICKERMAN. There was $50,000 appropriated for research there.

Mrs. HANSEN. What do you have in the fiscal year 1975 budget for Berea?

Mr. DICKERMAN. We have no additional funds The total amount that we have in the 1975 budget for Berea is $369,000.

Mrs. HANSEN. Would you compare that with the total you had in fiscal year 1974?

Mr. DICKERMAN. In 1974 it was $406,000. This reflects the reduction of the increase.

Mrs. HANSEN. What you did was cut the funds added by Congress.

Mr. DICKERMAN. That is right.

Mrs. HANSEN. Why has this occurred when other agencies have been including the additions in their base?

Mr. MCGUIRE. We have included the add-on in the base.

Mrs. HANSEN. Then the base amount was cut.

Mr. MCGUIRE. The base got cut. That is exactly what happened.

Mrs. HANSEN. How do you reconcile cutting the base amount when you need information on reclamation?

Mr. MCGUIRE. Again this was part of an attempt to hold down the overall total spending.

Mrs. HANSEN. There are funds in every part of the budget for the development of mining and I am perfectly frank in saying I don't think the Congress of the United States is going to spend additional money for development of coal without adequate reclamation techniques, Mr. McGuire.

Mr. MCGUIRE. Well, that is right. We frankly don't know why some public land agencies were increased and why others were decreased. Our research program overall will be down about $1.5 million over last year with the budget the way it is now.

COAL RESOURCES

Mrs. HANSEN. Will you place in the record the total current tonnage of coal that is coming from National Forest land, and the total number of kilowatt hours that is now supplied from Federal forest lands?

Mr. MCGUIRE. We will go as far as we can with those questions, Madam Chairman. Some of the answers may be found in the book on mineral areas management which we handed out this morning, but we will provide the specific answers.

[The information follows:]

The full potential of coal available is unknown because we do not have enough data on the coal resources. But we believe there are at least 50 billion tons of coal that ultimately could be mined from National Forest System lands.

An estimated 4.5 million tons of coal were mined from National Forest System lands in 1973.

Assuming that all of the estimated 4.5 million tons of coal mined in 1973 were used in generation of electric power, about 32 billion kilowatt-hours came from National Forest System lands.

Mrs. HANSEN. With the current problem of trying to develop energy and the increased interest in development of coal, I think there is going to be an increasing demand by Congress for answers in all phases of reclamation. I think the demand is going to increase and this kind of budget is going to really delay the coal development program.

Mr. MCGUIRE. We certainly agree with you. The opportunity is now to learn the proper reclamation techniques in the West before the development becomes full scale.

Mrs. HANSEN. You have special problems in this field particularly in the area of water.

Mr. MCGUIRE. That is right, and also we have the opportunity of extrapolating some of our findings from the Eastern experience to the Western problem.

RESEARCH AT INTERMOUNTAIN LABORATORY

Mrs. HANSEN. I think the OMB was extremely short-sighted in presenting this budget. I have another letter from Congressman Hansen of Idaho on the Intermountain Forest and Range Experiment Station at Ogden, Utah. He says: "Long-range plans of the Forest Service call for the addition of five scientists. . ." This will require an additional annual appropriation of $375,000. Is that amount included in your budget?

Mr. MCGUIRE. No; it is not. The Ogden allocation will increase by $26,000, however.

Mr. MCKAY. That will be down in total some $380,000 from last year, won't it?

Mr. McGUIRE. The program level will decrease. The $26,000 is to take care of pay increases and rents.

Mrs. HANSEN. Why did you decide to decrease this activity?

Mr. McGUIRE. Again, I can only say it was an effort to hold down the total Federal expenditure.

APPROPRIATION CUTS IN DEPARTMENT OF AGRICULTURE

Mrs. HANSEN. Why has the Forest Service been chosen to bear the brunt of maintaining national priorities?

Mr. McGUIRE. I am sure we are not the only ones——

Mr. J. CAMPBELL. Madam Chairman, in our Department it is not just the Forest Service. We have taken cuts in several of our agencies.

Mrs. HANSEN. With the price of food increasing?

Mr. J. CAMPBELL. We have also had cuts in production.

Mrs. HANSEN. You have more people living in the United States and greater demand.

Mr. J. CAMPBELL. Our farmers are doing an excellent job, I think, in producing food. I think this next year, if it is good weather, we will have another record harvest. The other agencies taking cuts have been Soil Conservation Service, Farmers Home Administration, and Agricultural Research Service. The Forest Service has not been singled out in the Department of Agriculture.

Mrs. HANSEN. As I look at the bureaus this committee handles, Mr. Secretary, the Forest Service has not faired very well.

Mr. Evans. As I recall last year, when the cuts were made, and the comments made, the Department of Agriculture suffered a greater cut than any other department, is that correct?

Mr. J. CAMPBELL. I don't know if that is true. I couldn't answer the question for the record. I would have to check to find out.

Mr. EVANS. Last year in our Agricultural Subcommittee, we talked about this and we were very alarmed because it looked like they had pointed the gun at the Department of Agriculture and pulled the trigger to cut them more than other departments.

Mr. J. CAMPBELL. We have a reduction of subsidies to our farmers because of increases in the market place which reduced the necessity for subsidies. On the other hand, we have had a tremendous increase in the Department of Agriculture in the food stamp and the free lunch program which, very frankly, have been escalating to our great alarm, in the Department of Agriculture.

Mrs. HANSEN. I don't see any great escalation in the Forest Service budget.

Mr. J. CAMPBELL. No, ma'am, that is correct.

RESEARCH AT DELAWARE LABORATORY

Mrs. HANSEN. I have received letters from Congressman Ashley and Congressman Minshall related to the Delaware Forest Service Laboratory. They are asking for an additional $450,000 for air pollution tree research. Is this $450,000 in the fiscal 1975 budget?

Mr. DICKERMAN. Madam Chairman, that amount is not in the budget. This has to do with research in air pollution as it affects hardwood trees.

AUBURN RESEARCH LABORATORY

Mrs. HANSEN. Congressman Nichols has written in regard to the Auburn Forestry Sciences Laboratory. This is relative to the second phase of construction of the laboratory. Is that in the budget?

Mr. DICKERMAN. This amount is not in the budget. We have no new construction.

Mrs. HANSEN. What is needed for the completion of the Auburn Laboratory?

Mr. DICKERMAN. Our estimate is somewhere between $700,000 and $800,000 at the present time. This would be the second phase of the Auburn Laboratory. We will know costs a little better in the next few weeks when bids for constructing the first phase are opened.

Mrs. HANSEN. It isn't a very good policy to build half a laboratory.

Mr. DICKERMAN. On this one each of the two phases is planned to provide the essential facilities needed for a research work unit.

RESEARCH AT RHINELANDER

Mrs. HANSEN. Congressman Obey has written relative to the increased fiber yield program proposed at Rhinelander, Wis. He is requesting $360,000 for this facility. Is this item in the budget?

Mr. DICKERMAN. This item is not in the budget.

Mrs. HANSEN. Why not? Is this a valuable project?

Mr. DICKERMAN. We think it is one of the most valuable ones to follow through the tremendous tree improvements and genetics work we have under way there at the present time. This would maximize the benefits flowing from the basic research.

Mrs. HANSEN. If it has such maximum benefits, why isn't it included in the budget?

Mr. DICKERMAN. The balance was not available to us to put in.

Mrs. HANSEN. I thought the reason we performed research, was to get a maximum response.

Mr. DICKERMAN. We hope to take the results of the genetics research on into the development phase with intensive culture for maximum fiber yield, which is what we are talking to at this point.

STATE AND PRIVATE FORESTRY COOPERATION

Mrs. HANSEN. I received another letter from Congressman Clay concerning appropriations for cooperative forestry programs of the Forest Service.

Mr. MCGUIRE. I believe that refers to our State and private forestry program cooperative fire control and technical assistance.

JUSTIFICATION MATERIAL

Mrs. HANSEN. We will insert justification pages 1 through 12 in the record at this point.

[The pages follow:]

FOREST SERVICE

Purpose Statement

The Forest Service is responsible for promoting the conservation and wise use of the country's forest and related watershed lands, which comprise one-third of the total land area of the United States. To meet its responsibility the Forest Service engaged in three main lines of work, as follows:

1. Management, protection, and development of the National Forests and National Grasslands. The 155 National Forests and 19 National Grasslands are managed under multiple use and for sustained yield. Under these principles natural resources of outdoor recreation, range, timber, watershed, and wildlife are utilized in a planned combination that will best meet the needs of the Nation without impairing the productivity of the land.

   Direct as well as generated employment for rural residents contribute to community development and to environmental protection and improvement. Gross area within unit boundaries encompasses about 226 million acres in 44 States and Puerto Rico, of which some 187 million acres are under Forest Service administration.

   In managing the National Forests, technical forestry is applied to the growing and harvesting of timber crops. Grazing use is managed to obtain proper range conservation along with utilization of the annual growth of forage. Watersheds are managed to regulate stream flow, prevent floods, and provide water for power, irrigation, navigation, and municipalities.

   Management includes the development, maintenance, and protection of sites and facilities for the millions of people who visit the National Forests each year for recreation purposes. Emphasis is given to protecting scenic quality while at the same time assuring availability for forest users. Wildlife habitat is managed to provide a suitable land and water environment for both game and non-game wildlife.

   Under the multiple use principles most areas are used for, or serve, more than one purpose or objective. For example, about 50 percent of the area within the National Forests serves five different purposes:

   (a) Timber production
   (b) Watershed protection
   (c) Forage production
   (d) Wildlife habitat improvement
   (e) Recreation

   An additional 28 percent serves four purposes in varying combinations. Of the remainder, 21 percent of the total serves three purposes with only 1 percent of the total reserved exclusively for a single purpose, mainly campgrounds and special use areas, such as summer homesites, pastures, and corrals.

The varied interests which frequently conflict and which must be reconciled, and the vast areas covered, clearly require careful planning and skillful management of the National Forest properties to most effectively serve the Nation's people.

The protection of the National Forests includes the control of forest fires, the control of tree disease and insect epidemics, and the prevention of trespass.

The major development activities of the National Forests are reforestation; timber stand improvement; revegetation; construction of roads, recreational facilities, range and other necessary improvements; and land acquisition and exchanges. Each of these activities contributes to the local economy and in many areas serves to improve incomes of the rural poor.

The economic importance of the National Forests and National Grasslands is evident when it is considered that:

(a) They produced a cash income in fiscal year 1973 of $470 million. Approximately 65 percent of this amount is credited to the general fund in the Federal Treasury (miscellaneous receipts). The remainder is distributed in accordance with special acts of Congress, including 25 percent to the States or counties in which lands are located, and 10 percent made available for construction and maintenance of the Forest Service system of roads and trails. In addition to these cash receipts, there are the even greater economic values which result from the processing of end products derived from this utilization of National Forest timber, forage, and minerals. Recreation, wildlife and water result in important economic activity in local, State, and national economies. There are also important intangible values of water, recreation, and wildlife such as the esthetic enjoyment of natural beauty.

(b) The area within National Forests boundaries is equivalent to some 10 percent of the area of the continental United States. Over 24 percent of this land is within areas now experiencing economic distress. Proper management, development, and utilization of these lands are important factors in permanent improvement of these local economies. Millions of people who live in and near the National Forests are supported in whole or in part through the economic development arising from the forests and their resources. These resources offer the most favorable basis for developing prosperous and vigorous local economies and communities.

(c) The National Forests supplied 12.4 billion board feet of timber in fiscal year 1973 to the Nation's forest products industries. This is expected to decrease to 12.0 billion board feet in 1974. Dependence of the forest products industries on National Forest timber continues to increase as the result of depletion of good quality timber on private lands. In some areas, the dependence of local industry on National Forest timber is almost 100 percent. Without this supply some small communities could not exist.

(d) About 3.3 million head of domestic livestock (mature animals) are grazed on the National Forests and Grasslands. In many local areas this is a major industry. Without such Federal rangelands the economic activity would be drastically curtailed from currently depressed levels.

(e) These lands provide about 390 million acre feet of high quality water annually. The lands also provide protection to municipal water supplies for nearly all western cities and towns and many in the East, to irrigation water used on about 20 million acres of western lands, and to many streams with water power developments. They provide flood protection to thousands of acres of rich valley lands and help to prevent more rapid siltation of reservoirs and stream channels. A dependable water supply is an important prerequisite for economic and community development.

(f) They provide habitat for a large part of the big game animal population, for birds, for millions of small game animals, furbearers, and for fish. Hunters, fishermen, and appreciative wildlife users (photographers and birdwatchers) constitute an important supplementary source of income for numerous communities, many of which are economically depressed. These lands provide habitat for 58 endangered and threatened fish and wildlife species.

(g) They provide opportunities for healthful outdoor recreation, with a minimum of restrictions. Outdoor recreation is an important source of supplementary income in most areas as well as providing recreational opportunities for local residents. In some relatively depressed communities it becomes even more important.

2. Forestry research. The Forest Service conducts research in the entire field of forestry and the management of forest and related lands. This includes the growth and harvesting of timber, its protection from fire, insects, and diseases, the protection and management of watersheds, and improved methods for development

and management of recreation resources. It conducts studies in forest economics, marketing of forest products, and a survey of the present extent and potential growth and use of the Nation's forest resources. It also conducts research to develop new and improved products from wood, to increase efficiency of utilizing forest products, and to advance the efficiency and mechanization of forestry operations.

The research program has a two-fold objective:

(a) To backstop the National Forest development program by devising more efficient practices for protecting, managing, and utilizing forest resources and that will not have undesirable consequences on environmental quality and productivity.

(b) To develop new and improved practices that will lead to sounder uses of forests in other public and private ownerships, more efficient and profitable utilization and marketing of forest products, and improvement of the environment on these lands.

The Forest Service disseminates and demonstrates the results of research to owners of private forest and rangelands, to public agencies which administer such lands, to forest product industries, and to consumers. Research in the growing, harvesting, processing, and marketing of forest products results in increased competitiveness for forest products. Contribution of the forest resource to the economic and social welfare is made more effective. Research in the management of resources for water, forage, wildlife, and recreation has similar effects as a basis for community development and satisfaction of national demands.

3. Cooperation with State and private forest landowners. The Forest Service cooperates with State agencies and private owners to improve multiple use management of non-Federal forest lands. Technical help is also provided by the Forest Service in cooperation with the State agencies to the processors of forest products. Opportunities exist for greatly increasing the contribution of these lands in enhancing the environment and to the social and economic welfare of the Nation as a whole and more particularly through rural development activities to improve the economic levels, employment opportunities, and general welfare of the people living in these areas. Specific programs are designed to:

(a) Better protect the 631 million acres of State and privately owned forests and critical watersheds against fires, insects, and diseases.

(b) Encourage better forest practices, for resource conservation, betterment, and profit, on the 393 million acres of non-Federal forest land.

(c) Aid in the distribution of planting stock for forest and windbarrier plantings on non-Federal lands.

(d) Assist the harvesters, processors, and marketers of forest products in doing a better job and thereby bring about greater use of forest products and increased income and employment for rural people.

(e) The Forest Service also provides assistance to States for forestation and tree improvement under Section 401 of the Agricultural Act of 1956 (16 USC 568e-568g), through the State forester, including advice, technical assistance, and financial contributions.

(f) Provide assistance to State and local communities in an intensified development planning effort to improve both the economic situation and environmental quality in rural America and to enhance environmental values associated with use of trees in urban and community areas.

Other work related to forestry includes:

4. Insect and disease control. Activities to suppress and control destructive forest insects and diseases to protect timber, recreation, scenic and other environmental values. Protection is provided to Federal lands and, in cooperation with the States, to non-Federal forest lands.

5. Flood prevention and watershed protection. The Forest Service cooperates with the Soil Conservation Service, appropriate State agencies and the local organizations sponsoring small watershed protection projects initiated under the Watershed Protection and Flood Prevention Act of 1954 (16 USC 1001-1007) in planning and installing forestry and related land resource measures on the watersheds. The Forest Service also collaborates with the Soil Conservation Service, other Federal and State agencies in the conduct of comprehensive river basin studies relating to the development of water and related land resources under authority of the Water Resources Planning Act (42 USC 1962) and 16 USC 1006 mentioned above. Such studies can form part of the basis of plans for regional and community economic development.

   On National Forest lands and on non-Federal forest lands within the watersheds authorized for treatment by the Department of Agriculture under the Flood Control Act (33 USC 701), the Forest Service plans and installs watershed improvement measures, in the form of minor physical structures, cultural measures, and intensified fire control, to retard runoff and reduce flood water and sediment damage. Work on non-Federal land is carried on in cooperation with the Soil Conservation Service and the appropriate State and local agencies.

   The Forest Service cooperates with the Soil Conservation Service and other Federal, State, and local agencies or groups in the emergency treatment of watersheds impaired by fire or other similar disasters to prevent the loss of life or serious flood and sediment damages. This work is performed under the authority of Section 216 of the Flood Control Act of 1950 (33 USC 701b-1) with funds allotted to the Forest Service by the Soil Conservation Service. This section of the Act provides that not more than $300,000 of the regular appropriations for Flood Prevention may be expended during any one fiscal year for emergency measures.

   Generally, this work is performed with funds allotted to the Forest Service by the Soil Conservation Service. Forest Service funds are used to finance land treatment and certain other measures on small watershed projects located on National Forest lands.

6. Job Corps Civilian Conservation Centers. The Forest Service operates 20 Job Corps Civilian Conservation Centers on National Forests throughout the United States under agreement with the Department of Labor. The Forest Service provides the staffing, administration and logistical support to physically operate and maintain the Centers and conduct the basic education, plan and supervise the recreation, and fully implement the vocational training of corpsmen. The funds for this program are transferred from Department of Labor. There are 41 to 60 permanent staff assigned to each Center based upon enrollee capacity of 112 to 224. Total capacity of all Centers is 3,848 corpsmen and Centers operate on a 24-hour, seven-day week basis. Both human and natural resources are being upgraded through these Civilian Conservation Centers, as young men improve their education and job skills in preparation for a more productive life.

7. Youth Conservation Corps. The Forest Service and the Department of the Interior share equally in a program authorized by the Act of August 13, 1970, as amended, (80 Stat. 1319). This work-education program provides: Gainful employment of America's youths from a variety of economic, racial and social backgrounds, ages 15 through 18, during the summer months in a healthful outdoor atmosphere; further development and maintenance of the natural resources of the United States; and an opportunity for understanding and appreciation of the Nation's natural environment and heritage. The work projects include recreation facilities maintenance and construction, wildlife habitat improvement, timber stand

improvement, trail maintenance and construction, and visitor information services. The residential program includes both urban and rural youth who reside away from, as well as adjacent to, public lands. The non-residential program includes those youth who reside adjacent to public lands.

8. Timber stand improvement. Funds collected from timber purchasers in connection with timber sales, under authority of the Knutson-Vandenberg Act, make possible some timber stand improvement work on cut-over areas each year looking to the establishment of natural tree growth and protecting it through the critical period of early growth. This work also helps to obtain stocking of trees of desirable species, form and quality. Timber stand improvement in promising young growth not associated with timber sale cuttings is done with funds directly appropriated by Congress.

9. Brush disposal. National Forest timber sale contracts require treatment of debris from cutting operations or deposit of funds to pay for the work. If it is not feasible for the timber purchaser to dispose of the logging slash, which is the case in most sales, it is done by the Forest Service using deposits made by the purchaser. This work is essential because logging slash increases the fire hazard and may contribute to the buildup of insect populations, increase certain disease infestations, and cause damage to stream channels.

10. Land and Water Conservation Fund. This fund, transferred from the appropriation made to the Department of the Interior, finances the acquisition of lands, waters, or interests in lands or waters by the Forest Service as well as certain other Federal agencies. The Act requires that the lands and waters acquired be primarily of value for outdoor recreation. Means are provided for expanding outdoor recreation opportunities and protecting and improving environmental quality including natural beauty.

11. Rural fire defense. The Forest Service, as a part of its regular programs, also directs Federal activities and provides technical guidance and training to States concerned with the prevention and control of fires which might be caused by an enemy attack or a nuclear accident in rural areas of the United States.

IMPLEMENTATION OF NATIONAL ENVIRONMENTAL POLICY ACT

Federal agencies are authorized and directed by the National Environmental Policy Act of 1969 (PL 91-190) to use all practical means and measures, consistent with other essential considerations of national policy, to carry out the purposes of the Act to protect and enhance the quality of the environment. The Forest Service is an environmental agency and most activities, in the broadest sense, are directed towards the protection and enhancement of the environment. The Act supplements and reinforces previous authorities. Section 102(2)(C) of the Act requires environmental statements on proposed major Federal actions significantly affecting the environment. The objective of this section is to build into all decisionmaking processes an appropriate and careful consideration of the environmental aspects of the proposed action. It assists and encourages agencies to implement not only the letter, but the spirit of the Act.

In addition to consideration of environmental factors in the planning and decisionmaking process in a wide array of Forest Service activities NEPA also provides a formalized procedure for informing and taking account of comments from other agencies, individuals, and groups having expertise on the subject area under consideration.

The Forest Service made a study of the cost and manpower requirements of implementing the Act. The study shows that in fiscal year 1972, the Forest Service spent approximately $13 million implementing NEPA. It is estimated that $5 million would have been spent on impact surveys and related activities normally taken by the Forest Service that would have been done even without passage of NEPA. In fiscal year 1972, the costs for implementing NEPA were approximately 2 percent of the Forest Service budget. However, continued need for increased quality as well as quantity will cause the costs to at least double in fiscal year 1975, according

to careful projections and estimates. Complexity is increasing, the volume of cases is sharply upward, and the scope and quality of statements must be improved. The entire planning and decisionmaking process of the Forest Service is involved.

Cost Summary from Study

Fiscal Year 1972:	Amount (in millions)	Man-Years
Cost of implementing NEPA	$13	712
Related costs and man-years incurred without NEPA	5	273
Increased cost to implement NEPA	8	439
Fiscal Year 1974:		
Estimated cost to implement NEPA	$28	1,533
Related costs and man-years incurred without NEPA	6	273
Increased cost to implement NEPA	22	1,260

The fiscal year 1974 estimated cost for various categories of work is as follows:

Environmental analysis and reports	$16,240,000
Draft and final environmental statements	3,080,000
Input to other Federal agencies, review and comment on other agency statements, and assistance to State and local people	2,800,000
Training, monitoring, inspecting, reporting, and other related activities	5,880,000
Total	28,000,000

Fiscal year 1975 was not included in the study. However, it is estimated that the costs will be at least that estimated for fiscal year 1974 and the percentage in each category will be approximately the same.

To accomplish the purposes of the Act and to meet Agency responsibilities and objectives, Forest Service policy is that the responsible official will not make a decision on a proposed action until the environmental impacts are assessed in detail. Alternative actions that will reduce adverse impacts or enhance environmental quality will be thoroughly explored. In the implementation of this policy, an environmental analysis will be made for proposed uses, activities, and plans concerning or involving National Forest System lands. The Forest Service is also following the same procedures for other activities where there are potentially major and significant environmental impacts or public controversy.

These analyses address the points required in NEPA. Along with established criteria, guidelines, and knowledge of potential or existing controversy, the analysis helps the responsible official determine if the proposal is a major Federal action affecting the environment significantly enough to require an environmental statement.

NEPA principles and requirements are being built into the land use planning and other planning processes. In addition, careful monitoring and evaluation is essential to fulfill the requirements of the task.

Prior to NEPA, the Forest Service prepared "impact" reports on proposed actions; these examined environmental impacts and mitigating measures of proposals. However, NEPA requires agencies to examine a wider range of alternatives, explores cumulative and secondary effects to a greater extent, and further formalize reviews with other agencies and the public.

ORGANIZATIONAL STRUCTURE

The Forest Service maintains its central office in Washington with program activities decentralized to 9 regional offices, 125 forest supervisors' offices, 687 district rangers' offices, 2 State and private forestry area offices, 8 forest and range experiment stations, the Institute of Tropical Forestry, and the Forest Products Laboratory. Location of headquarters offices:

Regional Offices: Missoula, Montana
Denver, Colorado
Albuquerque, New Mexico
Ogden, Utah
San Francisco, California
Portland, Oregon
Atlanta, Georgia
Milwaukee, Wisconsin
Juneau, Alaska

State and private forestry area offices: Upper Darby, Pennsylvania
Atlanta, Georgia

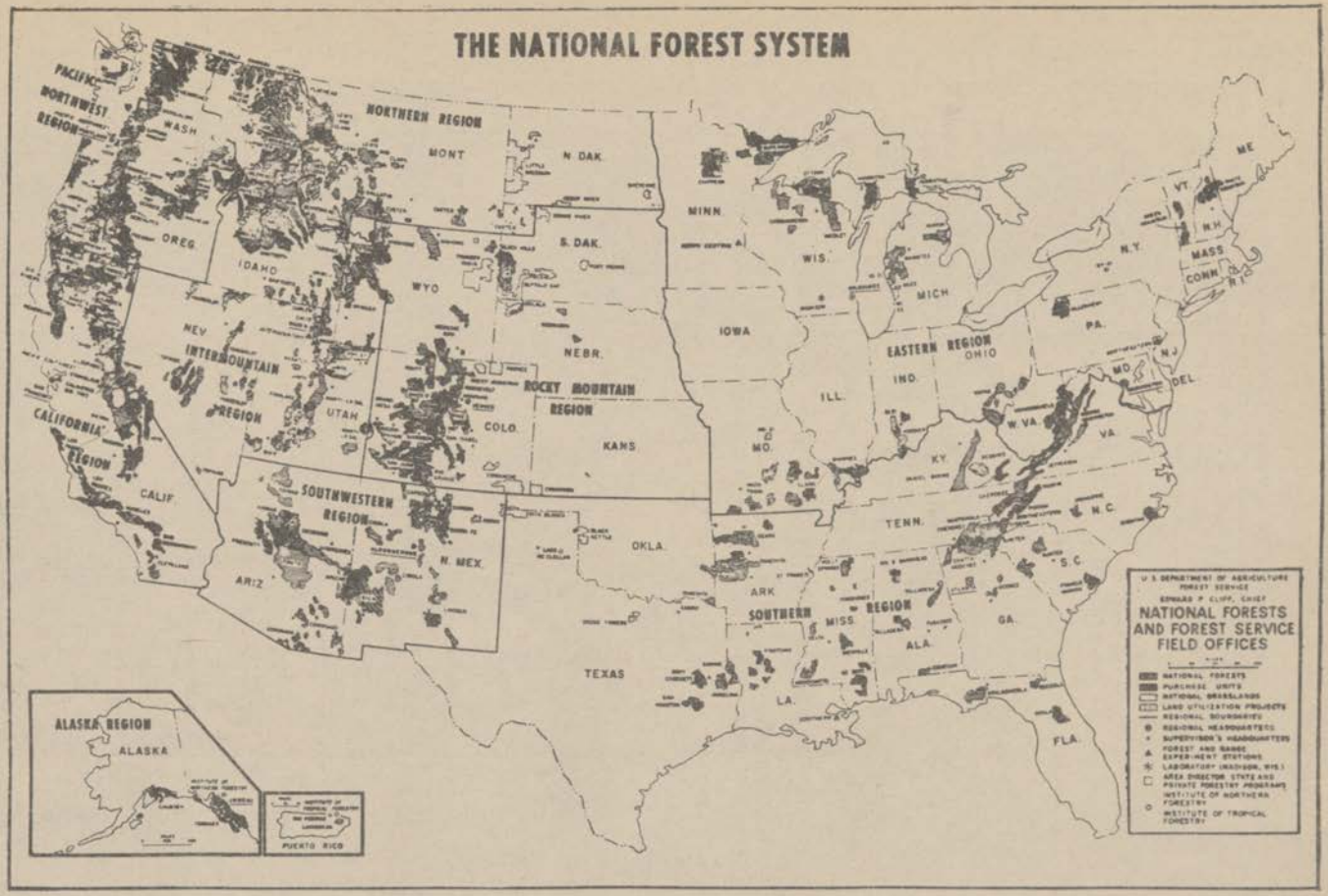
Experiment stations: Ogden, Utah
St. Paul, Minnesota
Upper Darby, Pennsylvania
Portland, Oregon
Berkeley, California
Fort Collins, Colorado
Asheville, North Carolina
New Orleans, Louisiana

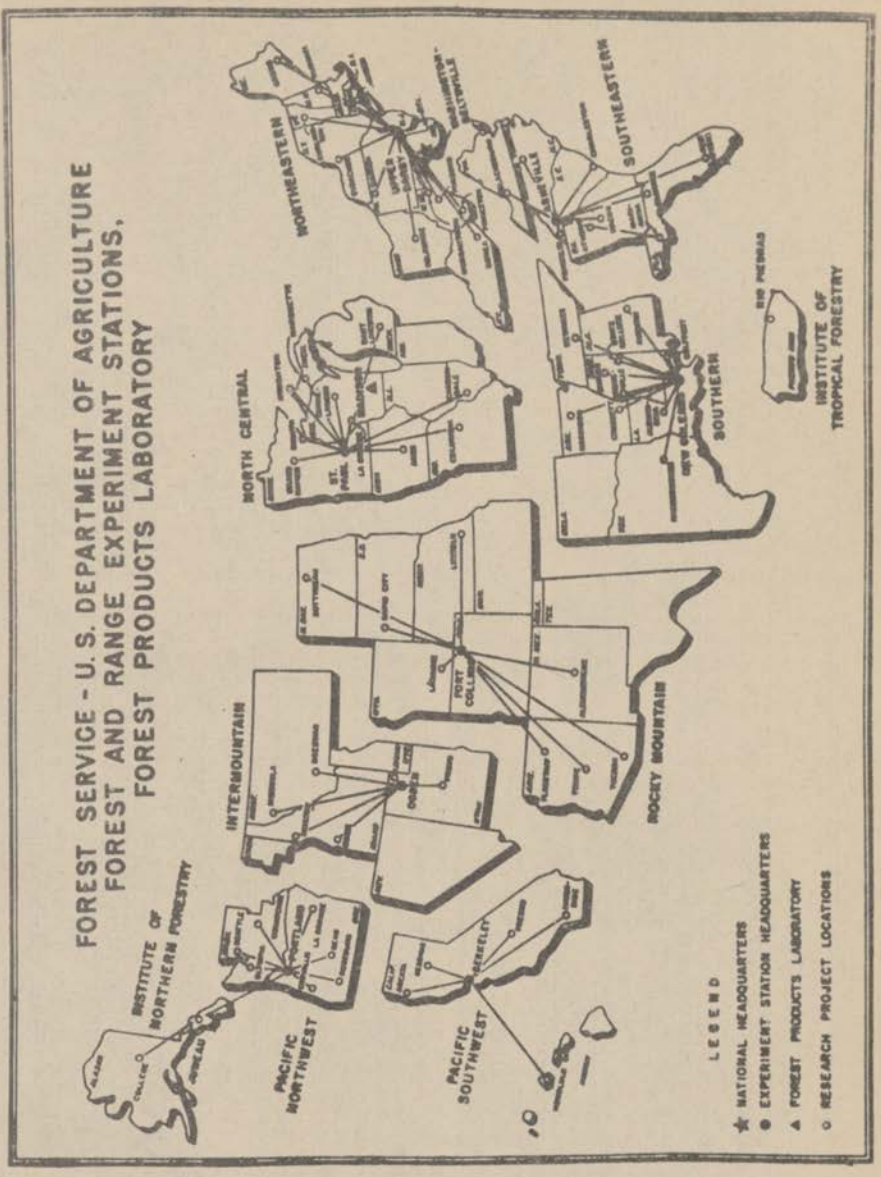
Forest Products Laboratory: Madison, Wisconsin

Institute of Tropical Forestry: Rio Piedras, Puerto Rico

National Forest, National Grasslands, and Utilization lands administered by the Forest Service are located in all States except the following six:

Delaware
Hawaii
Maryland
Massachusetts
New Jersey
Rhode Island


THE NATIONAL FOREST SYSTEM
PACIFIC NORTHWEST REGION
NORTHERN REGION
WASH
OREG
IDAHO
MONT
N. DAK.
MINN.
S. DAK.
WYO
NEV
INTERMOUNTAIN REGION
NEBR.
ROCKY MOUNTAIN REGION
UTAH
COLO.
KANS
IOWA
WIS.
MICH
N.Y.
ME
VT
N.H.
MASS
CONN.
R.I.
EASTERN REGION
OHIO
IND.
ILL.
PA.
N.J.
MD.
DEL.
W. VA.
VA
KY.
CALIFORNIA REGION
CALIF.
SOUTHWESTERN REGION
N. MEX.
ARIZ.
OKLA.
TENN.
N.C.
S.C.
ARK.
MISS.
SOUTHERN REGION
ALA.
GA.
LA.
TEXAS
FLA.
ALASKA REGION
ALASKA
PUERTO RICO
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
EDWARD P. CLIFF, CHIEF
NATIONAL FORESTS AND FOREST SERVICE FIELD OFFICES
NATIONAL FORESTS
PURCHASE UNITS
NATIONAL GRASSLANDS
LAND UTILIZATION PROJECTS
REGIONAL BOUNDARIES
REGIONAL HEADQUARTERS
SUPERVISOR'S HEADQUARTERS
FOREST AND RANGE EXPERIMENT STATIONS
LABORATORY (MADISON, WIS.)
AREA DIRECTOR STATE AND PRIVATE FORESTRY PROGRAMS
INSTITUTE OF NORTHERN FORESTRY
INSTITUTE OF TROPICAL FORESTRY


FOREST SERVICE - U.S. DEPARTMENT OF AGRICULTURE
FOREST AND RANGE EXPERIMENT STATIONS,
FOREST PRODUCTS LABORATORY
INSTITUTE OF NORTHERN FORESTRY
PACIFIC NORTHWEST
INTERMOUNTAIN
PACIFIC SOUTHWEST
NORTH CENTRAL
NORTHEASTERN
ROCKY MOUNTAIN
SOUTHERN
SOUTHEASTERN
RIO PIEDRAS
INSTITUTE OF TROPICAL FORESTRY
LEGEND
★ NATIONAL HEADQUARTERS
● EXPERIMENT STATION HEADQUARTERS
▲ FOREST PRODUCTS LABORATORY
○ RESEARCH PROJECT LOCATIONS

32-043 O - 74 - 10

Summary of Estimated Appropriations and Receipts

Page No.	Item	Available 1973 1/	Estimated available 1974 2/	Budget estimates 1975	Increase or decrease 1975 over 1974
	Appropriated Funds				
	Forest protection and utilization:				
21	Forest land management 3/	$311,584,778	$280,100,000	$291,136,000	$11,036,000
68	Forest research	58,963,955	63,816,000	64,485,000	669,000
90	State and private forestry cooperation	27,837,000	28,181,000	29,746,000	1,565,000
	Total, Forest protection and utilization	398,385,733	372,097,000	385,367,000	13,270,000
108	Construction and land acquisition 3/	48,794,900	26,443,000	24,147,000	-2,296,000
123	Forest roads and trails 3/	158,840,000	98,200,000	121,000,000	22,800,000
128	Acquisition of lands for National Forests, Special Acts	80,000	94,000	161,000	67,000
130	Acquisition of lands to complete land exchanges	- -	55,300	39,310	-15,990
107	Cooperative range improvements	700,000	700,000	700,000	- -
131	Assistance to States for tree planting 3/	1,020,000	1,013,000	1,346,000	333,000
134	Construction and operation of recreation facilities 3/	- -	3,277,837	1,260,000	-2,017,837
135	Youth conservation corps 3/	3,500,000	10,000,000	10,240,000	240,000
	Permanent Appropriations				
147	Expenses, brush disposal 3/	23,310,037	23,000,000	22,440,000	-560,000
146	Roads and trails for States, National Forests Fund	33,871,106	45,468,547	40,500,000	-4,968,547
148	Forest fire prevention 3/	228,373	250,000	250,000	- -
149	Restoration of forest lands and improvements 3/	27,483	50,000	50,000	- -
150	Payment to Minnesota (Cook, Lake, and St. Louis Counties) from the National Forests Fund	259,038	259,038	259,038	- -
151	Payments to Counties, National Grasslands	508,864	549,000	549,000	- -
152	Payments to school funds, Arizona and New Mexico	114,043	124,307	115,000	-9,307
153	Payments to States, National Forests Fund	84,676,129	113,668,668	101,200,000	-12,468,668
	Total	754,315,706	695,249,697	709,623,348	14,373,651
	Deduct permanent appropriations shown above	142,995,073	183,369,560	165,363,038	-18,006,522
	Total (excluding permanent appropriations)	611,320,633	511,880,137	544,260,310	32,380,173
	Receipts				
	Timber sales	$434,410,996	$387,000,000	$425,000,000	$38,000,000
	Grazing	5,376,834	6,050,000	6,400,000	350,000
	Power	238,776	240,000	250,000	10,000
	Recreation	4,625,803	5,000,000	5,600,000	600,000
	Land uses	1,055,993	1,200,000	1,400,000	200,000
	Mineral leases and permits	5,452,375	5,600,000	5,800,000	200,000
	Admission and user fees	4,056,028	- -	- -	- -
	National grasslands and land utilization	2,174,668	2,230,000	2,335,000	105,000
	Oregon and California grant lands: 4/				
	Timber sales	12,320,058	10,000,000	12,000,000	2,000,000
	Other	36,004	- -	- -	- -
	Total receipts	469,747,535	417,320,000	458,785,000	41,465,000

(Footnotes on next page)

1/ Includes Second Supplemental Appropriation Act, 1973 (PL 93-50, 7/1/73)--increased pay costs, $5,357,000; fighting forest fires, $39,563,000; $4.6 million of trust funds used for fighting forest fires repaid in fiscal year 1974.

Includes travel and program reductions in Forest land management of $6,658,000 applied to fighting forest fires and insect and disease control; $3,179,000 in Forest research and $5 million in State and private forestry applied to fighting forest fires

Excludes GSA space transfers of $428,267.

2/ Excludes following: GSA space transfers of $574,000 (Forest land management, $559,000 and Forest research, $15,000) and proposed supplemental for fighting forest fires, $90,800,000.

3/ In addition, prior year balances are available, including Cooperative law enforcement in the Forest land management activity.

4/ Account established for Oregon and California railroad grant lands, for which receipts are transferred to Department of the Interior for distribution under the Acts of August 28, 1937, June 24, 1954, and August 3, 1961 (43 USC 1181f-g).

JOB CORPS CIVILIAN CONSERVATION CENTERS

(Funds transferred to Forest Service by Department of Labor)

	Available 1973		Estimate 1974		Estimate 1975	
	No. of Permanent Positions	Amount (in thousands)	No. of Permanent Positions	Amount (in thousands)	No. of Permanent Positions	Amount (in thousands)
Center capital	4	864	1	932	1	1,500
Center operations .	815	24,965	805	24,611	805	26,600
Program direction .	78	1,863	78	1,883	78	1/ 2,240
Total	897	27,692	884	27,426	884	30,340

NOTE: Fiscal years 1974 and 1975 estimates are based on best information available to the Forest Service as of January 14, 1974.

1/ Includes administration of union contracts.

ENVIRONMENTAL IMPACT STATEMENTS

Mrs. HANSEN. You show costs for implementation of the National Environmental Policy Act rising from $8 million in fiscal year 1972 to $28 million in 1974. Do you expect this trend to continue?

Mr. MCGUIRE. We expect that next year we will spend at least $28 million for this same purpose, that is, preparing environmental impact statements and making necessary studies to comply with the Environmental Policy Act. This $28 million would compare with our total expenditures on the National Forests of about $291 million. It would be about 10 perecent of forest land management expenditures.

Mrs. HANSEN. Do you think the sum is going to increase?

Mr. MCGUIRE. I think the sum is going to increase.

Mrs. HANSEN. How many acres could be reforested with that amount?

Mr. MCGUIRE. This would probably provide enough money for——

Mr. NELSON. About 180,000 to 280,000 acres.

PAYMENTS TO STATES

Mrs. HANSEN. What is the reason for the $12,468,668 decrease in "Payments to States, National Forests Fund"?

Mr. MCGUIRE. We expect the payments to States to decrease because our overall receipts will decrease this year. We are estimating that our receipts will be down somewhat.

Mrs. HANSEN. Why will they be decreasing?

Mr. MCGUIRE. Principally because the timber market has slackened off. The rate of cutting and the price that is paid will decline somewhat from what they had been.

Mrs. HANSEN. This doesn't only affect the Federal Government, but your States and counties are also affected. The counties are going to be adversely affected because this is the 25 percent that provides for their schools and roads as the disposition might be. I think you are well aware, Mr. McGuire, of the problems that many of these school districts have in very poor sections of the country.

Mr. MCGUIRE. Yes, ma'am. Not only that, it's very difficult for the school boards and the county officials to plan ahead on their budgets because so much of their income in some counties is tied to these Federal payments.

Mrs. HANSEN. Have the schools begun to realize what is going to happen to them with this kind of a policy?

Mr. MCGUIRE. In many parts of the West, of course, the schools keep well informed on what is happening because they know the effect. But there are other parts of the country where they are not as well versed in the intricacies of the market as they are in other places. I think they may have some trouble.

Some of our Eastern school districts, for example, are just beginning to benefit from the 25-percent payment because the timber has just got up to merchantable size in this last building boom.

Mrs. HANSEN. Then all of a sudden their payments will start to decline.

Mr. MCGUIRE. That is what they will find, a decrease. The Western counties are, I think, anticipating this sort of thing in general and are prepared to cope with it.

JOB CORPS CENTERS

Mrs. HANSEN. You show an increase from $27,426,000 to $30,340,000 for Job Corps centers. Will this provide for an increase in the number of persons served?

Mr. DEINEMA. That is primarily to cover the increased costs of doing business.

FOREST PROTECTION AND UTILIZATION

Mrs. HANSEN. Please insert justification pages 13 through 20 in the record at this point.

[The pages follow:]

FOREST PROTECTION AND UTILIZATION

	Forest Land Management a/	Forest Research	State and Private Forestry Cooperation	Total
Appropriation Act, 1974	$267,351,000	$60,400,000	$27,760,000	$355,511,000
Budget estimate, 1975	291,136,000	64,485,000	29,746,000	385,367,000
Change in appropriation	+23,785,000	+4,085,000	+1,986,000	+29,856,000
Adjustments to 1974 appropriation:				
Appropriation Act, 1974	267,351,000	60,400,000	27,760,000	355,511,000
Proposed supplemental for pay costs	13,467,000	3,431,000	262,000	17,160,000
Transfer to General Services Administration for space rental	-559,000	-15,000	- -	-574,000
Adjustment--Wild and scenic rivers studies on State and private lands	-159,000	- -	159,000	- -
Adjusted base for 1975	280,100,000	63,816,000	28,181,000	372,097,000
Estimate, 1975	291,136,000	64,485,000	29,746,000	385,367,000
Change	+11,036,000	+669,000	+1,565,000	+13,270,000

a/ In addition, $700,000 is available by transfer from Cooperative Range Improvements.

SUMMARY OF INCREASES AND DECREASES
(On basis of adjusted appropriation)

	1974 Estimate	1975 Estimate	Increase or Decrease: Pay Costs	Space Rental	Program
Forest land management:					
Sales administration and management--Increase is for more thorough preparation of timber sales and for the higher costs of sales with more sophisticated logging systems ($2,160,000) and to control log export and substitutions from National Forest lands ($210,000). These increases are offset by a decrease of $396,000 for non-recurrent timber salvage work in tussock moth infested areas to be accomplished in 1974.	$79,463,000	$84,295,000	$675,000	$2,183,000	$1,974,000
Recreation use--Increase is for landscape and design effort in support of timber sale activities.	44,670,000	46,522,000	382,000	1,390,000	80,000

SUMMARY OF INCREASES AND DECREASES--continued
(On basis of adjusted appropriation)

	1974 Estimate	1975 Estimate	Increase or Decrease		
			Pay Costs	Space Rental	Program
Forest land management--continued					
Wildlife and fish habitat management--Increase of $230,000 is for coordination of wildlife biological needs and requirements with timber sale activities. This increase is offset by a $21,000 decrease which reflects non-recurrent rehabilitation work in tussock moth infested areas to be accomplished in 1974.	$8,694,000	$9,230,000	$66,000	$261,000	$209,000
General land management activities--Increase is for marking land lines and monuments in support of the timber sale program ($100,000); to reimburse the Employees' Compensation Fund ($560,000); and for cost of special Bicentennial and Forestry Centennial edition of booklet, "Highlights in the History of Forest Conservation" ($20,000).	24,741,000	26,460,000	185,000	854,000	680,000
Reforestation and stand improvement--Decrease reflects non-recurrent rehabilitation work in tussock moth infested areas to be accomplished in 1974.	33,331,000	35,317,000	427,000	1,601,000	-42,000
Rangeland management--Decrease reflects non-recurrent rehabilitation work of tussock moth infested areas to be accomplished in 1974.	15,113,000	15,774,000	133,000	532,000	-4,000
Soil and water management--Net decrease consists of an increase for protection of critical soils and unstable slopes and enhancement of water production in support of the timber sale program ($270,000); decrease of $790,000 due to reduction of watershed development activities of other agencies on Forest Service land; decrease of $13,000 reflects non-recurrent rehabilitation work in tussock moth infested areas to be accomplished in 1974; and decrease of $1,000 due to change in amounts for wild and scenic river studies on State and private lands transferred from this activity to general forestry assistance (1974, $159,000; 1975, $160,000).	15,217,000	15,215,000	94,000	438,000	-534,000

SUMMARY OF INCREASES AND DECREASES--continued
(On basis of adjusted appropriation)

	1974 Estimate	1975 Estimate	Increase or Decrease: Pay Costs	Space Rental	Program
Forest land management--continued					
Forest fire protection--Net decrease consists of an increase for fire protection in support of the timber sale program ($210,000); decrease of $1.4 million appropriated in 1974 for the Modular Airborne Fire-fighting System; and decrease of $824,000 which reflects non-recurrent timber salvage and rehabilitation work in tussock moth infested areas to be accomplished in 1974.	$36,359,000	$36,518,000	$326,000	$1,847,000	-$2,014,000
Forest insect and disease control--Decrease of $250,000 will be absorbed through a shift in program priorities. In order to maintain at least the same program level for gypsy moth control made possible by a $250,000 supplemental appropriation in 1974, it is proposed to reduce methods improvements efforts.	11,219,000	11,276,000	62,000	245,000	-250,000
Cooperative law enforcement--Decrease in budget authority is due to projected carryover of fiscal year 1974 funds that will be available for obligation in 1975. The request will provide an actual program level increase of $290,000	2,582,000	1,624,000	8,000	41,000	-1,007,000
Minerals management	4,436,000	4,630,000	29,000	165,000	- -
Fighting forest fires	4,275,000	4,275,000	- -	- -	- -
Subtotal, Forest land management	280,100,000	291,136,000	2,387,000	9,557,000	-908,000
Forest research:					
Forest watershed management research--Decrease is based on the discontinuation of research for which funding was increased in fiscal year 1974.	7,710,000	7,716,000	79,000	177,000	-250,000
Wildlife, range, and fish habitat research--Decrease is based on the discontinuation of research for which funding was increased in fiscal year 1974	4,482,000	3,860,000	37,000	116,000	-775,000

SUMMARY OF INCREASES AND DECREASES--continued
(On basis of adjusted appropriation)

	1974 Estimate	1975 Estimate	Increase or Decrease: Pay Costs	Space Rental	Program
Forest research--continued					
Forest recreation research--Decrease is based on the discontinuation of research for which funding was increased in fiscal year 1974.	$1,326,000	$1,222,000	$12,000	$34,000	-$150,000
Forest insects and disease research--Decrease reflects completion of non-recurring tussock moth research in 1974 in the amount of $240,000, plus $120,000 based on the discontinuation of research for which funding was increased in fiscal year 1974.	10,761,000	10,936,000	91,000	444,000	-360,000
Trees and timber management research	13,118,000	13,602,000	127,000	357,000	- -
Fire and atmospheric sciences research	7,847,000	8,067,000	43,000	177,000	- -
Forest products utilization research	9,723,000	9,895,000	79,000	93,000	- -
Forest engineering research	1,547,000	1,593,000	11,000	35,000	- -
Forest resources evaluation	3,649,000	3,820,000	34,000	137,000	- -
Forest economics and marketing research	3,653,000	3,774,000	35,000	86,000	- -
Subtotal, Forest research	63,816,000	64,485,000	548,000	1,656,000	-1,535,000
State and private forestry cooperation:					
Cooperation in forest management and processing--Increase is to be used for accelerating technical assistance to mill operators through systems analysis, which could result in increased volume and grade recovery of lumber by an estimated 15 percent from cooperating sawmills.	5,052,000	5,574,000	19,000	43,000	460,000

SUMMARY OF INCREASES AND DECREASES--continued
(On basis of adjusted appropriation)

	1974 Estimate	1975 Estimate	Increase or Decrease		
			Pay Costs	Space Rental	Program
State and private forestry cooperation--continued					
General forestry assistance--Increase to be used for: technical assistance to loggers, landowners, and pulp companies in reducing logging waste and redirecting products to higher quality use ($750,000); accelerating technical assistance to mill operators through systems analysis ($90,000); and $1,000 for wild and scenic rivers studies on State and private lands (see Soil and water management activity above).	$2,718,000	$3,662,000	$46,000	$57,000	$841,000
Cooperation in forest fire control	20,079,000	20,177,000	13,000	85,000	- -
Cooperation in forest tree planting	332,000	333,000	1,000	- -	- -
Subtotal, State and private forestry cooperation ..	28,181,000	29,746,000	79,000	185,000	1,301,000
Total	372,097,000	385,367,000	3,014,000	11,398,000	-1,142,000

PROJECT STATEMENT

(On obligation basis)

Project 9/	1973	1974 Estimate 4/	1975 Estimate	Increase or decrease: Pay Costs	GSA Space	Program
FOREST LAND MANAGEMENT:						
National Forest protection and management:						
(1) Timber resource management:		1/				
(a) Sales administration and management	$68,883,225	$79,463,000	$84,295,000	$675,000	$2,183,000	$1,974,000
(b) Reforestation and stand improvement	27,394,208	1/33,331,000	35,317,000	427,000	1,601,000	-42,000
(2) Recreation use	42,380,595	44,670,000	46,522,000	382,000	1,390,000	80,000
(3) Wildlife and fish habitat management	7,082,523	8,694,000	9,230,000	66,000	261,000	209,000
(4) Rangeland management	14,979,655	15,813,000	16,474,000	133,000	532,000	-4,000
(5) Soil and water management 2/ 3/	13,534,534	15,217,000	15,215,000	94,000	438,000	-534,000
(6) Minerals management 3/	3,095,425	4,436,000	4,630,000	29,000	165,000	- -
(7) Forest fire protection	36,115,756	36,359,000	36,518,000	326,000	1,847,000	-2,014,000
(8) General land management activities 5/	22,190,586	24,741,000	26,460,000	185,000	854,000	680,000
Subtotal	235,656,507	262,724,000	274,661,000	2,317,000	9,271,000	349,000
Amount advanced from Cooperative Range Improvements	700,000	700,000	700,000	- -	- -	- -
Subtotal, National Forest protection and management	234,956,507	262,024,000	273,961,000	2,317,000	9,271,000	349,000
(9) Fighting forest fires	62,141,570	6/ 4,275,000	4,275,000	- -	- -	- -
(10) Forest insect and disease control 7/	11,677,808	11,219,000	11,276,000	62,000	245,000	-250,000
(11) Cooperative law enforcement	1,935,121	2,582,000	1,624,000	8,000	41,000	-1,007,000
Total, Forest Land Management	310,711,006	280,100,000	291,136,000	2,387,000	9,557,000	-908,000
FOREST RESEARCH:						
Forest and range management research:						
(12) Trees and timber management research	12,296,964	13,118,000	13,602,000	127,000	357,000	- -
(13) Forest watershed management research	6,646,071	7,710,000	7,716,000	79,000	177,000	-250,000
(14) Wildlife, range, and fish habitat research	3,493,468	4,482,000	3,860,000	37,000	116,000	-775,000
(15) Forest recreation research	1,222,730	1,326,000	1,222,000	12,000	34,000	-150,000
Subtotal, Forest and range management research	23,659,233	26,636,000	26,400,000	255,000	684,000	-1,175,000
Forest protection research:						
(16) Fire and atmospheric sciences research	7,047,207	7,847,000	8,067,000	43,000	177,000	- -
(17) Forest insects and disease research	9,535,365	10,761,000	10,936,000	91,000	444,000	-360,000
Subtotal, Forest protection research	16,582,572	18,608,000	19,003,000	134,000	621,000	-360,000

PROJECT STATEMENT--continued

(On obligation basis)

Project	1973	1974 Estimate 4/	1975 Estimate	Increase or decrease: Pay Costs	GSA Space	Program
FOREST RESEARCH--continued						
Forest products and engineering research:						
(18) Forest products utilization research	$8,893,776	$9,723,000	$9,895,000	$79,000	$93,000	- -
(19) Forest engineering research	1,471,346	1,547,000	1,593,000	11,000	35,000	- -
Subtotal, Forest products and engineering research	10,365,122	11,270,000	11,488,000	90,000	128,000	- -
Forest resource economics research:						
(20) Forest resources evaluation	3,544,250	3,649,000	3,820,000	34,000	137,000	- -
(21) Forest economics and marketing research	3,600,452	3,653,000	3,774,000	35,000	86,000	- -
Subtotal, Forest resource economics research	7,144,702	7,302,000	7,594,000	69,000	223,000	- -
Total, Forest Research	57,751,629	63,816,000	64,485,000	548,000	1,656,000	-$1,535,000
STATE AND PRIVATE FORESTRY COOPERATION:						
(22) Cooperation in forest fire control	19,954,845	20,079,000	20,177,000	13,000	85,000	- -
(23) Cooperation in forest tree planting	322,990	332,000	333,000	1,000	- -	- -
(24) Cooperation in forest management and processing	4,887,076	5,052,000	5,574,000	19,000	43,000	460,000
(25) General forestry assistance 2/	2,737,401	2,718,000	3,662,000	46,000	57,000	841,000
Total, State and Private Forestry Cooperation	27,902,312	28,181,000	29,746,000	79,000	185,000	1,301,000
Total obligations or estimate	396,364,947	372,097,000	385,367,000	3,014,000	11,398,000	-1,142,000
Unobligated balance brought forward	-7,297,072	- -				
Unobligated balance carried forward 8/	3,391,484	- -				
Unobligated balance lapsing	5,926,374	- -				
Total available or estimate	398,385,733	372,097,000				
Supplemental appropriation	- -	-17,160,000				
Transfer to General Services Administration for space rental	428,267	574,000				
Transfer from other accounts	-4,600,000	- -				
Appropriation or estimate	394,214,000	355,511,000				

1/ For comparability, $500,000 for log export control is shown under Sales administration and management rather than under Reforestation and stand improvement as appropriated.

2/ For comparability, following amounts for Wild and Scenic River Studies on State and private lands are shown under General forestry assistance rather than under Soil and water management as appropriated: 1973, $200,000; 1974, $159,000; 1975, $160,000.

3/ For comparability, an amount of $1 million for surface, environment and mining (SEAM) is shown under Minerals management rather than as appropriated under Soil and water management in fiscal year 1974.

4/ Includes fiscal year 1974 supplementals as follows:

Increased pay costs	$17,160,000
Additional timber sell	6,940,000
Insect and disease program	490,000
Timber salvage and rehabilitation of tussock moth infested areas	1,300,000
Modular Airborne Firefighting System	1,400,000
Total	27,290,000

5/ Includes allocations to the Department of the Interior, Bureau of Land Management: 1973, $270,000; 1974, $270,000; 1975, $500,000.

6/ Excludes proposed supplemental for fighting forest fires, $90.8 million.

7/ Includes allocation to the Department of the Interior, Bureau of Land Management: 1973, $908,000; 1974, $642,000; 1975, $754,000.

8/ Includes 1973 unobligated balances carried forward--Forest fire protection $384,089
Cooperative law enforcement 3,007,395
3,391,484

9/ See pages 104 and 105 for proposed changes in activity structure.

PROGRAM DECREASES

Mrs. HANSEN. Throughout these pages you refer to program decreases due to "nonrecurrent" work related to the tussock moth. Please provide for the record, by subactivity the amount appropriated in 1974, the work that was accomplished, and why you consider the work nonrecurrent.

Mr. MCGUIRE. We will be happy to do that. I think this is money that was provided for salvage operations.

[The information follows:]

In fiscal year 1974, the Forest Service asked for and received a supplemental appropriation for rehabilitation of the forests infested with the tussock moth as follows:

Sales administration and management	$396,000
Reforestation and stand improvement	42,000
Wildlife habitat management	21,000
Rangeland management	4,000
Soil and water management	13,000
Forest fire protection	824,000
Total	1,300,000

This is referred to as "nonrecurrent" because the money is being used to rehabilitate part of the forest that is infested with tussock moth. Once the area is in the proper condition, it will be managed along with the rest of the forest under regular appropriations. The work is progressing as planned but will not be completed until July 1, 1974.

RESEARCH DECREASES

Mrs. HANSEN. In your research program you have several decreases due to "discontinuation of research for which funding was increased in fiscal year 1974." I assume these are our congressional add-ons. Please place in the record the specific projects which are being decreased in 1975, the amount appropriated in 1974, the amount requested in 1975, and the rationale for the decrease.

Mr. MCGUIRE. We will be glad to do that.

[The information follows:]

We propose to decrease or discontinue research in several areas for which funding was increased in fiscal year 1974 because allowances for fiscal year 1975 were not adequate to permit their continuation. The programs, the fiscal year 1974 program increases, and the amount included in the fiscal year 1975 budget request are shown below:

Location	Program	FY '74 Program Increase	FY 1974 Appropriated	FY 1975 1/ Budget Request
Olympia, Wa.	Wildlife habitats in intensively managed forests.	$100,000	$100,000	$---
LaGrande, Or.	Possible role of range management methods in the cause and incidence of bovine pulmonary emphysema.	60,000	60,000	---
Seattle, Wa.	Recreation use management.	50,000	171,000	125,000
Fairbanks, Al.	Soil-water-plant relations in very cold climates.	100,000	162,000	64,000
Juneau, Al.	Predicting the demand for outdoor recreation in Alaska.	100,000	100,000	---
Fresno, Ca.	Impact of recreation use and water impoundments on wildlife and fish habitats in the Sierra, Nevada.	50,000	377,000	341,000
Reno, Nv.	Effective methods for improving and managing the Pinyon-juniper lands.	315,000	471,000	163,000
St. Paul, Mn.	Management of wildlife habitat in Northern Great Lake region.	100,000	100,000	---
Carbondale, Il.	Insects and diseases of black walnut and other fine hardwoods.	120,000	120,000	---
Berea, Ky.	Restoration of strip mined land in the Appalachians.	50,000	406,000	369,000
Durham, NH.	Effect of intensive forest use on water quality.	100,000	319,000	227,000
Orono, Me.	Impact of intensive culture on wildlife habitats in the Northeast.	50,000	50,000	---
Stoneville, Ms.	Impact of intensive culture on wildlife habitats in southern hardwood forests.	100,000	100,000	---

1/ FY '75 Budget Request includes Pay Act and Space Cost Adjustments.

Mrs. HANSEN. Please insert justification pages 21 through 67 in the record at this point.

[The pages follow:]

Projects (1) - (8)

GEOGRAPHIC BREAKDOWN OF APPROPRIATION

National Forest Protection and Management

	1974 estimate	1975 estimate	Change
		(in thousands)	
Alabama	$2,162	$2,257	$95
Alaska	7,071	7,381	310
Arizona	11,233	11,726	493
Arkansas	6,738	7,034	296
California	46,426	48,865	2,439
Colorado	10,955	11,436	481
District of Columbia	12,135	12,668	533
Florida	2,264	2,363	99
Georgia	2,000	2,088	88
Idaho	22,344	23,325	981
Illinois	963	1,005	42
Indiana	750	783	33
Kansas	24	25	1
Kentucky	1,769	1,847	78
Louisiana	2,374	2,478	104
Maine	59	62	3
Maryland	124	129	5
Michigan	4,945	5,162	217
Minnesota	5,445	5,684	239
Mississippi	3,188	3,328	140
Missouri	3,365	3,513	148
Montana	15,387	16,063	676
Nebraska	324	338	14
Nevada	2,083	2,174	91
New Hampshire	1,350	1,410	60
New Mexico	9,632	10,055	423
New York	94	98	4
North Carolina	3,097	3,233	136
North Dakota	268	280	12
Ohio	584	610	26
Oklahoma	506	528	22
Oregon	33,524	34,996	1,472
Pennsylvania	1,729	1,805	76
Puerto Rico	139	145	6
South Carolina	2,067	2,158	91
South Dakota	2,607	2,721	114
Tennessee	1,937	2,022	85
Texas	2,582	2,695	113
Utah	7,936	8,285	349
Vermont	656	685	29
Virginia	3,081	3,216	135
Washington	15,168	15,835	667
West Virginia	1,985	2,072	87
Wisconsin	3,125	3,262	137
Wyoming	6,529	6,816	287
Total	262,724	274,661	11,937

Project (1a)

TIMBER RESOURCE MANAGEMENT - Sales administration and management

1973	$69,280,000
1974	1/79,463,000
1975	84,295,000
Increase	+4,832,000

A net increase of $4,832,000 is proposed as follows:

(1) An increase of $2,160,000 for more thorough preparation of timber sales, silvicultural examination, and for higher costs of making sales and supervising the harvest of timber with sophisticated logging systems.

(2) An increase of $210,000 to monitor log export controls, including administration of anti-substitution provision of contracts awarded between January 1 and June 30, 1974 only.

(3) An increase of $675,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(4) An increase of $2,183,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(5) A decrease of $396,000 which reflects non-recurrent timber salvage work in tussock moth infested areas to be accomplished in fiscal year 1974.

Log export controls, which were extended through calendar year 1973 by the Housing and Urban Development Act of 1970 (PL 91-609, December 31, 1970), apply to all sales awarded prior to January 1, 1974. These controls will require continued enforcement monitoring to the conclusion of those sales, some 4 to 5 years hence. It is estimated that program costs for the enforcement of the Act on National Forest lands will be $560,000 in fiscal year 1975, an increase of $60,000 over fiscal year 1974.

Section 301 of the Department of the Interior and Related Agencies Appropriation Act of 1974 prohibits the use of any appropriation for sales "hereafter made" of unprocessed timber from Federal lands west of the 100th meridian in the contiguous 48 States, which will be exported from the United States or which will be used as a substitute for timber from private lands which is exported by the purchaser. Program costs for the monitoring of the anti-substitution provision during fiscal year 1975 are estimated to be $150,000.

The total program for fiscal year 1975, compared with 1973 and 1974, follows:

	1973	1974	1975	Change
		(in thousands)		
Sale preparation	$33,032	$40,031	$42,670	$2,639
Harvest administration	29,153	30,506	31,617	1,111
Subtotal, preparation and harvest	62,185	70,537	74,287	3,750
Enforcement of Log Export Act and substitutions	570	500	710	210
Timber inventory and stand management control	4,267	5,358	5,550	192
Timber salvage of tussock moth infested areas	- -	396	- -	-396
Silviculture examination	2,258	2,672	3,748	1,076
Total	69,280	79,463	84,295	4,832

1/ For comparability, log export control ($500,000) is shown under Sales administration and management rather than as appropriated under Reforestation and stand improvement.

Project (1a)

It is expected that the demand for National Forest timber will remain at a high level, similar to fiscal year 1974. The high standards needed to prepare this volume of timber for sale will also be the same as those established for the previous fiscal year. The Forest Service continues to be under close scrutiny by the American public to manage the forest resources in an environmentally sound manner.

The principal costs per thousand board feet in timber sale preparation are associated with the effort expended for coordinated resource inputs and detailed examination and inventory of the land and resources to assure full consideration and enhancement of the local environment.

Protection and enhancement of the environment and response to public concerns are evidenced in timber harvest through increased frequency of inspections and closer administration to achieve quality performance:

(1) That minimizes or eliminates adverse impacts on the environment.

(2) Protects the soil.

(3) Insures more complete utilization and cleanup.

(4) Promotes an improved, healthy forest cover.

To achieve a quality timber resource management program requires the assistance of specialists in soil analysis, landscape layout, wildlife management hydrology, and ecology as well as well-trained, competent silviculturists, sales layout foresters, logging systems engineers, and sales administrators. Workload and cost information, including the specialty mix, manpower and dollar resources, is shown in the following tabulation for fiscal years 1973, 1974, and 1975:

	1973	1974 1/	1975
Sale preparation			
Million board feet (local scale)	10,199	11,800	11,800
Cost per thousand board feet	$3.24	$3.36	$3.62
Total cost (in thousands)	$33,032	$39,635	$42,670
Harvest administration			
Expected harvest level in million board feet (local scale)	12,357	12,060	12,650
Total cost (in thousands)	$29,153	$30,506	$31,617

1/ Excludes supplemental funds of $396,000 received in fiscal year 1974 to prepare for sale an estimated 300 million board feet of timber from areas damaged by tussock moth in the Pacific Northwest.

Harvest of National Forest timber is dependent on:

(1) The national demand for timber products (which may be represented by softwood lumber price indices and the expected level of housing starts).

(2) The amount of National Forest timber sold in recent years.

(3) Producers' expectations of future volumes available (represented by the portion of the programed allowable harvest sold).

Based upon these factors, the Forest Service estimates that the timber harvest in fiscal year 1975 will be 12.65 billion board feet (local scale). The Forest Service plans to sell 11.8 billion board feet of timber (local scale).

The above represents the immediate measurable outputs of the timber resource program. The timber harvest program is administered through timber sale contracts to achieve:

(1) Protection and enhancement of the environment.

(2) Harmonization with indigenous ecosystems and other resource uses.

(3) Utilization to the fullest extent possible of all timber harvested.

(4) A healthy forest cover, improved and structured as specified in the timber management plan and individual stand prescriptions.

Adequate supplies of National Forest timber are important to the Nation's housing program and to the Nation's economic program. The orderly progress of timber harvesting across a forest is determined from inventories conducted for timber management planning. Stand management control designed to organize and monitor efficient forest age-class distribution and to promote optimum timber growth also depends on adequate and timely inventory information.

The Forest Service will continue to implement the shift towards annual updating of all timber management plans to incorporate increases resulting from silvicultural activities and changes resulting from multiple use decisions.

The increasing demands for goods and services from the National Forests have changed the pattern of land management. No longer is it sufficient to prescribe management of each resource independently of the other resources nor is it sufficient to prescribe silvicultural measures over broad areas and forest types. It is now necessary to identify, map, measure, and prescribe treatment for each timber stand, in-place, to supplement the extensive, forest-wide statistical sample inventories and the management plans prepared therefrom. Before managers make decisions concerning the extent and pattern of timber harvest, reforestation, or timber stand improvement measures they must know:

(1) Where potential harvest volumes are located.

(2) The current growth and potential growth.

(3) The relationship to other resources and the forest as a whole.

(4) Potential or current problems such as fragile soils.

(5) Public needs and desires.

Returns to the Treasury from the harvest of National Forest timber are summarized in the following tabulation:

Fiscal Year	Receipts (in millions)
1968	$205.6
1969	306.8
1970	283.9
1971	217.0
1972	330.0
1973	446.7
1974	397.0 (estimated)
1975	437.0 (estimated)

Examples of Recent Accomplishments

The record of timber harvested and sold during the past 5 years is compared with the programed allowable harvest in the following table:

Project (1a)

Fiscal Year	Annual Allowable Harvest 1/	Actual Volume Harvested	Percent of Allowable Actually Harvested	Actual Volume Sold	Percent of Allowable Actually Sold
	(Volumes in billion board feet, local scale)				
1969	12.8	11.8	92	18.9 2/	148
1970	12.8	11.5	90	13.4	105
1971	12.9	10.3	80	10.6	82
1972	12.9	11.7	91	10.3	80
1973	12.8	12.4	97	10.2	80

1/ As of the January 1 midpoint of the fiscal year. Programed harvest includes only sawtimber for National Forests west of the Great Plains and in Alaska, and sawtimber and convertible products for National Forests in the eastern half of the United States.

2/ Includes Juneau Unit Pulp Sale in Alaska of 8.75 billion board feet.

Project (1b)

TIMBER RESOURCE MANAGEMENT - Reforestation and Stand Improvement

1973	$32,102,000
1974	1/33,331,000
1975	35,317,000
Increase	+1,986,000

A net increase of $1,986,000 is proposed as follows:

(1) An increase of $427,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(2) An increase of $1,601,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(3) A decrease of $42,000 which reflects non-recurrent rehabilitation work in tussock moth infested areas to be accomplished in fiscal year 1974.

The program for fiscal year 1975, compared with 1973 and 1974, follows:

	1973	1974	1975	Change
		(in thousands)		
Reforestation	$19,630	$19,651	$20,804	$1,153
Timber stand improvement	10,335	11,635	12,344	709
Genetic tree improvement	1,740	1,680	1,782	102
Nursery operation and development	397	365	387	22
Total	32,102	33,331	35,317	1,986

The proposed reforestation and stand improvement program will contribute to the long-range goal of improving the total net growth and sustainable harvest volume on the National Forests. Growth resulting from this program will not only help to offset the decrease in available yield brought about by changes in land use but will also help to raise both the short-term and long-term sustainable harvests from National Forests. The long-range increase in yield (by the year 2000) will exceed 90 million board feet annually.

A comparison of proposed fiscal year 1975 outputs with fiscal years 1974 and 1973 follows:

	1973	1974 (estimate)	1975 (estimate)
Reforestation (acres)	130,972	165,099	152,260
Timber stand improvement (acres)	170,438	219,372	204,460
Genetic tree improvement (acres of seed orchards)	1,512	1,512	1,512
Nursery operation and development (No. of nurseries)	12	12	12

Examples of Recent Accomplishments

Reforestation. With appropriated funds, an area of 115,203 acres of National Forest land was reforested in 1973--102,541 by planting and 12,662 by seeding. In addition, 15,769 acres of plantations were established by preparing the ground to promote regeneration from natural seedfall. Other reforestation accomplishments in 1973 include:

(1) Forest Service seed extractories processed 11,338 pounds of seed.

(2) Production of 106.2 million trees in 12 Forest Service nurseries.

(3) Establishment of 40 acres of new seed production areas and 125 acres of new seed orchards. About 15.5 thousand acres were planted with seedlings grown from the better quality seed produced in seed orchards or seed production areas.

- - - - - -

1/ For comparability, log export control ($500,000) is shown under Sales administration and management rather than as appropriated under Reforestation and stand improvement.

Project (1b)

Reforestation with funds collected under the Knutson-Vandenberg Act. The following reforestation was in addition to reforestation done with appropriated funds:

	Acres
Tree planting	159,019
Seeding	21,583
Reforestation by natural seed-fall on prepared sites	33,696
	214,298

An additional 5,551 acres of National Forest land were reforested by other Federal and cooperative programs.

The total area reforested where some treatment such as planting, seeding, or site preparation was applied in 1973 was 350,821 acres.

Timber stand improvement. An area of 170,438 acres was treated by the following cultural measures with appropriated funds in 1973:

	Acres
Thinning	110,579
Release	57,249
Pruning	546
Fertilizing	2,064
	170,438

Timber stand improvement was also done for the same purpose with Knutson-Vandenberg funds on the following acreage in 1973:

	Acres
Thinning	117,487
Release	56,134
Pruning	855
Fertilizing	255
	174,731

In addition, 9,245 acres of timber stand improvement was accomplished with other Federal or cooperative funds.

Project (2)

RECREATION USE

1973	$42,053,000
1974	44,670,000
1975	46,522,000
Increase	+1,852,000

An increase of $1,852,000 is proposed as follows:

(1) For landscape and design effort in support of timber sale activities, $80,000.

(2) To provide for the full year costs of the pay increase effective in fiscal year 1974, $382,000.

(3) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $1,390,000.

The requested funding will provide for:

(1) Operation and essential maintenance including cleanup and sanitation services for an expected 202.5 million visitor-days of recreation use.

(2) A program to initiate review of roadless areas identified as having potential for possible wilderness designation.

(3) A program to begin review with public involvement of the most critical problem areas on all National Forest lands to determine which should be open or closed to off-road vehicle use in accordance with EO 11644.

In addition, the budget proposes an appropriation of $1,260,000 for Construction and operation of recreation facilities (page 134).

The Forest Service manages recreation use through the National Forest System. The following tabulation shows the total planned financing for 1975 as compared with funds available in 1973 and 1974.

	FY 1973	FY 1974	FY 1975	Change: Pay Costs	Change: Space Rental	Change: Program
			(in thousands)			
Administration of concessions and recreation use permits	$1,569	$1,630	$1,680	$13	$50	-$13
Operation and maintenance	33,495	34,927	36,582	301	1,093	261
Planning and inventories	1,291	1,318	1,359	11	41	-11
Wilderness administration	2,935	3,015	3,108	25	93	-25
Visitor Information Service	2,763	3,780	3,793	32	113	-132
Total	42,053	44,670	46,522	382	1,390	80

The funding is needed for managing recreation use in the National Forests as an integral part of the overall Forest Service program. The funding will allow for basic services for the increasing number of recreation visitors to the National Forests. Basic services will be provided to cope with an expected 202.5 million visitor-days of use to prevent adverse environmental effects and infringement on other resource use of the National Forests. The use is a 2.2 percent increase over fiscal year 1974 and an increase of about 17 percent over use of 172.5 million visitor-days use in 1970.

The funding will provide visitor safety, enforcement of occupancy and use regulations signing, and general services for operations, cleanup, sanitation, maintenance and management to protect the environment while offering recreation opportunities.

Project (2)

The National Forest recreation program includes many activities. These are classified into activities occurring in developed sites (such as campgrounds and ski sites) and dispersed areas (such as back country areas or wilderness). More than 60 percent of the use occurs in undeveloped areas. The following illustrates the variety of activities and the use occurring in 1972:

Activity			Public Use Visitor-Days	Public Use Percent
Camping			50,062,500	27.2
Picnicking			7,411,200	4.0
Recreation travel (mechanized)			42,274,700	23.0
Automobile	(36,231,500)	(19.7)		
Scooter and motorcycle	(2,910,200)	(1.6)		
Ice and snowcraft	(2,862,600)	(1.6)		
Other	(270,400)	(0.1)		
Boating			5,423,200	2.9
Power boats	(3,365,900)	(1.8)		
Self-propelled boats	(2,057,300)	(1.1)		
Games and team sports			771,000	.4
Waterskiing and other water sports			873,200	.5
Swimming and scuba diving			3,666,200	2.0
Winter sports			6,964,400	3.8
Skiing	(5,812,800)	(3.2)		
Other	(1,151,600)	(0.6)		
Fishing			15,457,100	8.4
Hunting			13,739,700	7.5
Hiking and mountain climbing			6,862,100	3.7
Horseback riding			2,616,000	1.4
Resort use			3,525,200	1.9
Organizational camp use			4,122,400	2.2
Recreation residence use			7,839,500	4.3
Gathering forest products			1,250,600	.7
Nature study			924,100	.5
Viewing scenery, sports, environment			7,073,900	3.8
Visitor information (exhibits, talks)			3,101,300	1.8
Total			183,958,300	100.0

A detailed explanation of financial needs follows:

(1) Administration of concessions and recreation special use permits ($1,680,000, increase of $50,000.)

About 13 percent of recreation use in the National Forests, or 26.1 million visitor-days use, will be accommodated by concessionaires (resorts, marinas, ski areas) and other recreation special-use permittees (organization camps, recreation residences). Private capital is used to develop facilities and to provide services while returning receipts to the Federal Treasury. In fiscal year 1973, receipts totaled over $4.6 million, an increase of $1 million over fiscal year 1972. It is estimated that receipts in fiscal year 1975 will exceed $5 million.

Funding for this item will be used:

(a) For plans, environmental reviews and statements, designs, prospectus preparation, and administration of new sites for concessionaire development and operation.

(b) To administer and review proposed expansion or improvement of facilities under existing special-use permits.

(c) To administer 1,780 concessions and over 20,000 recreation special-use permits.

Administration is necessary to assure compliance with permit stipulations which require environmental safeguards, satisfactory service, and that the sites continue to serve the purpose for which they were established. Requirements of the National Environmental Policy Act also make planning coordination and observance of construction activities essential.

(2) Operation and maintenance ($36,582,000, increase of $1,655,000.)

This item includes funding necessary to:

(a) Operate the recreation program in developed sites and general forest areas, including special areas such as National Recreation Areas, Wilderness, archeological and other special interest areas, wild and scenic rivers, and the National System of Trails. Operation includes such items as regulation of use (including off-road vehicle use) where necessary, cleanup and disposal of refuse in sites and general forest areas, providing for reasonable safety of visitors, fee collection and enforcement, and law enforcement. It also includes operation of a landscape management program to enhance and protect the visual qualities of the National Forests.

(b) Provide for maintenance of facilities reported as unsafe for public use and for emergency maintenance which is necessary to continue operation of needed facilities.

The funding level will continue to provide for basic needs of cleanup and disposal of refuse, providing sanitation and sewage treatment facilities, visitor safety, law enforcement, and signing in general forest areas and developed sites.

Dispersed recreation use such as hiking, riding, fishing, hunting, sightseeing and snowplay take place on the 187 million acres of general forest areas. In 1975, this type use will amount to about 124 million visitor-days, or almost 60 percent of all recreation use occurring on National Forest lands. Providing for cleanup, reasonable safety of users, minimal sanitation facilities, and law and regulation enforcement is a major job that will be accomplished at a basic level.

To protect environmental and resource values of general forest areas, the funds will also be used to implement requirements of E.O. 11644 regarding regulation of off-road vehicles. Studies and public involvement will begin on the most critical areas. Intensive management to enforce restrictions will be necessary.

The funding will allow continuing operation at current standards on 8,436 developed recreation sites. It will also provide for continued operation of another 237 sites within six National Recreation Areas. The developed sites have a capacity of more than 746,000 persons-at-one-time. Visitor safety, law enforcement, and refuse cleanup and disposal will be provided.

The funding will allow for increased costs associated with operation and maintenance of newly provided solid waste collection and disposal systems and sanitation and sewage treatment facilities. These have been developed to abate air and water pollution under the provisions of E.O. 11507 (disposal of solid waste) and E.O. 11514 (protection and enhancement of environmental quality) at a cost in excess of $50 million. Operating costs for the new solid waste collection and disposal systems are $2,446,000 annually. Operation and maintenance of the new sanitation and sewage treatment facilities will require $1,675,000 annually. Program adjustments will be made to provide these added programs, including off-season closures of recreation sites receiving little use, promoting user cleanup in remote and boat access campsites, deferring non-essential maintenance of other facilities, and closure of selected recreation sites which receive less than 10 percent of maximum design capacity.

Project (2)

Emergency maintenance and correction of unsafe conditions for all Forest Service recreation facilities in general forest areas and at developed sites will be accomplished.

The total funding will also provide for the cleanup and administration necessary to accommodate 600,000 visitor-days of use expected on over 2,000 miles of the Appalachian, Pacific Crest, and Gabrielino National Scenic Trails.

It will also provide for cleanup and sanitation within the 478 miles of Wild and Scenic Rivers System within the National Forests. It will provide for necessary operation to accommodate the 300,000 visitor-days of use these areas will receive. Cleanup costs are high due to difficult accessibility, and programs will be continued to encourage visitor self cleanup.

This funding will also allow a basic program to comply with E.O. 11593 in protecting and stabilizing historical sites, buildings, districts, and objects for which management decisions have been made in unit area plans and/or through informal classification as historical or archeological areas. The funding will also allow similar basic programs for other existing special-interest areas such as botanical, zoological and paleontological.

The funding requested will allow the development of procedural instructions and training programs for all National Forest land managers to insure that commodity uses, including timber harvest, which the National Forests must support are so planned and administered as to be compatible with the environmental and ecological integrity of all the landscapes involved. It will also allow a program for environmental protection and enhancement of National Forest lands. The availability of the scientific knowledge necessary to fully implement the intent of the National Environmental Policy Act of 1969 is dependent on a continuing cadre of specially trained landscape architects to participate in inter-disciplinary multiple use planning. The funding requested will allow for this continuing cadre of landscape architects for an intensified program in developing overall multiple use, environmental resource, and landscape plans assuring that timber harvest and other commodity uses are harmonious with the natural landscape.

(3) Planning and inventories ($1,359,000, an increase of $41,000.)

The proposed funding will allow for maintaining the 1959 to 1961 National Forest Recreation Survey and unit management plans, and the preparation of plans for management of areas specially classified by Acts of Congress.

A study of National Forest lands will be implemented with public involvement to determine areas to be open or closed to off-road vehicle use.

Funding will also allow for initiating compliance with the identification, inventory, and nomination requirements of E.O. 11593 as well as the protection and establishment requirements. This funding level is estimated to result in the annual nomination of approximately 250 properties to the National Register of Historic Places out of an estimated Service-wide potential of 5,000 properties. This should result in completion of the nomination program in approximately 20 years.

(4) Wilderness administration ($3,108,000, an increase of $93,000.)

Maintaining this level of funding will allow for a program of cleanup and sanitation on the 14.2 million acres of National Forest Wilderness and Primitive Areas.

Studies leading towards reclassification of Primitive Areas as directed by the Wilderness Act of 1964 will also remain on schedule to assure completion within the allotted time directed by the Act.

Project (2)

Studies of roadless areas identified for possible future classification as wilderness will be initiated.

(5) Visitor Information Service ($3,793,000, an increase of $13,000.)

These funds will be used:

(a) To manage the second year of operation at Blanchard Springs Caverns on the Ozark National Forest in Arkansas.

(b) To continue the operation and maintenance at various Visitor Information Service facilities throughout the National Forest System at a lower level of manning.

Naturalist programs at visitor centers, information stations, amphitheaters, campfire programs, and along trails will be continued at slightly lower levels. Such programs contribute significantly to public understanding and appreciation of natural resources and their role in providing a quality human environment. These programs are the foundation of on-the-ground, people-to-people environmental and ecological education activities of the Forest Service.

Project (3)

WILDLIFE AND FISH HABITAT MANAGEMENT

1973	$7,857,000
1974	8,694,000
1975	9,230,000
Increase	+536,000

A net increase of $536,000 is proposed as follows:

(1) An increase of $230,000 for coordination of wildlife biological needs and requirements with timber sale activities.

(2) An increase of $66,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(3) An increase of $261,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(4) A decrease of $21,000 which reflects non-recurrent rehabilitation work in tussock moth infested areas to be accomplished in 1974.

The planned level of financing for fiscal year 1975, as compared with 1973 and 1974, is as follows (in thousands):

	1973	1974	1975	Change: Pay Costs	Change: GSA Space	Change: Program
Recurrent work	$4,282	$4,617	$5,021	$35	$139	$230
Habitat restoration and development	2,800	3,174	3,272	24	95	-21
Endangered and other threatened species	775	903	937	7	27	- -
Total	7,857	8,694	9,230	66	261	209

There is a real need to continue the intensified recurrent work segment of this program which includes the coordination of wildlife and fish habitat needs into timber management, road construction, and other development activities. This is especially cogent when considering the Forest Service program of accelerated timber management which must be instituted to help meet the national need for wood products. To fully develop the opportunities of wildlife and fish habitat management through timber management programs, it is essential that the wildlife resource needs for both game and nongame species be coordinated into the planning, execution, and follow-up phases of Forest Service developmental programs.

Numerous opportunities exist to match cooperative proposals with the States for habitat restoration and development on National Forest System lands. Direct wildlife and fish habitat improvement programs with the States are in accord with the long-term cooperative agreements made with the various State conservation agencies.

Management and protection of the habitat for 58 endangered and other threatened wildlife and fish species found on or adjacent to National Forest System lands is of highest priority. The Forest Service land management program seeks increased protection, management, and survival of these species through habitat enhancement and maintenance. Quality habitat conditions are needed to insure survival and continued increases in the population status of these species.

(1) Recurrent work is the heart of the wildlife program which involves relatively fixed annual costs in relation to other resource uses and programs.

Coordination. Program activities such as timber harvesting, timber regeneration, timber stand improvement, recreation, road and trail construction, and reservoir construction can have adverse impacts upon wildlife and fish habitat unless development and land use activities are thoroughly coordinated with the environmental needs of the animals. To best accomplish this integration of resource use planning and provide adequate consideration for the fish and wildlife species, the expertise of trained biologists is required. Wildlife biologists are assigned to all regional offices and to a number of the National Forests to also work on multidiscipline planning teams and give technical guidance to this activity. The intensity of coordination determines the degree to which wildlife values are protected or enhanced. The control of animal damage to other resources also requires intensive coordination.

Cooperation. Cooperating with State conservation departments, the agencies responsible for protecting wildlife and regulating the harvest of game populations, is an important part of the Forest Service wildlife program. Habitat management on the National Forests is essential to the success of State fish and game programs because habitat and wildlife populations cannot be managed independently of each other. The States contribute a substantial share of the cost of habitat and fishing water improvements. In 1972 (most current available data) the States financed 45 percent of the habitat work on the National Forests. This amounts to an expenditure of about $1.2 million.

Surveys and plans. Evaluating wildlife, fish, and endangered and threatened species habitat, preparing or revising wildlife management plans, and assisting with multiple use planning, are continuing activities which are basic to an effective wildlife program.

Maintenance. Maintaining habitat improvements already in place is a recurring job that generally takes precedence over new development work. The States share in this work under terms of cooperative agreements.

(2) Habitat restoration and development include a wide variety of activities designed to increase wildlife and fish production for the use and enjoyment of the public.

Food and cover--developing either food or protective cover to enhance the quality of the wildlife environment. This is a broadbased program applicable on all Forest Service administered lands.

Wetland developments. About 90 percent of this work consists of marshland improvement for waterfowl in the north central States and the development of greentree reservoirs along the Mississippi drainage. This work is extremely important in the total national effort to maintain waterfowl production.

Fish stream improvement--includes removal of migration barriers establishing in-stream improvement devices, mechanical gravel cleaning, streambank stabilization, streambank fencing, and construction of streamflow maintenance. Program emphasis will be directed toward the western forests and Alaska.

Fish lake improvement--includes development of new fishing lakes and the improvement of existing lakes. New lake development is a cooperative program with the State conservation departments.

(3) Endangered and other threatened species--include several activities directed toward improvement, protection and management of the habitat for 58 wildlife and fish species found on lands administered by the Forest Service.

Habitat maintained through coordination--coordination of other resource activities with programs for the protection and management of endangered and threatened species. Surveys, studies, and plans form the basis for implementing the prescribed environmental needs and requirements. Activities are coordinated and integrated into the programs of other Federal and State agencies having direct responsibility for management of the populations.

Plans and surveys--evaluation of endangered and threatened species habitat, preparing or revising wildlife management plans to best meet the multiple resource uses while continuing to provide maximum environmental benefits for these important species of wildlife.

Administrative studies--to effectively identify the critical limiting factors affecting the species through evaluative studies which will provide the guidelines necessary to future management of the habitat.

Direct habitat improvement--includes the development of food, protective cover, nesting areas, habitat enlargement and other enhancement measures to improve and maintain quality environment values.

Work accomplishments during 1973

A summary of total wildlife and fish habitat acres improved follows:

Food and cover development	335,804
Water development	180,160
Wetland development	7,630
Fish stream improvement:	
In-stream structures	1,128
Barrier removal	325
Spawnbed improvements	27
Channel fencing	549
Rough fish removal	479
Fish lake development:	
Spawnbeds and shelters	216
Aquatic plant control	1,591
Rough fish removal	1,371
New fishing lakes	3,097

Also, several thousand acres of wildlife habitat were improved through coordination efforts.

Examples of Recent Accomplishments

Programs to expand the range of the Atlantic salmon were undertaken in cooperation with the Bureau of Sport Fisheries and Wildlife, the State of New Hampshire (White Mountain National Forest), and the State of Michigan (Huron-Manistee National Forest). These salmon were taken in 1973 for the first time in history from Michigan's Au Sable River.

An item of special interest in 1973 was a cooperative venture with Hunt-Wesson Foods, Inc., involving the establishment of a National Children's Eagle Nesting Area on the Chippewa National Forest in Minnesota. Hunt-Wesson purchased four bald eagle nest sites involving 114 acres of private land which will be donated to the Forest Service.

Significant accomplishment was made by the Southern Region toward training both professionals and technicians in the use of the Forest Service Wildlife Habitat Management Handbook. Out-Service training sessions were given to the Alabama Professional Biologists Association; Eastern U.S. Air Force Game Managers at Eglin Air Force Base, Florida; Auburn University graduate students; U.S. Navy and Marine Base personnel from North Carolina, South Carolina, and Virginia; and Soil Conservation Service personnel in Arkansas. The Handbook is used as a text at Auburn University, Mississippi State, Louisiana State University, Virginia Polytechnic Institute, University of Kentucky, and Purdue. The Southern Region Handbook is also used as a supplemental reference by 15 additional colleges and universities, four paper companies, and six professional environmental statement firms. As a result, significant improvement in the timber-wildlife coordination activities is evident.

Project (3)

Public use and enjoyment of the wildlife resources continue to grow. This use includes both hunting and fishing and appreciative uses. In calendar year 1972, the estimated public wildlife use of Forest Service administered lands amounted to:

Hunter visitor-days	13,743,000
Fisherman visitor-days	15,470,000

(The visitor-day is a unit of measure amounting to 12 hours.)

In addition, there was an estimated 17.5 million days of appreciative use which includes bird and animal watching, wildlife photography, and forest visits to observe all forms of wildlife, including endangered and threatened species. Wildlife activities not only provide for an outdoor recreation experience and the suitable environment for all wildlife species, but it is also important from an economic standpoint. This is especially true in rural areas and communities. Estimated user expenditures for wildlife-oriented activities on the National Forests for fiscal year 1973 are as follows:

	Days Use*	User Expenditures** (in millions)
Appreciative (bird watching, photography)	17.5	$87
Big-game hunting	25.0	437
Small-game hunting	10.0	76
Waterfowl hunting	2.0	19
Freshwater fishing	58.0	365
Saltwater fishing	.4	4
Commercial salmon fishing	- -	31

*Days use--calculated from visitor-days use reports, using the following conversions:

(1) Each hunter averages 5 hours of hunting time per day.
(2) Each freshwater fisherman averages 4 hours of fishing per day.
(3) Each saltwater salmon fisherman averages 6 hours of fishing per day.
(4) Each bird watcher/photographer is estimated to spend 4 hours per day.

**User expenditures--based on average expenditures for sport fishing and hunting as determined in the National Survey of Fishing and Hunting (1970). For commercial fishing, the output value is based on the value of the salmon catch of fish spawned in waters within National Forests but caught in off-shore saltwater.

32-043 O - 74 - 12

Project (4)

RANGELAND MANAGEMENT

1973	$15,516,000
1974	15,813,000
1975	16,474,000
Increase	+661,000

A net increase of $661,000 is proposed as follows:

(1) An increase of $133,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(2) An increase of $532,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(3) A decrease of $4,000 which reflects non-recurrent rehabilitation work in tussock moth infested areas to be accomplished in fiscal year 1974.

The rangeland management program is concerned with the management of some 105 million acres of National Forest System land for livestock grazing under policies that help maintain a quality environment and a viable rural economy.

This large and varied acreage of public range is divided into some 12,000 management units (allotments). Each of these forms a part of a ranch unit or, in some cases, a group of small ranch units.

National Forest System ranges are particularly important to ranch units and ranching communities in western United States. In the 11 western States some 14,000 ranch units representing 22 percent of the farms and ranches in those States, graze livestock on National Forest System range. Most of the National Forest grazing is seasonal and provides a critical link in year-round cattle or sheep operations.

About 7.6 million animal unit months of grazing are being currently provided to some 16,600 family-type ranching operations under a permit system which equitably allocates the grazing resource, regulates the grazing use under multiple use principles, and charges a fair and equitable fee.

The program activities include determination of resource capabilities, prescription and application of intensive range management techniques such as rest-rotation grazing, administration of permits, construction and maintenance of range improvements, range revegetation, control of livestock trespass, and control of resource damaging insects and diseases.

An additional management responsibility has come to the Forest Service with the enactment of Public Law 82-195 which provides for the protection, management and control of wild free-roaming horses and burros. The Secretaries of Agriculture and the Interior are charged with administration of the Act. The Secretary of Agriculture has directed that his responsibilities be carried out through the rangeland management program of the Forest Service.

The Forest Service immediately faces several tasks which are necessary to properly implement the Act. Much must be learned about the ecology and social structure of these animals over a great variety of climates and topography. Identification and separation must be made of privately owned animals which are roaming with wild ones. Regulations for protection of the wild horses and burros as defined by the law must be enforced and methods must be developed for controlling their numbers should they reach proportions which are incompatible with other uses of the National Forests.

Development and utilization of the National Forest System rangeland resource are based on the multiple objectives:

(1) To maintain environmental quality.

(2) To restore lands with deteriorated or unsatisfactory range condition.

(3) To produce forage and utilize grazing capacity at an intensity commensurate with economic efficiency and national demand.

(4) To contribute to the alleviation of problems in economically depressed areas and in areas with unique social characteristics.

(5) To contribute to rural economic development and stability.

(6) To promote the viable existence of the family type farm or ranch unit.

Resource (grazing permit) allocation systems, range environment analysis, supply and demand analysis, and economic efficiency analysis provide the basis for the procedures and priorities necessary to fulfill the program objectives. Through these studies, the efficient share of grazing demand to be produced on National Forest System lands, the most efficient intensity of management for each resource unit, and finally, several areas where the economic criteria is replaced with social criteria, have been identified. The following investment priorities have been established.

(1) Allotments having the greatest need for improvement of range condition.

(2) Allotments which contribute the most towards alleviating economic distress of rural residents and communities.

(3) Allotments which contribute the most to rural economic development in general.

Following are some examples of recent and planned accomplishments:

Activity	1973	1974	1975
Allotment plans maintained (No.)	6,169	6,369	6,569
Allotment plans initiated (No.)	200	200	200
Deteriorated range being treated (thousand acres)	9,598	9,890	10,182
Range revegetation (thousand acres)	157	160	160
Grazing Use:			
Cattle, including offspring (thousands)	2,729	2,750	2,775
Sheep, including offspring (thousands)	3,305	3,300	3,300
Animal unit months (thousands)	7,568	7,650	7,750

Project (5)

SOIL AND WATER MANAGEMENT 1/

1973	$13,795,000
1974	2/ 15,217,000
1975	15,215,000
Decrease	-2,000

A net decrease of $2,000 is proposed as follows:

(1) Increase of $270,000 for protection of critical soils and unstable slopes and enhancement of water production in support of the timber sale program.

(2) Increase of $94,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(3) Increase of $438,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(4) Decrease of $790,000 in planning, liaison and protection of Forest Service land in connection with water development projects of other agencies. There has recently been a lessening of effort in water project planning and new construction starts. The funds available will help avoid misuse of resources in the most sensitive situations.

(5) Decrease of $13,000 which reflects non-recurrent rehabilitation work in tussock moth infested areas to be accomplished in fiscal year 1974.

(6) Decrease of $1,000 due to change in amount for wild and scenic river studies on State and private lands transferred from this activity to general forestry assistance.

The total program for fiscal year 1975, compared with 1973 and 1974, follows:

	1973	1974	1975	Change: Pay Costs	Change: GSA Space	Change: Program
				(In thousands)		
(1) Soil and water science for management support	$7,232	$8,333	$8,900	$60	$237	$270
(2) Watershed restoration and improvement	1,954	2,029	2,088	15	57	-13
(3) Wild and scenic rivers studies	712	733	758	5	21	-1
(4) Environmental analysis and construction liaison	2,802	2,541	2,645	10	94	--
(5) Planning liaison and protection related to projects of water resource development agencies	1,095	1,581	824	4	29	-790
Total	13,795	15,217	15,215	94	438	-534

(1) Soil and water science for management support ($8,900,000, an increase of $567,000)

Emphasis will continue to be given to:

(a) Management services such as application of technical water, geologic, and soils knowledge to resource management and development activities; advice and counsel on design of specifications for resource management programs to meet specific water management objectives or to enhance soil productivity and avoid problems.

- - - - - -

1/ For comparability, following amounts for Wild and Scenic River Studies on State and private lands are shown under General forestry assistance rather than under Soil and water management as appropriated: 1973, $200,000; 1974, $159,000; 1975, $160,000.

2/ For comparability, surface, environment and mining (SEAM), $1 million, is shown under Minerals management rather than as appropriated under Soil and water management.

(b) Soil, water, and geologic resource inventories including interpretation and analysis. Inventories conducted by scientists provide basic information interpreted for both short- and long-term planning efforts in such areas as land use, timber management, range management, transportation systems, and the wild and scenic rivers program. As management and development activities move into remote and more fragile areas, minimal levels of basic information about the watersheds become essential as a basis for environmentally sound action.

(c) Surveillance and monitoring of National Forest uses and programs to assure that they are compatible with the protection of man's environment. Identifying areas with existing or emerging soil and water quality problems so that corrective action can be formulated and implemented.

The 390.4 million acre-feet of high quality water produced from National Forests is an example of the importance of water in the National Forest Program. In 1972, the dependent regional gross product for all water uses from National Forests averaged $1,157 per acre-foot of water produced, or a total of $167 billion. Protecting the clean water resource will result in substantial and varied social and economic benefits to all citizens.

Extreme demands are being put upon available water supplies, particularly in the West. The Congress and the courts have determined that the United States has a right to reasonable use of water on National Forests reserved from the public domain except those waters appropriated before the National Forests were created. Efforts are underway to obtain sufficient quantities of water in accordance with legal authority for the administration and development of the National Forest System. This project on a watershed basis includes:

(a) An inventory of present and foreseeable needs.
(b) A determination of water availability.
(c) An assessment of the potential for increasing yields in water-short areas.
(d) Action to secure the water needed for National Forest purposes.

The western States want the Forest Service to complete the inventory program as rapidly as possible. The field inventory of Forest Service consumptive water uses is essentially completed. A major part of the total project effort is expected to be completed by fiscal year 1978.

Additional work is developing due to adjudication proceedings in some western States. Increasing judicial and administrative action in water rights is anticipated, both on lands reserved from the public domain and on acquired lands, over the next several years.

Examples of Recent Accomplishments

Land use planning--the process for making decisions about long-term allocations of natural resources and the land base from which they are obtained--has received greatly increased emphasis in 1973.

Soil resource inventories were conducted on 15.6 million acres; detailed soil surveys were conducted on about 0.4 million acres in cooperation with the Soil Conservation Service and the State Agricultural Experiment Stations.

Resource protection requirements and design services were provided by geology, hydrology and soil scientists on more than 2,000 projects.

Project (5)

Soil and water condition and trend observations along with monitoring effects of timber management, mineral developments, Boundary Waters Canoe Areas, and suspected pollution problem sites where people physically use the water resource are underway at 2,000 locations. On the Los Padres National Forest in California a survey was made of watershed conditions that caused mudflows to occur as a result of the Molera fire in the Big Sur area.

Cooperative studies are continuing with State Fish and Game Departments to determine minimum flows necessary for fish culture in connection with Federal Power Commission relicensing of "run of the river" power facilities.

On the Tongass National Forest in Alaska, timbered slopes over the critical angle of repose were delineated on 4.5 million acres of land. Timber management procedures have been updated to reflect special considerations for these fragile areas.

(2) Watershed restoration and improvement ($2,088,000, an increase of $59,000)

The purpose of this continuing program is the restoration and maintenance of surface disturbed areas to enhance the quality of the environment and restore productive capacity of renewable resources. Projects include:

(a) The South Fork Salmon River Project (Idaho) where sedimentation has severely damaged anadromous and resident fisheries of regional and possibly national importance.

(b) The Palzo tract project (Illinois) where chemicals and sediment from old surface coal mining operations have seriously degraded water quality and caused the United States to be cited in court by State water quality authorities.

(c) South Fork Holston River and New River Watershed (Virginia) where sedimentation from old manganese mining operations affect stock water, wildlife and resident fisheries.

Restoring the hydrologic functioning of rural lands damaged beyond the point of natural recovery is essential to protecting the beauty and quality of the rural environment. This is a continuing program to:

(a) Meet soil stability and water quality requirements.

(b) Encourage the orderly development of watershed resources.

(c) Repair degraded watersheds.

(d) Provide continuing maintenance to projects completed to keep them effective.

The funds will be used to provide opportunities for utilizing the skills, and to furnish jobs and timely income for local people in rural areas of low income and critical under-employment. Illustrative of some of the specific activities are:

(a) Emergency treatment and maintenance for the highest priority areas in the 184,000 acres of National Forest System lands burned annually by wildfires.

(b) Being responsive to treatment and maintenance needs on thousands of miles of abandoned "orphan" roads and trails that are great contributors of sediment and uncontrolled runoff, causing local problems of flooding and the resultant inability of water supply to serve agriculture, domestic, or recreational needs.

(c) Maintenance and reinforcement on the highest priority areas of eroding and gullied land treatments installed during the last 5 years.

(d) Removal of debris in stream channels above reservoirs and in anadromous fish streams.

Improvement of the water resource by scientific management helps individuals and communities in rural areas improve their quality of life, and is an integral part of multiple use management.

In response to public demands, the water resource improvement activity for fiscal year 1975 will consist primarily of:

(a) Application of special treatments to capitalize on opportunities to improve water yield through regular ongoing activities such as timber harvesting, range revegetation, timber stand improvement, and fire control in water short areas.

(b) Maintenance of existing water resource improvement projects to insure continuing effectiveness of work done to date.

(c) Continuation of programs under cooperative agreement with Anaconda Company in Montana and with the Salt River Valley Users Association in Arizona.

Examples of Recent Accomplishments

Rehabilitation of damaged areas is progressing in all parts of the country, but much work still needs to be done. A computer program--CHAGCOM--has been developed to facilitate the design of gully stabilization structures.

Rehabilitation work is coordinated with other resource and service divisions to accomplish an integrated program of management under multiple use.

In fiscal year 1973, Forest Service crews treated and stabilized:

Acres of sheet eroded and deteriorated areas	36,000
Miles of streambanks and shorelines	350

Treatments to aid in restoring favorable watershed conditions on lands damaged by wildfire continued. Emergency measures (initial treatment on new burns and maintenance on older burns) were applied to 27 fires on 52,000 acres that required onsite protection and posed threats to life, property, public health, and watershed functioning.

(3) Wild and scenic rivers studies ($758,000, an increase of $25,000)

The purpose of this activity is to carry out comprehensive studies of rivers designated as potential additions to the National Wild and Scenic Rivers System. The Wild and Scenic Rivers Act (PL 90-542) named 27 rivers as potential additions to the national system. The Forest Service is the lead agency for the Department of Agriculture's river study work on nine of the 27 rivers. These nine are: Chattooga River in North Carolina, South Carolina, and Georgia; Flathead River, Montana; Illinois River in Oregon; Pere Marquette River in Michigan; Moyie, Priest, St. Joe and Salmon (main stem) Rivers in Idaho; and the Skagit River in Washington.

The program effort during fiscal year 1975 will essentially complete work on the St. Joe, Skagit, Salmon, Flathead and Pere Marquette Rivers, while making substantial progress on the remainder. All studies are cooperative efforts with States, Federal agencies, and other interested groups and individuals and they provide for employment of local people to collect resource data and data on resource use and capability.

Examples of Recent Accomplishments

The Department's report and recommendations on the Chattooga River were transmitted to the President and the Congress for their consideration. Also, the Flathead River proposal has been sent to all concerned Federal departments and agencies and to the Governor of Montana for review and comment. The river study report and draft environmental statement for the Pere Marquette River are in the process of being prepared.

(4) Environmental analysis and construction liaison with water resource development agencies ($2,645,000, an increase of $104,000)

Environmental analyses delineate the effects, define necessary mitigating measures, and identify enhancement opportunities relative to proposed water resource development associated with National Forests and National Grasslands. Reports resulting from such analyses document measures which are essential to the attainment of National Forest multiple use objectives and identify how National Forest management can contribute to project purposes to optimize their economic and social contribution to rural America. To be effective, the analysis and report must be concurrent with the construction agency's preliminary planning to permit their findings to be incorporated in the licensing or authorizing document.

Liaison with the construction agency during the construction period is necessary to facilitate coordination between the construction agency and the Forest Service. Protection of the land and resources, minimizing interference with regular protection and management activities, and facilitating construction agency operations are direct economic dividends derived from this program.

Experience has shown that without adequate analysis and liaison effort such as is provided by this activity, natural resources often suffer from enormous waste and misuse, and the project works fail to make their maximum contribution. Natural beauty and high quality water are among those resources most susceptible to loss. The rising value of forest resources and constant increase in demands against the declining resource base requires increased perception, scientific input and thoroughness in making environmental analyses and preparing reports.

Examples of recent accomplishments include environmental analyses and reports for Bath County Pumped Storage Project, Parr Shoals, Skidmore Fork Flood Control Project, and the Central Utah Project. In addition, construction liaison was carried out on such major developments as the California Water Plan and the ongoing elements of the Central Utah Project.

(5) Soil stabilization and cover improvement ($824,000, a decrease of $757,000)

The treatment of lands tributary to water resource development projects to reduce sediment yield or to modify the pattern of runoff lengthens the life and increases the utility of the water control structures. This work is done on National Forest System Lands tributary to the project, only where hydrologic analysis and other elements of the environmental analysis determine that such work is needed and that benefits to the project purpose are clearly established.

Treatment programs include the following:

(a) Modifying the vegetation to decrease erosion, to reduce flood peaks, and to increase the annual quantity and improve the timing of water yielded from the tributary lands.

(b) Clearing reservoir areas, where not done as part of construction, and keeping the reservoir free of debris to make the area safe for public use and to maintain scenic beauty.

(c) Land treatment measures such as contour terracing, gully plugs, headwaters debris and flow retarding structures, and streambank and shoreline stabilization measures.

Essential land treatment and related measures are planned at small watershed projects authorized by PL-566 and PL-534, and at other major reservoir projects. Treatment measures will include soil stabilization and vegetation management to improve water quality and quantity. Also, in order to provide for public safety and user enjoyment of reservoir areas, debris and stump removal will be accomplished on about 10,000 acres.

Recent accomplishments included the application of land treatment measures at Dry Creek, Cottonwood Creek, and Carpinteria PL-566 projects. Stumps were removed at some reservoirs comprising the Yakima Project and reservoir sweeping was done at major reservoirs where the Forest Service has management responsibilities.

Project (6)

MINERALS MANAGEMENT

1973	$2,893,000
1974	1/ 4,436,000
1975	4,630,000
Increase	+194,000

An increase of $194,000 is proposed as follows:

(1) To provide for the full year costs of the pay increase effective in fiscal year 1974, $29,000.

(2) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $165,000.

(1) Surface environment, and mining program ($1,030,000, an increase of $30,000 for space rental)

SEAM is a research, development and application program designed to provide an innovative array of economical and effective surface mine reclamation alternatives which satisfy environmental, energy, and mineral needs. The direct end product of SEAM will be several demonstration areas where new techniques in planning of mining operations, new methods of rehabilitation, and environmental stewardship criteria can be evaluated and displayed.

The 1974 Appropriation Act for the Forest Service provided $1.7 million for SEAM in 1974--$1.0 million for Forest land management and $700,000 for Forest watershed management research. The ongoing programs of other USDA agencies also contribute to the objective of developing techniques for surface mine rehabilitation.

SEAM is an on-the-ground problem-solving effort initially concentrated in the West. SEAM is a partnership undertaking with land managers, the mining industry and political jurisdictions. It will be closely coordinated with ongoing Federal and State programs.

The development and application funds for SEAM in fiscal year 1974 will be used to begin meeting six basic objectives:

Objective A. Determine and evaluate the environmental impacts of mining and related activities both on site and on surrounding areas. Identify and display alternatives.

Objective B. Determine and evaluate the socio-economic impacts of mining and related developments with emphasis on rural areas. Identify and display alternatives.

Objective C. Develop alternative engineering systems to prevent or reduce future environmental damage.

Objective D. Develop alternative land treatments designed to return or transform disturbed areas to beneficial use.

Objective E. Develop alternative institutional, legal, and physical criteria for use in coordinated planning and administration of mineralized lands.

Objective F. Assemble, synthesize, test, and evaluate alternative systems and practices on demonstration areas. Assist land managers, industry, and regulatory authorities in applying such systems and practices on a broad scale.

- - - - - -

1/ For comparability, surface environment and mining (SEAM), $1 million, is shown under this activity rather than as appropriated under Soil and water management.

Specifically the work will include:

(1) Assembling existing inventory data, operationalizing remote sensing techniques and classifying and stratifying areas in land units to predict environmental responses.

(2) Assembling and systematizing appropriate socio-economic data to determine cultural effects of mining on rural communities.

(3) Acquiring equipment for collecting, processing, and planting seed or plants on disturbed areas and demonstrating sound techniques for mechanically stabilizing areas disturbed by mining.

(4) Use of research results at plant material centers to develop, propogate, and disseminate seed and plant materials.

(5) Development of guides and criteria to evaluate quality of mining plans.

(6) Providing guides, technical service and demonstration of equipment and methods to industry and land managers.

(2) Mineral claims, leases, and permits ($3,600,000, an increase of $29,000 for pay costs and $135,000 for space rental)

For the most part, activities under the 1872 mining law are subject to little restraint by Federal and State laws. Safeguarding surface resources and avoiding occupancy trespass are therefore dependent upon timely--sometimes daily--contact with mining claimants. This requires time-consuming, costly trips by forest officers to the sites of such activities, many of which are located in remote areas having difficult access.

If such contacts are not made, improperly located and poorly designed access roads are often built. Such roads cause soil erosion, muddy streams, and unnecessary damage to esthetic values. Frequent inspections are also important in precluding trespass. Many persons, attracted by recreational opportunities in the National Forests, find it easy to abuse the 1872 mining law by erecting or maintaining residences on claims--ostensibly for legitimate mining purposes, but actually for use as vacation homes, year-round residences or hunting camps. Once such residences are built, even though no serious attempts are made to mine, and occupancy is clearly recreational or for some other non-mining purpose, their removal typically takes several years and thousands of dollars in public funds. In most cases, a mining claim must be found inadequate in mineral content after competent examination and declared invalid in a Department of the Interior proceeding before action can be taken to actually remove a residence. Unless promptly removed, after a claim is declared invalid, a habitable residence invites new mining claimants. Vigilance and lengthy discussions with claimants concerning the prerequisites which must be met before a residence can be lawfully built or maintained are necessary to inhibit such trespasses. Failure to prosecute these cases encourages more trespasses. As of January 1, 1973, there were almost 1,400 habitable structures on mining claims in California's National Forests. Most of these structures are on claims of doubtful validity and, if occupied, for non-mining purposes, constitute trespasses on Federal lands.

Administration of new regulations governing the occupancy and use of National Forest lands under the 1872 mining law will require the filing of operating plans which will be approved contingent upon adequate measures to protect surface resources and rehabilitate disturbed areas. Frequent contacts with operators and on-the-ground inspections will be necessary to check on adherence to approved operating plans. With the intensity of exploration increasing, especially for copper and gold deposits, demands for timely review and approval of operating plans should rise markedly.

Operations under the mineral leasing acts, particularly those associated with exploration and development of fuels (oil, gas, and coal) are expected to increase. These, too, require review and approval of operating plans to protect the environment. Timely action on applications for leases and permits and frequent inspections are necessary so as not to adversely affect energy availability, while providing protection for surface resources.

Examination of mining claims is a time-consuming job for qualified mining engineers and geologists. To protect the public interest and encourage bona fide development, it is necessary to examine and report on claims:

(1) For which patent applications have been filed.

(2) Of doubtful validity that are being misused or that conflict with Forest Service programs.

(3) Located in wilderness where applications for prospecting or mineral development permits have been filed.

The mineral leasing job requires:

(1) Review of applications for prospecting permits and leases to determine if mineral activities are compatible with other uses.

(2) The preparation of stipulations and operating plans to protect the environment.

(3) The preparation of mineral title reports on all acquired lands.

(4) On-the-ground administration to ascertain that terms of leases, permits, stipulations, and operating plans are understood and followed.

Fiscal year 1975 anticipated workload as compared with fiscal years 1973 and 1974 follows:

	1973	1974 estimated	1975 estimated
Surface resource protection and management of mining claims (claims)	20,172	29,000	24,000
Mining law compliance and validity determination (claims)	6,042	4,500	4,500
Mineral leasing and surface resource protection (No. of leases requiring action)	8,582	9,000	12,000
Surface management of mineral reservations and rights outstanding (No. of cases requiring action)	1,035	1,200	3,100
Mineral material disposal (No. of permits or leases requiring action)	2,479	2,500	2,700
Mineral withdrawals and mineral character determinations (acres)	601,700	650,000	5,300,000

Examples of Recent Accomplishments

Mining claims. New reserves of uranium, copper, silver, gold, lead, zinc, and molybdenum continue to be in great demand by mining companies. Management of surface resources on mining claims was accomplished on over 20,000 claims during fiscal year 1973. Approximately 6,000 mining claims were examined for compliance with the mining laws during the year. There were 71 mineral patent applications, involving 385 claims, pending at the close of calendar year 1972. Actions on 252 claims were completed during this period; 2 claims (applications) aggregating 45 acres were patented during the calendar year.

Mineral leases and permits. Demand for low-sulphur coal that will reduce air pollution in urban area continues to be very high. Exploration for oil and gas and phosphates continues at a high level. Some 8,600 leases and permits were active during fiscal year 1973, thus requiring Forest Service administration to protect the environment and coordinate uses. Nearly 2,500 sales and free use permits were granted, involving disposal of common varieties of mineral materials. More than 1,000 mineral operations were active on acquired lands as a result of reserved or outstanding mineral rights. These require action to avoid or reduce environmental degradation.

Total revenue from leases and permits on acquired lands amounted to $6,777,509 during fiscal year 1973. In addition, an estimated $27 million was received from leases and permits on public domain lands.

Project (7)

FOREST FIRE PROTECTION

1973	$32,639,000
1974	36,359,000
1975	36,518,000
Increase	+159,000

A net increase of $159,000 is proposed as follows:

(1) An increase of $210,000 for hazard reduction and fire prevention in support of the timber sale program.

(2) An increase of $326,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(3) An increase of $1,847,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(4) A decrease of $1.4 million appropriated in 1974 for procurement of ten units of the Modular Airborne Fire Fighting System.

(5) A decrease of $824,000 which reflects non-recurrent timber salvage and rehabilitation work in tussock moth infested areas to be accomplished in fiscal year 1974.

The objectives of National Forest Fire Protection Program are to:

(1) Provide for public safety and prevent loss of human life to wildfire.

(2) Protect forest resources and hold property losses to levels consistent with land use objectives.

(3) Reduce the flammability of all forest lands.

(4) Use and manage fire to increase productivity and achieve land management objectives.

(5) Promote professional fire management practices to protect and improve environmental quality.

(6) Accomplish the above economically.

This program is to lower the flammability of forest and rangelands resulting in greater protection of lives, property and resources. The quality of the environment is improved through scientific smoke management and application of sound fire management practices including the prescribed use of fire. Uncontrolled fires become less tolerable each year as the interface between rural and urban areas increases.

Land and resources protected by the Forest Service are subject to more use by recreationists, travelers and others for special purposes, collectively increasing the risk from man-caused fires. Paradoxically, response of the land to good management practice often creates combustible fuels where few existed before. The challenge is to meet the burgeoning problem of increased hazard and risk. Where possible, effort has been made to make improvements in fire prevention, preparedness, suppression, and modification of fuels to increase effectiveness and efficiencies.

The proposed budget will be used to finance protection measures approximately as follows:

Protection Measure	1973	1974	1975	Project (7) Change: Pay Costs	CSA Space	Program
				(In thousands)		
Fire prevention	$6,808	$8,346	$8,977	$82	$449	$100
Fire detection	4,256	3,445	3,723	35	183	60
Fire attack forces	15,492	15,522	16,560	150	838	50
Air operations	4,403	4,270	4,542	40	232	- -
Fuel modification	545	1,498	1,630	15	117	- -
Equipment development and testing	535	470	500	4	26	- -
Modular Airborne Fire Fighting System	- -	1,400	- -	- -	- -	-1,400
Studies, surveys, plans and training	600	584	586	- -	2	- -
Tussock moth infested areas	- -	824	- -	- -	- -	-824
Total	32,639	36,359	36,518	326	1,847	-2,014

Examples of Recent Accomplishments

Fire training and safety. National fire training emphasis in 1973 focused on production of multi-media training materials in fire and air operations. The thrust was to improve effectiveness, increase efficiency, and develop safe work habits of fireline worker and air operations personnel.

A major effort in fire safety resulted in an improved safety record overall. Action on major fires using 10,000 people from every part of the Nation without serious injury attests to the success of this effort. The Off Fire in California and Freezout Fire in Oregon are specific examples of fires fought under extremely tough conditions without major injury.

Two fatalities in California, however, emphasize the need for increased efforts in safety and training fire crew personnel.

Fuel treatment. Work in this program consists of constructing new fuel breaks, maintaining existing fuel breaks, making vegetative type conversions in highly hazardous fuel areas, cleanup of forest debris along roadsides, and treatment of undesirable forest fuels to maintain the environment and achieve ecological benefits.

Continued progress is being made in lowering the flammability of forest lands. About 250,000 acres of excessive natural fuels were reduced in fiscal year 1972 to improve the forest environment.

Fuel treatment work programed as a result of the fiscal year 1972 supplemental funding of $5 million is about completed. As an example, within the National Forests of Washington and Oregon, approximately 3,900 acres of fuel type conversion has been done and 130 miles of fuel breaks have been constructed.

Air operations. Improvements on the prototype were completed and the first Modular Airborne Fire Fighting System (MAFFS), a detached fire retardant delivery system developed with the Air Force, was field-tested. Over 20 drops were made under simulated conditions in mountainous terrain and 24 drops were made on actual fires in Montana, Idaho, and California. All results were favorable and the procurement of 10 units is planned in fiscal year 1974.

Progress continues toward interagency standardization of air operations procedures with the development of a single air tanker services contract acceptable to both Bureau of Land Management and Forest Service.

A test project was started on the evaluation of some modern military night vision technology and equipment. The objective is to find some aids for operating helicopters at night to make more efficient use of hours of darkness in fighting forest fires. Initial tests indicate the night vision goggles have a high potential for Forest Service work.

A national inspection team was organized for the purpose of checking air tanker firms, their aircraft and pilots on a pre-award basis to standardize the procedures. Other agencies concur in this type of operation and will have representatives on the team where needed. This is another step in the coordination of efforts, especially with the Bureau of Land Management.

Mobilization. During 1973, the mobilization effort was in both initial attack forces and the pre-positioning of reinforcement crews. The success of strengthening initial attack forces where needed is borne out by the fire record. Of 11,866 fires, 11,363 were suppressed while less than 10 acres. Only four out of each 100 fires escaped initial attack. The increase and decrease of initial attack forces consisted of moving ground tankers, tractors, smokejumpers, helitack crews and smokechasers from areas of moderate fire danger to areas of high fire danger.

The Boise Interagency Fire Center (BIFC) constantly monitored the fire situation throughout the West during the summer months. As situations became critical, organized crews and other resources from a low fire danger area were alerted or started enroute to fire-threatened areas in advance of request by field units.

Through BIFC role in coordination of aircraft, mobilization and demobilization of firefighters, it is estimated several million dollars were saved in transportation costs. It is also believed acreage burned would have been greater without planning and coordination in movement of firefighters from controlled fires to uncontrolled fires.

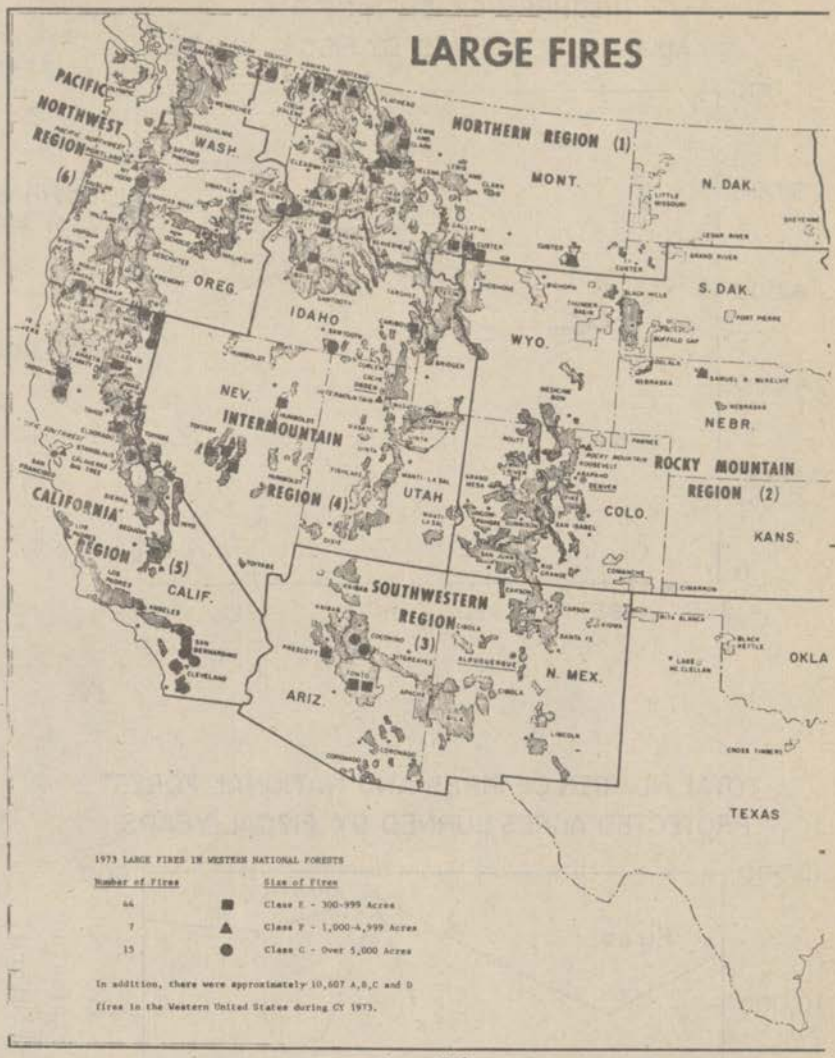
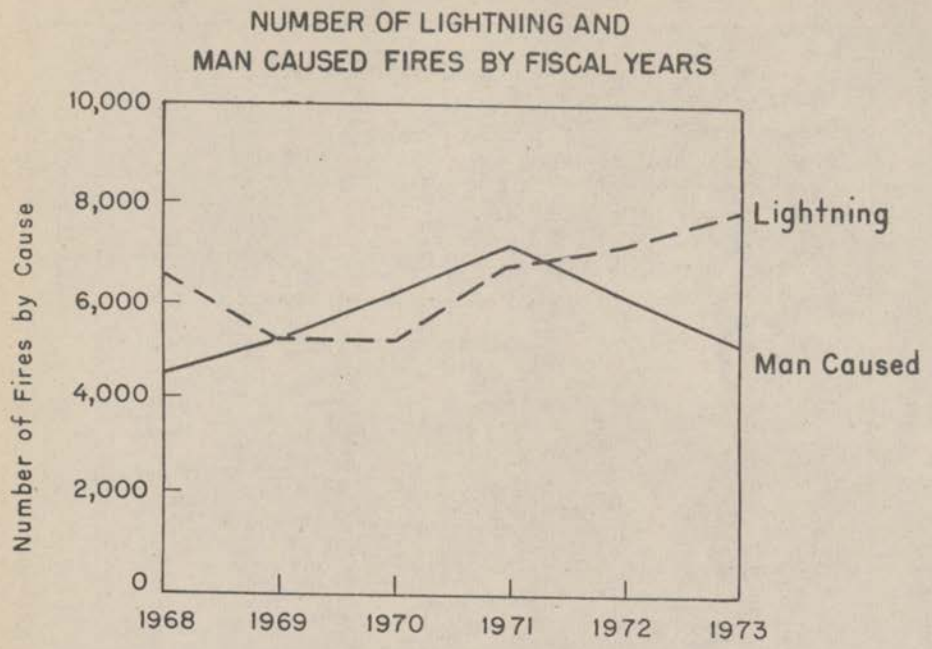

LARGE FIRES
PACIFIC NORTHWEST REGION (6)
WASH.
OREG.
NORTHERN REGION (1)
MONT.
N. DAK.
S. DAK.
IDAHO
WYO.
NEV.
INTERMOUNTAIN REGION (4)
UTAH
NEBR.
ROCKY MOUNTAIN REGION (2)
COLO.
KANS.
CALIFORNIA REGION (5)
CALIF.
SOUTHWESTERN REGION (3)
N. MEX.
ARIZ.
OKLA.
TEXAS
1973 LARGE FIRES IN WESTERN NATIONAL FORESTS
Number of Fires
Size of Fires
44 Class E - 300-999 Acres
7 Class F - 1,000-4,999 Acres
15 Class G - Over 5,000 Acres
In addition, there were approximately 10,607 A,B,C and D fires in the Western United States during CY 1973.

Figure 7-1


NUMBER OF LIGHTNING AND
MAN CAUSED FIRES BY FISCAL YEARS
Number of Fires by Cause
10,000
8,000
6,000
4,000
2,000
0
1968
1969
1970
1971
1972
1973
Lightning
Man Caused

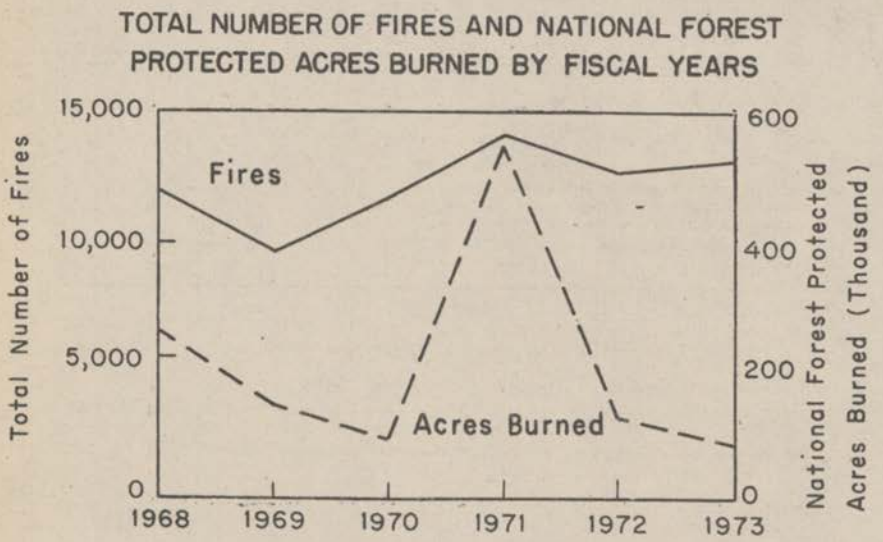

TOTAL NUMBER OF FIRES AND NATIONAL FOREST
PROTECTED ACRES BURNED BY FISCAL YEARS
Total Number of Fires
15,000
10,000
5,000
0
600
400
200
0
National Forest Protected
Acres Burned (Thousand)
Fires
Acres Burned
1968
1969
1970
1971
1972
1973

Figure 7-2

Project (8)

GENERAL LAND MANAGEMENT ACTIVITIES

1973	$21,110,000
1974	24,741,000
1975	26,460,000
Increase	+1,719,000

An increase of $1,719,000 is proposed as follows:

(1) For land line location, $100,000, for marking land lines and monuments in support of the timber sale program.

(2) To reimburse the Employees' Compensation Fund, $560,000.

(3) For cost of special Bicentennial and Forestry Centennial edition of the booklet, "Highlights in the History of Forest Conservation," $20,000.

(4) To provide for the full year costs of the pay increase effective in fiscal year 1974, $185,000.

(5) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $854,000.

The total program for fiscal year 1975, compared with 1973 and 1974 follows:

	1973	1974	1975	Change
			(in thousands)	
(1) Land classification	$461	$787	$825	$38
(2) Land exchange	3,446	3,681	3,853	172
(3) Land status records and cadastral engineering (land line location)	3,144	4,088	4,375	287
(4) Geometronics	1,144	1,298	1,358	60
(5) Maintenance of improvements for fire and general purposes (including communications)	7,909	8,972	9,385	413
(6) Special uses--non-recreation	2,875	3,615	3,784	169
(7) Payments to Employees' Compensation Fund	2,131	2,300	2,860	560
(8) Bicentennial and Forestry Centennial	- -	- -	20	20
Total	21,110	24,741	26,460	1,719

(1) Land classification ($825,000, an increase of $8,000 for increased pay costs and $30,000 for space rental.)

The function of land classification is to structure and recommend programs concerning the extent, location and composition of the National Forest System that will most effectively further national objectives. Purposes and activities are to:

(a) Improve the land base to provide for current and prospective public needs for outdoor recreation space.

(b) Improve the landownership pattern to facilitate development and use of recreation, timber, range forage, water, and wildlife resources which can contribute to growth of rural economies.

(c) Encourage land adjustment for protection and improvement of watersheds.

(d) Promote stability and encourage economic growth of communities in and near areas in the National Forest System.

(e) Improve efficiency in the administration of natural resource programs.

(f) Improve land use patterns to promote the preservation and enhancement of the environment.

(g) Survey the degree of utilization of public lands pursuant to Budget Circular A-2.

Financing at the level indicated will enable Forest Service to meet pressing needs for:

(a) Identification and detailed analyses of areas within and adjacent to the National Forests and Grasslands to determine the land exchange and land consolidation which should be made to best accomplish national objectives, including the Hells Canyon-Snake River proposal. Of particular urgency are Forest Service intensive unit planning projects and joint agency planning efforts.

(b) Determination of the merits of opportunities to transfer Federal lands to or from the National Forest System, including consideration of lands claimed by Indians, and jurisdictional transfers at numerous Federal water control projects important for outdoor recreation.

(c) Analysis and classification of lands with potential for national recreation areas, monuments, wildlife preserves, or other special status.

(d) Continuing action on Alaska native selections of land, cooperation with the Department of the Interior on proposed additions to the four national conservation systems, and other activities required as a result of the passage of the Alaska Native Claims Settlement Act.

(e) Consideration of applications made by the State of Alaska for State land selections.

(f) Continuing follow-up action on the disposition of public lands surveyed pursuant to Executive Order 11724.

Continual review of the location and extent of the National Forest System components is desirable to determine the direction land use and ownership patterns should take in relation to new developments and needs. The 155 National Forests and 19 National Grasslands located in 44 States and Puerto Rico include nearly 40 million acres of non-Federal land. Programs for consolidations of landownership within existing boundaries of these units need to be based upon sound consideration of their short- and long-range effects.

Examples of Recent Accomplishments

(1) Participation with the Department of the Interior in the analysis and formulation of recommendations for proposed additions to the National Forest and other permanent Federal conservation systems in Alaska.

(2) Transfer of 6,000 acres of the Savannah River AEC Project lands to the Forest Service for multiple use management.

(3) Completion of the Cascade Head-Salmon River Oregon Study and Report which delineate alternative means of protecting this unique area.

(4) Interchange with the Corps of Engineers completed at Lake Clark Hill, South Carolina, and Wynoochee Dam, Washington.

(5) Studies of Indian land issues involving the Mescalero-Apache, the San Carlos-Apache, the Mission Indians, and the Bay Mills Indians resulting in establishing agency positions on these matters.

(2) Land exchange ($3,853,000, an increase of $138,000 for space rental and $34,000 for increased pay costs.)

Properly conceived land exchanges result in alleviating the need to construct certain road segments, the location and marking of property lines, the issuance of certain special-use permits, and other management costs. The consolidation of ownership through land exchanges results in a $10 cost avoidance for every dollar spent in accomplishing the program. Selected examples of estimated cost avoidance which will result during the next 10 years, from the fiscal year 1975 exchange program, are:

Reductions	Units	Amount (in thousands)
(a) Property lines and corners	1,030 miles	$1,236
(b) Road construction and maintenance	75 miles	3,750
(c) Use permits and occupancy trespass	300 cases	1,200
(d) Road right-of-way needs	190 cases	114
Total		6,300

Meterial revenue increases to the United States Treasury can also result through well planned exchanges. Access road problems can be eliminated and make heretofore inaccessible mature timber stands available for harvest to the mutual benefit of the United States and timber companies in need of timber supplies. The rural economy is also benefited. Significant benefits can be realized for both the United States and private owners engaged in livestock operations through the consolidation of ownerships, thus reducing costs and improving management of the ranges.

Carefully designed land exchanges can make material contributions in bettering rural America and the communities located within or near the boundaries of the National Forest System. Farmers and ranchers operating marginal operations can frequently acquire the adjoining National Forest System lands suitable for grazing, thus permitting development of an economic unit. Communities are frequently aided through exchanges that provide lands for expansion and development.

The fiscal year 1975 land exchange program will involve the examination and appraisal of 200,000 acres involving an estimated 250 proposed exchanges. The land the Government gives and receives in exchanges must be examined and appraised. Following examination and appraisal, negotiations are expected to be completed and 200 cases approved during the fiscal year involving a total of 160,000 acres.

Examples of Recent Accomplishments

In fiscal year 1973, 129 land exchanges were approved. In these exchanges, the United States will acquire 57,821 acres valued at $14,218,819 and will grant 29,718 acres valued at $13,351,691. A total of 150 land exchanges were fully completed with title to 81,124 acres passing to the United States and 51,186 acres passing to the other landowners. The net increase in National Forest acreage was 29,938.

(3) Land status records and cadastral engineering (land line location) ($4,375,000, an increase of $100,000 in support of the timber sales program, $153,000 for space rental, and $34,000 for increased pay costs.)

(a) Land status records. This is a systematic search of records and the presentation in plat, tabular record, and supplementary form of all ownership interests, and Congressional and administrative actions which limit or otherwise affect administration of the National Forest System or the use of adjoining lands by the owners thereof. It is the record of what land interests the Forest Service must administer. Significant progress is necessary to meet the expanding need for correct currently available records of Forest Service landownership, use, and encumbrances.

Project (8)

The National Forest System was created and altered to meet changing needs by many Acts of Congress and administrative actions in accordance therewith. Some 160 million acres were reserved from the public domain.

Over 27 million acres were acquired by several agencies of Government. Over the years many exchange, acquisition, and disposal actions have occurred. The great number of records of the status of such lands as to ownership, encumbrances, and restrictions on use were never satisfactorily assembled, checked, and placed in a system readily used and currently maintained as changes occurred. As a result, the Forest Service has been handicapped in meeting the impact of the vast increase in resource use in recent years.

A system has been developed to assure that accurate status information is assembled and records kept current at a central point and supplied to all field offices of the Forest Service. In converting to this system, all public records are reviewed and entered. Maintenance of records is done in the nine regional offices and supplied currently to some one thousand field offices. Time devoted to maintenance of the converted records has slowed down conversion of the remaining records. The project is over 85 percent completed. The conversion job is scheduled for completion by the end of 1976.

The systematic search and review of records in the conversion project continues to reveal, and identify more clearly, many parcels and general areas which have previously been misunderstood, identified inaccurately, or overlooked in administration due to inadequate records and poor identifying ties between records and ground location.

Users of these system records (Forest Service and other Government agencies, adjoiners, and other public users) are enthusiastic about them. They give confidence in administration and reduce areas of potential ill-will with adjoiners and users of public and private resources.

Work Proposed for 1975

	1973	1974 planned	1975 estimated
Townships completed	900	900	900

(Total program: 15,561 mapping units--accomplished through calendar year 1972 - 12,862)

(b) Cadastral engineering (land line location). Accurate plainly marked property lines are essential to effective management of lands and the land based resources. Significant progress in this activity must be made so that National Forest lands can be managed to meet Forest Service multiple use-sustained yield policy and contribute to the stability and growth of the rural economy.

There are about 272,500 miles of property lines between National Forest System lands and adjoining land owned by others. Presently, only about one-tenth of these property lines are adequately located and marked.

About 1,160,500 property corners are required to locate and perpetuate these property lines, with an additional 210,900 corners not on the property lines but needed to control the property corners. Many of these corners were established 50 to 200 years ago. A large share of them have disappeared because of neglect, carelessness, and destructiveness. Many have not yet been established.

Corner search under this program has revealed that about 30 percent of previously established corners are missing and must be restored through relatively expensive cadastral surveys. The search also reveals that many corners are in such poor condition that their loss is imminent unless quick action is taken.

Project (8)

The following has been accomplished since the program was initiated in 1958:

Fiscal Year 1958 - 1973

Corners:

1.	Searched		303,315
2.	Found acceptable evidence of corner		214,099
	(a) Do not need remonumentation		54,506
	(b) Need remonumentation		159,593
	(1) Remonumented by Forest Service	92,949	
	(2) Remonumented by Bureau of Land Management/ Forest Service cooperation	46,813	
3.	No acceptable evidence of corners found, cadastral surveys needed to establish corners		89,216
	(a) Corners established by Forest Service cadastral surveys	38,660	
	(b) Corners established by Bureau of Land Management cadastral surveys	16,317	
4.	Miles of cadastral surveys run to reestablish missing corners and establish new corners required:		
	(a) By Forest Service	14,752	
	(b) By Bureau of Land Management	8,243	

Property Lines:

Miles marked to standard	19,344
Miles marked to interim standard	10,508
Miles inspected and maintained	4,347

The Forest Service has been fairly successful in obtaining help and support in this work from some of the adjoining landowners.

Most of the activity to date has been to search out and preserve "thread hanging" corners to prevent their complete loss. For every such corner found in time and preserved, a future expenditure of about $1,000 for a cadastral survey is saved. The average cost to search out and permanently preserve a corner by remonumentation is $100.

Trespass that results in costly litigation and time-consuming "untangling" procedures can be mostly eliminated by timely and adequate marking of property lines.

Since 1966, an annual transfer of the appropriation for this program has been made to the Bureau of Land Management, Department of the Interior. The money was used for urgent cadastral surveys to reestablish property corners that were determined to be lost through the Forest Service corner search activity. In fiscal year 1975, $500,000 is planned for transfer to BLM.

The work to be done under the cadastral program is shown in the following table. This work is carried on in every State in which the Forest Service administers land.

Work Proposed for 1975 as Compared with 1973 and 1974

	FY 1973 (Accomplished)	FY 1974 (Planned)	FY 1975 (Planned)
Corners (Nos.)			
Search	24,457	29,500	32,300
Remonument	12,637	13,500	14,800
Establish	6,606	3,500	3,800
Maintenance	2,802	2,500	2,500

Project (8)

	FY 1973 (Accomplished)	FY 1974 (Planned)	FY 1975 (Planned)
Boundaries (miles)			
Locate and mark:			
To full standard	2,458	1,500	2,200
To partial standard	410	1,000	1,000
Maintenance	588	1,000	1,000

Examples of Recent Accomplishments

The accomplishment since 1958 in comparison to the total inventory of property corners and lines is as follows:

Corners searched	26 percent of total
Property lines marked	9 percent of total

Work has been programed in areas of most urgent need, thus obtaining maximum immediate benefits.

One-third of the corners revealed as missing by the corner search phase to date has been reestablished by cadastral surveys. This work is also done where most urgently needed, thus obtaining maximum immediate benefits.

Recently, the first operational model of a laser beam system for surveying property lines was successfully field tested. The system was developed for the Forest Service by the National Aeronautics and Space Administration.

The "laser range pole" system was designed to allow direct projection of straight lines between adjacent property corners, whether terrain is mountainous or heavily forested. Thus surveyors can "sight" directly between two points a mile apart, no matter how rough the terrain or how dense the forest. With the laser sender at one point, a beam is pulsed straight up, perhaps as high as a mile. From the second ground point, a sensor, or receiver, detects the pulse. The receiver is locked in at the exact direction and its sighting device is lowered to ground level where, within sight of the receiver, a surveying crew can mark the exact direction on the ground. The line is then extended by the regular sighting and marking methods back to the laser firing point.

Operational tests in Colorado on National Forest boundaries recently showed the system was accurate within three inches over a mile course. The tests also indicate that the system may reduce the cost of survey between corners already established by two-thirds. This could save millions of dollars and many man-years of work over the next few years. Portions of fiscal year 1975 funds are planned for purchase of "laser range pole" systems.

(4) Geometronics ($1,358,000, an increase of $48,000 for space rental and $12,000 for increased pay costs.)

Multiple use planning requires a knowledge of the terrain, the extent and location of the natural resource and how they are tied in with, and related to, existing and planned management programs within a planning unit. Environmental information is essential in the planning of timber sales and related facilities.

Technological advancements have provided new means of improving and intensifying management of National Forest resources and related facilities. These advancements promise significant reductions in field-going operations and ultimately cost and manpower savings. Investigations are underway to provide more comprehensive and efficient methods for recording, storing, retrieving and displaying interrelated terrain and resource data. Digitizing various forms of data for computer handling is an essential element in this process. These displays are in various forms-tabular data, seen area plats, slope and aspect maps, resource layers, orthophotos and engineering data.

Most of the resource information has been compiled by the appropriate functional specialists. It consequently has been displayed on a wide variety of maps and graphics. This fragmented approach is a time-consuming task.

In response to the need for a less time-consuming and costly task, the Multi-layer System has been developed. The objective will be to ultimately incorporate all of the functional mapping efforts into a coordinated system, tied to a common base. These layers will provide systematic input to information systems as well as a format for displaying the output.

Utilizing the terrain data and resource data, it is proposed to prepare several management bases on an adequate scale and format for approximately 12 National Forests:

		1973	1974	1975
Resource inventory (primary series)	1:24,000 scale quadrangles	708	590	708
General management (secondary series) Regional series	Forests	12	10 1	12 1

The funds for fiscal year 1975 will be used to produce the appropriate map information and develop new geometronic process and display techniques.

(5) Maintenance of improvements for fire and general purposes (including communications) ($9,385,000, an increase of $349,000 for space rental and $64,000 for increased pay costs.)

This program provides for maintenance and for minor betterment, minor construction or replacement of buildings, utilities, pollution abatement facilities, airfields, communications systems and related structures throughout the National Forests and National Grasslands. The value of existing improvements exceeds $300 million. These facilities are essential to the achievement of activity functions of the Forest Service including the protection, management and development of National Forest lands for minerals and recreation use, forage, timber and water protection, and for enhancement of fish and wildlife habitat.

It is essential that the physical plant, upon which all Forest Service programs depend, be brought up to acceptable standards and be maintained at that level. These funds will be used toward maintaining the following:

Type of facility	
Fire lookouts, towers, and observatories	1,500
Dwellings, cabins, barracks, and trailers	5,400
Field offices	800
Storage and service buildings	7,000
Water and sewer systems	5,000
Radio units	22,100
Landing fields and heliports	500
Miles of telephone lines	7,500
Miles of administrative fences	1,200

Maintenance funds are proportionately distributed to field units based upon number of improvements by classes currently justified by program use and an analysis of unit maintenance cost.

(6) Special uses--non-recreation ($3,784,000, an increase of $136,000 for space rental and $33,000 for increased pay costs.)

Occupancy and use permits, easements and memoranda of understanding authorized 48,950 special land uses on 5.8 million acres of the National Forests in 1973. There is a constant turnover of these authorized uses of about 5 percent each year. The number of new permits issued has increased about 3 percent each year. It is estimated in fiscal year 1975 that the number will increase to around 52,600, covering a total of 6.2 million acres.

Users include public and private enterprise representing individuals, corporations and city, county, State and Federal government agencies. The special land uses are grouped in eight broad categories consisting of about 60 kinds of use excluding recreation. They are:

(1) Agriculture.
(2) Community improvement.
(3) Industrial.
(4) Public information.
(5) Research, study, and training.
(6) Transportation.
(7) Utilities and communications.
(8) Water.

Areas of particular interest are antiquities, electronic installations, fences, pastures, powerlines, reservoirs, roads, telephone lines, and water transmission facilities.

Special land uses assist economic development of rural areas by making suitable land available to farmers, ranchers, and local communities. The Federal Government is the major landowner in many localities. Denial of the use of National Forest System land would create hardships on the local communities, deter further business development, and materially affect on-going Federal programs in rural areas.

More than 25,000 new applications, applications for amendment, applications for transfer, and inquiries are received annually from individuals, companies, corporations, and city, county, and State governments, as well as Federal agencies, to fill their needs. Of this total number, approximately 6,500 are new applications.

Based on past experience, less than a third of the new applications can be approved as being compatible with resource and environmental factors and the needs of the general public. Each new application requires an impact survey, multiple use report or comparison with multiple use plan. New applications of major impact also require preparation of an environmental statement prior to approval. Investigations identify conflicts with management plans and existing uses. Recommendations attempt to assure conformance with multiple use and individual resource plans and programs and actions to protect the quality of the environment. A permitted use must be activated with improvements designed and installed or constructed in compliance with all existing laws, regulations, and local codes under a carefully drawn special-use document embodying all recommended protection measures. Of particular importance are the National Environmental Policy Act of 1969 (PL 91-190), the Federal Water Pollution Control Act amendments of 1972 (PL 92-500), and Executive Order 11507.

After permits are issued, periodic compliance inspections are made to determine whether the authorized conditions, responsibilities, and duties are met according to acceptable standards.

These standards are those which:

(1) Maintain acceptable levels of water and air quality.
(2) Protect the natural resources from excessive soil erosion.
(3) Prevent unnecessary damage to natural beauty and esthetics of the environment.
(4) Protect renewable resources such as timber, forage, and wildlife from careless or wanton damage.
(5) Do not unnecessarily increase fire hazard.
(6) Protect the public and other users from physical hazards.
(7) Maintain fees or rentals equal to the value of the use authorized comparable with fair market value.

Project (8)

Of the total funds available, about $75,000 would be used to develop and maintain information on National Forest archaeological sites and to protect such sites and artifacts from vandalism or other damage by unauthorized persons, including, if necessary, excavation of endangered sites on an emergency basis.

Under special authorities more than half of all permitted uses are allowed without charge. The remainder pay fees for the privilege of occupying National Forest land. Fiscal year 1973 receipts from special land uses were $1,080,903. In addition to the actual receipts collected by the Forest Service, about $2.7 million of assistance, through free permits, should be recognized. The total direct monetary value of receipts and benefits is over $4 million. However, many of these free permits no longer qualify, and they are being converted to charge permits. There will be a proportionate increase in receipts to the Treasury.

(7) Payments to Employees' Compensation Fund ($2,860,000, an increase of $560,000)

These funds will be used to reimburse the Employees' Compensation Fund, Department of Labor, in accordance with PL 86-767 (5 USC 785), which was enacted September 13, 1960, for benefit payments made from that fund to employees of the Forest Service who are injured while in the performance of duty. The 1974 payment was $2,325,563.

(8) Bicentennial and Forestry Centennial ($20,000)

The Nation's Bicentennial in 1976 also is the Centennial of Federal forestry in the United States. America's vast forests have played a basic role during the past 200 years in this country's development of the highest standard of living for the most people of any Nation in history. Funds requested will be used to revise and publish the booklet, "Highlights in the History of Forest Conservation," as a special National Bicentennial and Forestry Centennial edition.

Project (9)

FIGHTING FOREST FIRES

1973	$43,838,000
1974	4,275,000
1975	4,275,000

No increase is proposed.

This program provides an initial amount for suppressing forest fires on or threatening National Forests and Grasslands which cannot be handled by the regular forest fire protection program. This initial appropriation is supplemented each year to the extent necessary to cover all emergency forest firefighting costs.

Included are expenditures for men and equipment to control large fires. In addition, when critical conditions present an unusual threat, men are engaged in special efforts to prevent fires and temporary forces are used at strategic locations to be available to attack fast-spreading fires.

The volume and scope of emergency forest firefighting varies annually according to severity of burning conditions and the extent of the forest fire protection program. This program and the forest fire protection program are directly related. The cost of fire protection on the National Forests and Grasslands is the sum of the two programs.

Calendar Year 1973 Fire Season

The most severe and widespread drought conditions in 39 years occurred in Washington, Oregon, Idaho, Montana, and Northern California. Fire season in Arizona and New Mexico, which normally decreases after early July rains, continued severe through October. No precipitation, continued high temperatures, and wind caused all fires to spread rapidly.

Through December 31, 1973, 12,335 fires burned 178,353 acres. This is a 1 percent increase in the number of fires and a 20 percent decrease in acres burned based on the past 5-year average. Of the total fires, 5,941 were man-caused fires. This is a 2 percent increase over the five-year average.

From August 8 to 24, 1973 there were over 2000 fires caused by either man or lightning; 25 of these fires became large due primarily to the extreme burning conditions. During one 24-hour period lightning set over 400 fires. Although initial attack forces had been increased, capabilities for suppression were over-taxed.

Geographic Breakdown of Obligations--Fiscal Year 1973

Alabama	$32,544	Kentucky	26,131	Oregon	9,963,017
Alaska	18,068	Louisiana	56,799	Pennsylvania	2,316
Arizona	4,504,713	Michigan	50,546	South Carolina	47,637
Arkansas	100,210	Minnesota	165,901	South Dakota	185,546
California	23,205,733	Mississippi	73,927	Tennessee	72,792
Colorado	443,403	Missouri	101,889	Texas	19,063
District of Columbia	359	Montana	2,816,503	Utah	1,562,559
Florida	206,175	Nebraska	30,292	Vermont	371
Georgia	20,063	Nevada	858,496	Virginia	55,233
Idaho	5,630,761	New Mexico	2,451,239	Washington	4,364,952
Illinois	6,768	North Carolina	95,251	West Virginia	4,300
Indiana	1,593	North Dakota	142	Wisconsin	7,696
		Oklahoma	7,185	Wyoming	351,397
				Total	57,541,570

The amounts for 1974 and 1975 have not been distributed by States. Locations of emergency firefighting funds cannot be forecast with any degree of accuracy.

Project (10)

FOREST INSECT AND DISEASE CONTROL

1973	$10,696,000
1974	11,219,000
1975	11,276,000
Increase	+57,000

A net increase of $57,000 is proposed as follows:

(1) An increase of $62,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(2) An increase of $245,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(3) A decrease of $250,000 will be absorbed through a shift in program priorities. In order to maintain at least the same program level for gypsy moth control made possible by a $250,000 supplemental appropriation in 1974, it is proposed to reduce methods improvements efforts.

The forest pest control program involves protection of the forest from depredation by insects and diseases on lands of all ownerships. Activities include:

(1) The prevention, detection, evaluation, and suppression of pests on all Federal lands.

(2) Coordination of the program on lands of all ownerships.

(3) Federal financial assistance to States for a similar program on State and private lands.

The program for fiscal year 1975 will include a strong effort to hold losses caused by bark beetles to tolerable levels. It is not possible to predict this far in advance the exact locale or scope of control operations, but present beetle activity indicates a need for:

(1) Mountain pine beetle control projects in Colorado, Montana, South Dakota, Wyoming, and Washington.

(2) Douglas-fir beetle, fir engravers, and western pine beetle control projects in California, Oregon, and Washington.

(3) Spruce beetle control projects in Alaska, Arizona, Colorado, New Mexico, Oregon, and Washington.

(4) Southern pine beetle control projects in Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Texas, and Virginia.

Defoliating insects--such as the gypsy moth, spruce budworm, Jack pine budworm, tussock moth, and sawflies--will be controlled where resource values are seriously threatened by them and benefit-cost ratios are favorable. With firm data not available as yet, it is expected that suppression projects may be required to control:

(1) Gypsy moth in New Jersey, New York, Pennsylvania, and Rhode Island.

(2) Spruce budworm in Maine, Minnesota, and Montana.

(3) Jack pine budworm in Michigan and Wisconsin.

(4) Tussock moth in Oregon, Washington, Idaho, and Montana.

(5) Sawflies in Michigan, Minnesota, and Wisconsin.

(6) Cankerworms and leaf tiers in New Jersey, New York, and Pennsylvania.

Every effort is being made to strengthen procedures for making detection surveys and biological evaluations. The future goal is to cut detection time in half and to obtain more precise figures concerning the status of specific pests. By decreasing the time during which pests go undetected and better predicting the course they might follow, suppression costs can be lowered and destructive losses to the Nation's timber supply reduced.

The costs have greatly increased since the implementation of the National Environmental Policy Act. Not only have additional monies been required to prepare and review environmental statements, but restrictions on pesticides have seriously affected the capability to deal with major outbreaks of forest pests. Several pesticide registrations have been canceled leaving no effective method for reducing destructive losses occurring to the Nation's timber supply. When less persistent chemicals have been available as substitutes, a larger effort has been required to monitor outbreaks for proper timing of application. **Much of the effort is devoted to screening and testing of alternate chemicals and other means of managing pest populations.**

Efforts will be continued on control of the dwarf mistletoes in the Western regions in 1975 on a project basis. These parasitic plants are responsible for reductions of tree growth amounting to estimated losses of $40 million annually in lumber production from western conifers. Integrating control into planned silvicultural work provides a high rate of return (10-15 percent) by eliminating losses caused by dwarf mistletoe.

White pine blister rust control will be continued in the East, the Lake States, and in selected stands in California. The program in the East is primarily a cooperative one, financed by the States with Federal financial assistance. Careful evaluation of rust conditions and hazard has reduced the area requiring control materially in recent years.

Pest outbreaks fluctuate greatly. The cost to check and contain outbreaks cannot be accurately predicted. Using past experience as a guide, along with the knowledge of developing situations, Federal fund needs for fiscal year 1975, as compared with 1973 and 1974, are as follows:

Item	1973	1974	1975	Change		
				Pay Costs	GSA Space	Program
			(In thousands)			
Technical assistance, training, detection, and evaluation ..	$6,067	$6,396	$6,387	$35	$137	-$181
Methods improvement	903	645	162	-4	2	-481
Bark beetle control	1,992	2,267	2,024	14	37	-294
Defoliator control	2,089	1,058	1,815	13	50	694
Other insect control	129	123	134	1	2	8
Blister rust control	644	445	448	2	10	-9
Oak wilt control	59	56	59	- -	1	2
Dwarf mistletoe	186	206	220 2/	1	5	8
Other disease control	27	23	27	- -	1	3
Total 1/	12,096	11,219	11,276	62	245	-250

1/ Includes $1.4 million travel reduction savings in other forest land management funds that were used for insect and disease control work.

2/ For approved suppression projects.

Pest control scientists help to protect the environment by carefully weighing and determining the adverse effects of unchecked pest outbreaks and those which might result from prescribed control treatments with the benefits to be derived. As part of their overall responsibilities, pest control scientists will keep all

environmental impacts, both beneficial and adverse, in proper perspective and recommend those courses of action that will provide the greatest benefits.

Examples of Recent Accomplishments

Cooperative gypsy moth suppression. Cooperative projects in New York, New Jersey, Pennsylvania, and Rhode Island provided for treatment of some 200,000 acres infested with gypsy moth. Treatments were successful in protection of current year's foliage. Significance of any long-term benefits must await further evaluation.

Cooperation with States. Last year was the first full year of operations under the new Pest Management Action Program. Participation is up 23 percent with 32 States now involved. Fiscal year 1973 was the first complete year of suppression project cost-sharing at 50 percent rather than the 33-1/3 percent of previous years. Together, these two programs have led to an increase of over 2.5 million Federal dollars moving directly into the State forest pest management program.

Seedling resistance to fusiform rust. A system was developed for testing and evaluating large volumes of loblolly and slash pine tree seed for resistance to fusiform rust. Implementation of the system on an operational basis is now underway. This will facilitate the identification of resistant parents whose seed can be used for regeneration purposes in rust hazard areas; hence, reducing future losses from this disease.

Spruce budworm attacked in Maine. Some three million acres of spruce-fir type in Maine were infested by spruce budworm. Maine, in a cooperative suppression project with the Forest Service, used Zectran to treat 470,000 acres where high damage was imminent if the infestation were allowed to go unchecked. The overall reduction in budworm population in the treated area was about 93 percent.

Bark beetles. Suppression of various bark beetle outbreaks involved treatment of numerous individual spot infestations in the West and South. The massive southern pine beetle epidemic now underway is being vigorously attacked on many fronts. Hopefully, these efforts will result in population declines next year. Although direct chemical treatment was necessary in some places, greater advantage, than in any previous year, was taken to utilize logging as a means of removing infested trees from the woods before beetle emergence. Last year 172 million board feet and 481 thousand cords of dead and dying trees were removed from forests in the South.

Project (10)

GEOGRAPHIC BREAKDOWN OF APPROPRIATION

Insect and Disease Control

	1973 1/	1974 estimate	1975 estimate
		(in thousands)	
Alabama	$437	$386	$438
Alaska	108	110	104
Arizona	160	162	167
Arkansas	114	105	78
California	1,000	1,015	1,043
Colorado	350	355	365
Connecticut	20	20	21
Delaware	6	6	6
District of Columbia	180	184	188
Florida	43	44	45
Georgia	380	132	167
Hawaii	20	20	21
Idaho	740	750	771
Illinois	8	8	8
Indiana	8	8	8
Iowa	7	7	7
Kansas	6	6	6
Kentucky	55	56	57
Louisiana	500	456	460
Maine	749	608	625
Maryland	160	162	136
Massachusetts	20	20	21
Michigan	160	162	136
Minnesota	115	117	120
Mississippi	180	132	136
Missouri	100	101	94
Montana	753	764	761
Nebraska	8	8	8
Nevada	30	30	31
New Hampshire	110	112	104
New Jersey	313	236	209
New Mexico	250	254	261
New York	840	688	521
North Carolina	325	299	297
Ohio	60	61	57
Oklahoma	7	7	7
Oregon	640	649	667
Pennsylvania	353	364	313
Rhode Island	170	54	136
South Carolina	149	126	129
South Dakota	300	304	313
Tennessee	157	159	156
Texas	270	223	261
Utah	65	66	68
Vermont	90	91	78
Virginia	530	527	542
Washington	420	426	438
West Virginia	150	152	191
Wisconsin	190	193	198
Wyoming	290	294	302
Total program level	12,096	11,219	11,276

1/ Includes funds transferred from other Forest land management accounts.

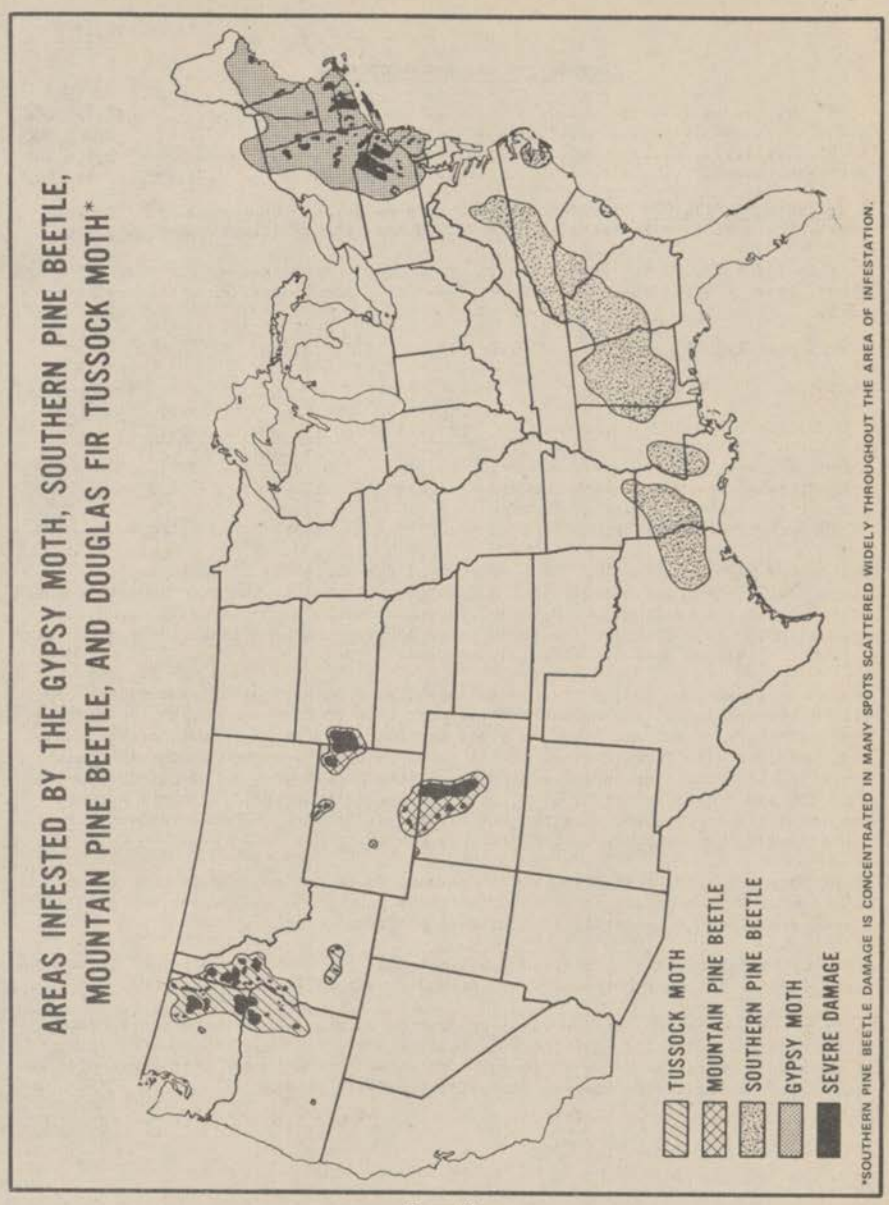


Figure 10

32-043 O - 74 - 14

Project (11)

COOPERATIVE LAW ENFORCEMENT

1973	$2,527,000
1974	2,582,000
1975	1,624,000
Decrease	-958,000

A decrease of $958,000 in budget authority is proposed. On the basis of program level, there will be an increase of $290,000 over the 1974 level of $3,462,000.

This includes $8,000 for annualization of the pay cost increase effective in fiscal year 1974 and $41,000 for General Services Administration space rental cost.

Fiscal year 1975 funds, compared with 1973 and 1974, follow:

	FY 1973	FY 1974 estimate	FY 1975 estimate	Increase or decrease
		(in thousands)		
Program level	$1,935	$3,462	$3,752	$290
Unobligated balance brought forward	-2,416	-3,008	-2,128	880
Unobligated balance carried forward	3,008	2,128	- -	-2,128
Appropriation (budget authority)	2,527	2,582	1,624	-958

Public Law 92-82 (August 10, 1971) authorized the Secretary of Agriculture to cooperate with any State or political subdivision thereof in the enforcement of State or local laws on lands of the National Forest System. Such cooperation includes reimbursement to a State or its subdivision for expenditures incurred in connection with activities on National Forest System lands.

State and local laws and ordinances are applicable on National Forest System lands with few exceptions. The Forest Service must look to State and local law enforcement officials to enforce these laws and ordinances on the National Forests. State and local law enforcement agencies will continue to perform, on a nonreimbursable basis, their normal law enforcement duties without cost to the Federal Government. This program provides for the negotiation of law enforcement agreements between the local law enforcement agencies and the Forest Service to handle abnormal impacts caused by public use of the National Forest.

As of November 1973, there were 274 agreements in operation. It is expected that this number will increase to 325-350 in fiscal year 1975. 400 counties in 40 States are eligible to participate in this program.

The cooperating agencies processed 3,474 criminal cases for violation of State or local laws on National Forests during calendar year 1972.

It is proposed that at least a level program be maintained as these small cooperating agencies generally must increase their staff and invest in added equipment to provide service under the agreement. They need a commitment that there will be reasonable continuity in program financing from year to year.

Project (11)

GEOGRAPHIC BREAKDOWN OF PROGRAM LEVEL

Cooperative Law Enforcement

	FY 1973 actual	FY 1974 estimate	FY 1975 estimate
		(in thousands)	
Alabama	$13	$16	$17
Alaska	- -	49	52
Arizona	68	113	121
Arkansas	25	43	46
California	498	715	775
Colorado	15	120	130
District of Columbia	46	44	47
Florida	26	37	40
Georgia	8	23	25
Idaho	68	270	295
Illinois	15	18	19
Indiana	9	11	12
Kentucky	36	16	17
Louisiana	10	17	18
Michigan	43	41	44
Minnesota	30	32	34
Mississippi	13	23	25
Missouri	43	73	78
Montana	78	265	290
Nebraska	- -	2	2
Nevada	25	59	63
New Hampshire	44	57	61
New Mexico	63	110	120
New York	9	11	12
North Carolina	17	37	40
North Dakota	- -	25	28
Ohio	9	11	12
Oklahoma	1	3	3
Oregon	238	350	380
Pennsylvania	31	27	28
South Carolina	8	17	18
South Dakota	11	87	95
Tennessee	28	30	32
Texas	9	16	17
Utah	128	270	295
Vermont	27	33	35
Virginia	13	44	47
Washington	185	275	300
West Virginia	1	10	11
Wisconsin	16	12	13
Wyoming	28	50	55
Total	1,935	3,462	3,752

SALES ADMINISTRATION AND MANAGEMENT

Mrs. HANSEN. You are requesting an increase of $4,832,000 for sales administration and management for a total program of $84,295,000. In light of the recent suit on the additional 1 billion board feet sale, is this still a realistic estimate? What accounts for the estimated decrease in receipts from timber sales from 1974 to 1975?

Mr. MCGUIRE. We believe this is a realistic estimate. The judge's decision applied only to the fiscal year 1974. We still intend to go ahead with at least this level of timber sale offerings.

Mrs. HANSEN. Will any of your timber sale offerings that you anticipate be in the same category as the extra billion board feet?

Mr. MCGUIRE. The judge did not apparently get to that question of individual sales.

Mrs. HANSEN. But there are other judges.

Mr. MCGUIRE. There are other judges. We don't know, frankly. We don't think so. We think that we can protect against such litigation by programmatic statements or perhaps by utilizing the environmental program for the future as a programmatic statement. We don't know what future litigation might turn up here.

The decrease in receipts is due to a slackening in market conditions anticipated for at least the first half of fiscal year 1975.

HOUSING STARTS

Mrs. HANSEN. What was the estimated need for housing starts in the United States in 1973, and what were the actual housing starts?

Mr. MCGUIRE. The need figures, you may recall, were established by Congress a number of years ago. I believe the total over a decade was 26 million starts, of which the average would be 2.6 million starts annually.

Housing starts have declined. Recently they have been in the neighborhood of 1.5 million or 1.6 million annual rate. There are some signs of having starts picking up again. We expect that the trend has about reached bottom.

Mrs. HANSEN. Is this a seasonal reflection?

Mr. MCGUIRE. It may be, although I think there is such a large pent-up demand for housing that it's not entirely seasonal. I think the pent-up demand continues.

Mrs. HANSEN. The housing starts never seem to keep pace with the need. Isn't this correct?

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. What are the housing starts each year in Japan?

Mr. WYATT. What about France, Madam Chairman?

Mrs. HANSEN. Yes, France and Germany?

Mr. MCGUIRE. I do not have such figures, but we can supply some examples.

[The information follows:]

HOUSING STARTS (ESTIMATED FROM SEVERAL SOURCES)

	Japan	France	West Germany
Year:			
1972	1,805,000	562,500	660,600
1971	1,619,000	488,500	555,000
1970	1,621,000	470,200	478,100

LUMBER COSTS IN $30,000 HOME

Mrs. HANSEN. What is the major reason for the decline in housing starts each year?

Mr. MCGUIRE. I think in this instance the increasing costs of housing, particularly the cost of land and mortgages.

Mrs. HANSEN. What are the various factors in the construction of a house which account for the increasing costs? Many times the cost is attributed to lumber. As I recall, lumber was only about 18 percent of the total cost. Is this correct?

Mr. MCGUIRE. It's in that neighborhood. It's only about one-fifth.

Mrs. HANSEN. Please insert in the record a breakdown of the various cost factors for a $30,000 home?

Mr. MCGUIRE. We would be glad to do that.

[The information follows:]

The cost relation of land, labor, and materials are changing so rapidly at present that experts in this field are reluctant to place much dependence on historic ratios. The best estimates for the above examples are:

Land	$5,000
Materials	13,600
Labor	9,000
Profit	2,000
Closing costs	400
Total	30,000

Of the material costs, wood products, including lumber, plywood, and millwork, would probably total $3,750.

Over the mortgage life, the $30,000 house would cost a total of about $75,000, of which $30,000 would repay the principal and $45,000 would be for interest. Changes in the duration of mortgage life have as great or greater effect on total lifetime costs as changes in the interest rate.

INTEREST RATES

Mrs. HANSEN. What impact do the interest rates have?

Mr. MCGUIRE. They add to the cost.

Mrs. HANSEN. What is the current rate?

Mr. MCGUIRE. The last figure I saw was around 8.7 percent.

Mr. MCKAY. I think the costs have doubled on a 20- or 25-year loan because of the interest.

SOCIAL IMPLICATIONS

Mrs. HANSEN. Mr. McGuire, I am concerned about the housing lag because of its social implications. If we suddenly become a nation of nonhouseowners, what does it do to the stability of the Nation?

Mr. McGuire. Of course, it has tremendous social impacts. Many people cannot afford to buy houses at all at present prices. They have had to switch to housetrailers or to rental units. Many people don't realize, however, that much of the deficiencies in housing are in rural areas and not in the cities at all.

Mrs. Hansen. I know.

Mr. McGuire. It's not possible just to contemplate high-rise apartments or mass housing solutions when the problem is so largely concentrated outside the metropolitan areas.

Mrs. Hansen. But the social implications of deficiency of homes are just as bad in the rural areas as they are in the urban areas.

Mr. McGuire. That is certainly the case.

Mr. McKay. I think some of the social impacts are that you get a nation who doesn't care.

Mrs. Hansen. That is right.

Mr. McKay. If you don't have anchors to where they have some stability to something they own or can own, they get to the point of who cares, when I run out here and it gets messy I will go somewhere else.

As a result, you had a notice in Mount Whitney, Calif., today that you are cutting back in the wilderness area and you are going to have to cut in half the people you are going to allow up there because of the mess they leave and the forest is such that you cannot put any outhouse facilities, and so on, with the numbers of people going in. It's getting like a human corral up there until they are going to have to shut it off. So it gets a don't care attitude, I think, is the implication if you get down. And that is disastrous.

Mr. McGuire. People don't build any ties to the communities and don't take interest in community problems when they don't have an opportunity to put down roots.

One of the concerns here also is that, if we do embark on another attempt to subsidize housing, at the same time we should look at the problems of providing timber and other materials needed to build those houses.

TIMBER SELL VERSUS TIMBER HARVEST

Mr. Long. Figures on pages 23 and 25 indicate that the Forest Service timber harvests are consistently higher than timber sales. Why does this discrepancy exist? How is the unsold timber harvest disposed?

Mr. McGuire. The planned timber sell offerings program is the maximum volume that can be produced within the overall budgetary and manpower limitations without seriously disrupting the other resource programs and with assurance that a quality job will be done and the forest environment protected and enhanced. Since the preparation of timber sales is normally a 3 to 5 year process, the budget and manpower levels in preceding years have a lot to do with determining the volume of timber that can be offered for sale in the current year.

On the other hand, the forcasted harvest volumes are estimates of what the timber purchasers will actually cut from the backlog of volume they already have under contract. Once the timber is sold, only minimum controls are exercised over the actual timing of the harvest. We are estimating that the timber purchasers will respond to the na-

tional demand for timber products by harvesting volumes which are greater than the sell offerings.

This is not an unusual situation. Over the years timber purchasers have occasionally harvested more than was sold that same year. However, Forest Service performance on timber sell versus timber harvest is quite good as we have built up a backlog of timber under contract of over 46 billion board feet. During the past 5 years, 1969 through 1973, reported on page 25, sell volumes exceeded harvest volumes 3 of the 5 years.

In regard to your second question, unsold timber offerings usually remain available to interested timber purchasers for several months after the planned sell date and many of them are later sold. Some of the offerings do not sell as originally prepared. These are withdrawn and either redesigned to make a more desirable offering or dropped entirely in favor of some other offering. If the unsold timber offering consisted of timber in immediate need of salvage, it is quite possible that the timber will have deteriorated before it could be harvested.

LITTER CLEANUP

Mrs. HANSEN. What is the cost of the cleanup of litter per year in the national forests?

Mr. MCGUIRE. We have a total figure for operation and maintenance of $36.6 million. This includes somewhat more than cleanup. It also provides for such things as signing and providing for the safety of visitors, fee collection, and so on.

Mr. NELSON. We will attempt to get that figure for the record, Madam Chairman. We do not have it at this time.

[The information follows:]

Approximately 30 percent, or about $14 million, is used for cleanup of recreation facilities and areas.

VANDALISM

Mrs. HANSEN. The increasing cost of litter cleanup is getting to be sizable in every municipality, county, State, and in every Federal Department that has any management of land.

Mr. NELSON. We have a single fund which we add to our cleanup of litter and maintenance. Of course, we have had great losses from vandalism and the like in these areas also. We have to separate these out.

Mrs. HANSEN. You can't separate vandalism from home-ownership. That is one of the social implications. If you have always lived in a house that belonged to somebody else and somebody else didn't take care of it, this is part of the harvest you are going to reap. I think you are going to have an unmanageable country if you don't solve some of these social problems. You are going to have more kidnaping, hijacking, lawlessness, and more vandalism.

That is why I have a deep concern. I sometimes think that our social priorities should outweigh some of the budgetary constraints.

PRESIDENTIAL SCHOLAR

Mr. WYATT. Madam Chairman, could I interrupt you long enough to acknowledge the presence here of a Presidential Scholar from Tillamook High School in my district, Mark Kiekhaefer.

Mrs. HANSEN. We are delighted to have you with us this afternoon.

Mr. WYATT. I want to welcome him here. He is from Tillamook High School right next door to Astoria.

TIMBER INVENTORIES

Mr. EVANS. What is the progress of your timber inventory now? Do you trust their accuracy any better than before?

Mr. MCGUIRE. Timber inventories are the basis for determining the amount of forest land that is suitable and available for forest management. The inventories also determine the volume of standing trees, site capability, and current growth rates. Recently the forest inventory designs have been changed to permit the mapping of all timber stands and identification of land-use classifications which results in improved accuracy and reliability of inventory estimates. Emphasis toward this more intensive inventory procedure was started in fiscal year 1973. It will take 7 to 9 years to complete the improved type of inventory on all national forest system lands.

The reliability, accuracy, and adequacy of the information gathered under this inventory design is much better than previously.

SUPPORT OF TIMBER SALE ACTIVITIES

Mr. EVANS. You have a requested increase here of $230,000 "for coordination of wildlife biological needs and requirements with timber sale activities." I am concerned that you are crediting this item to the wildlife and fish habitat management section, rather than to the timber section. Since it is obvious that these moneys will not be required if you had no timber cutting activities, why are they not credited to the timber management section? I have the same question about your proposed increase of $270,000 to protect critical soils and unstable slopes "in support of the timber sale program" [p. 39]. It seems to me that these items should always be credited to the timber program.

Mr. MCGUIRE. The Forest Service mission is achieved through a wide variety of programs, each consisting of many activities directly aimed at development and management of the various resources and their uses. The number of impacts and interrelationships among programs are almost infinite. In order to study and analyze the programs in a multi-resource context, we have established a framework of "systems" to identify, measure, and display interrelationships. One of these is the timber system.

To minimize adverse environmental impact of decisions relating to land management, the Forest Service requires project planners to obtain and use the expertise of resource specialists in planning and designing each timber sale and road construction project.

The timber system includes the growing, harvesting, and managing of timber on the national forests, a program which does create the need for specialists working in activities which are germane to other program areas, such as wildlife management and soils management. These specialists are working to develop and manage the resource wherein their skills lie, even when the immediate action requiring their skills is the growing or harvesting of timber. Their use in the timber program is to assure protection and enhancement of the other resources

through coordination, particularly during the planning and design phases.

Under these conditions, we believe that it is quite proper to fund these specialists in the program area which encompasses their skills and major interest.

HARVEST OF NATIONAL FOREST TIMBER

Mr. EVANS. You list three factors upon which are dependent the harvest of national forest timber. Isn't it also true that the present rapid rate of cutting of private industry timber in the Western States has and will continue to lead to increasing pressure to cut more from the national forests? And therefore, isn't the rate of private industry cutting also a factor which determines the harvest of national forest timber?

Mr. MCGUIRE. In local areas where supplies of private timber become insufficient to satisfy the needs of dependent industry there will be more demand for available national forest timber leading to an increased harvest. This demand becomes evident when the number of bidders for national forest timber sales increases sharply and when the high bid for the timber far exceeds the appraised rate.

However, we have found that at the aggregated national level we can best forecast the rate at which timber purchasers will cut the timber they already have under contract by the use of these three factors, that is, the national demand for timber products, the amount of national forest timber sold in recent years, and timber producer's expectations of future national forest volumes available.

ACCELERATED TIMBER MANAGEMENT PROGRAM

Mr. EVANS. You make the statement on page 33 about "Forest Service program of accelerated timber management which must be instituted to help meet the national need for wood products." Would you please elaborate on the nature and meaning of the accelerated timber management program? Does this indicate a planned increase in the timber cut every year?

If so, how does this fit in with the administration's order to you to increase the cut by 1 billion board feet last year, which was recently struck down in a court decision? Are you planning to go ahead anyway? If there is an accelerated program, how much more are you going to cut? And can you give us a list of which national forests you plan to increase this cut? And by how much in each forest?

Mr. MCGUIRE. The accelerated timber management program is twofold. First, it seeks to raise timber harvests to the full amount permissible under sustained yield. The total allowable (sustained) harvest for all the national forests is currently in the neighborhood of 13 billion board feet annually whereas timber sales in fiscal year 1974 will total no more than 10.8 billion board feet. The President's budget for fiscal year 1975 requests funds to offer 11.8 billion board feet. Future increases to reach the full allowable harvest level would be desirable to help meet the Nation's need for wood products.

Additionally, the accelerated program seeks to raise the allowable harvest by increasing timber growth. This can be done by increasing

cultural practices such as thinning, planting, and forest fertilization. In no case does the Forest Service propose to increase harvest levels above those which can be sustained.

The Forest Service must comply with the court order and will offer no more than 10.8 billion board feet in fiscal year 1974. The President's budget for fiscal year 1975 requests funds for offering 11.8 billion board feet. This compares to offered, sold, and harvest volumes in previous years as follows:

[In billions of board feet]

	Offered	Sold	Harvested
Fiscal year:			
1966	11.6	11.4	12.1
1967	12.0	11.7	10.9
1968	12.3	11.7	12.1
1969	[1] 12.1	[1] 10.2	11.8
1970	14.0	13.4	11.5
1971	11.1	10.6	10.3
1972	11.0	10.3	11.7
1973	10.7	10.2	12.4

[1] Excludes volume in 50-year Alaska sale.

Thus, it can be seen that the proposed level of offering in 1975, while higher than for 1974, is no higher than offered in half of the 8 previous fiscal years. We cannot determine at this time which national forests would offer increased timber in future fiscal years if funds are made available. Sale offerings from each national forest are planned by the forest supervisor in consultation with the regional forester and depend on such things as local demand for timber, transportation access, and available staffing, subject to the allowable harvest level established for the national forest.

REFORESTATION AND STAND IMPROVEMENT

Mrs. HANSEN. You are requesting an increase of $1,986,000 for reforestation and stand improvement, for a total program of $35,317,000. Last year when the committee added $7 million for reforestation, you said that there was an inadequate nursery stock to utilize this large an increase. What is the situation now?

Mr. NELSON. We have at present 12 nurseries in operation. We think that we would have the capacity to produce about 150 million seedlings per year, Madam Chairman. At present we are producing about 106 million. We think we do now in fact have added capacity for increased production.

Mrs. HANSEN. What is the average cost per acre for reforestation? I realize some of your reforestation is done by seeding and some by planting. What is the difference between the seeding and the replanting costs?

Mr. NELSON. Planting costs us in the neighborhood of $100 an acre. Seeding costs us something in the neighborhood of $20 to $30 an acre. This price can vary, depending upon how much site preparation we have to put in and the like.

Mrs. HANSEN. What is the average cost for site preparation per acre?

Mr. NELSON. Site preparation would run these days something around $40 per acre.

Mrs. HANSEN. None of your increase in this activity is related to program, it is all GSA space and pay. In light of the committee's continuing concern in this area, why do we see an increase for sales administration and none in this category?

Mr. MCGUIRE. I suppose the answer is one of priorities.

Mrs. HANSEN. Don't tell me that it isn't a mandatory priority to plant trees so we have some in the year 2000.

Mr. MCGUIRE. Unfortunately, tree planting is the kind of thing that can always be put off one more year. However, we can't delay the timber harvesting without an impact on prices.

We agree with you that we cannot continue to delay year after year.

Mrs. HANSEN. I have been on this committee 10 years now and you have been delaying, except for the committee's assistance all during that period.

Mr. MCKAY. In line with your own argument, Mr. McGuire, all you are doing is delaying by a year or two a recoil action.

Mr. WYATT. Could I pursue this program a little bit?

Mrs. HANSEN. Yes.

MULTIYEAR PROGRAM

Mr. WYATT. Chief, at the direction of this subcommittee, you prepared your multiyear program for intensive management and you labeled it, "Environmental program for the future," which includes substantial reforestation, timber stand improvement, State and private forestry, research, and various purposes for which Forest Service is charged with managing the national forests.

I feel very strongly, particularly since this is the last year that I am going to have any input on this program, and I am sure the chairman feels too, that we should get started on this and shouldn't delay it year after year after year.

I would ask you, first of all, looking at it from the various points of view, is it not true that we are in the midst of a wood fiber shortage in the United States?

Mr. MCGUIRE. I certainly agree that we face such a shortage. The recurring price crises have come every 3 years or so. In the last decade we have had a situation where softwood lumber and plywood prices just got out of hand, with a 50 percent to 100 percent increase.

Mr. WYATT. Do you have any idea what would happen to these prices if we ever once met our goal of 2.6 million housing units starting per year?

Mr. MCGUIRE. Lumber prices rose about 70 percent since 1950. I would think if we had been trying to build at the rate of 2.6 or 2.8 million starts a year, even during part of that time, the price increase would be over 100 percent. These are real prices, discounting inflation.

WOOD FIBER SHORTAGE

Mr. WYATT. Likewise, is there not a worldwide wood fiber shortage?

Mr. MCGUIRE. Yes, there is. The world demands more softwoods particularly. Softwoods are the backbone of construction. They are useful for paper. The developing countries are demanding more of this kind of material, the most common physical structural material in the world.

The sources of softwood are pretty much limited to the Northern Hemisphere. While there are substantial acreages of softwood timber in Canada and in the U.S.S.R., much of that timber is remote. The sites are poor and the capabilities for growing more are limited. Some of the best opportunities for growing softwoods are here in the United States.

Mr. WYATT. If we start in this country coming very close to meeting the housing demands over a sustained period of several years, our wood fiber shortage, exclusive of foreign demands, are going to be very, very strong, are they not?

Mr. MCGUIRE. They certainly are.

Mr. WYATT. We can see clearly, just as we should have been able to see clearly a few years ago the energy shortage, that we are going to face a crisis in wood fiber in the years ahead if we are going to meet our commitment to our people.

Mr. MCGUIRE. That is correct.

BALANCE-OF-TRADE PAYMENTS

Mr. WYATT. I have a couple of questions for Mr. Campbell on the same subject. Mr. Secretary, you have been a very strong voice in the Department of Agriculture for the development particularly of our renewable natural resources, our agricultural resources, our agricultural crops. I think most members of this committee realize that the United States cannot become an isolated island, that we have to trade with the world and that one of the best hopes that we have of maintaining some kind of reasonable balance of trade and balance of payments is in our expertise, our technology and our resources in the area of agriculture. Isn't that correct?

Mr. J. CAMPBELL. Yes, that is correct. We are very fortunate in having a climate and hundreds of millions of acres of fertile land for the production of crops as well as trees.

Mrs. HANSEN. Do you have any idea as to what the percentage of our export is that is furnished by renewable agriculture commodities, including wood fiber?

Mr. J. CAMPBELL. We exported $20.6 billion worth of agricultural products this last year.

Mr. WYATT. Including wood fiber?

Mr. J. CAMPBELL. That would exclude wood fiber.

Mr. MCGUIRE. The export of wood fiber was closer to $3 billion.

Mr. WYATT. Do you know what the total export figure is offhand?

Mr. J. CAMPBELL. Total calendar year 1973 exports of agricultural commodities, excluding forestry products, were $17.6 billion. Exports of forestry products in 1973 were $3 billion.

EXPANSION OF EXPORTS

Mr. WYATT. It's a very substantial amount of our total exports?

Mr. J. CAMPBELL. Yes, sir. In fact, we were able to put our balance of trade in the black because of this expanded agricultural export.

Mr. WYATT. Isn't it generally felt that the principal area where we can expand our balance of trade favorably is in the area of agricultural products?

Mr. J. CAMPBELL. Yes, that is correct.

Mr. WYATT. Which would include wood fiber also?

Mr. J. CAMPBELL. Yes, that is right.

Mr. WYATT. Would you agree that this is one area where we should be expanding our exports generally? I am talking about agricultural products.

Mr. J. CAMPBELL. Yes, I agree with that, Congressman. I think we have the natural resources and the acres to produce. This would be an excellent area for export.

RESTRICTION OF EXPORTS

Mr. WYATT. This committee has been faced with the horrible problem of large exports. A lot of people feel when we have a shortage at home we should think only about the home markets and forget about our foreign markets.

I remember the Smoot-Hawley Act and the worldwide depression that followed a restrictive trade policy.

Would you, Mr. Secretary, see that there would be some dangers in retaliatory action by foreign governments if we started restricting the export of raw materials and substantially restrict them?

Mr. J. CAMPBELL. We think we would run a grave danger here of losing our potential for export in the future. We feel in agriculture that we should not inhibit exports of our commodities and that the American public is well able to bid against the competition of foreign buyers because the American public is, very frankly, more affluent than the foreign buyers.

Mr. WYATT. If we start a restrictive policy on exports of agricultural materials, there is certainly real danger of a real retaliatory trade was starting.

Mr. J. CAMPBELL. Yes, and it would be detrimental to our continued economic growth if we were to have to retrench in agriculture back to the domestic market alone, which is what we would eventually have to do. If we got into this retaliatory situation of losing our exports, we would have to find something else for half of our soybean growers to do, and find something else for half of our rice growers to do, and find something else for two-thirds of our wheat growers to do, one-third of our corn growers, and 40 percent of our cotton growers, because we export in these commodities. We see a drying up in the sale of chemicals to agriculture, of machinery to agriculture, and the use of transportation to agriculture. It would have a very detrimental effect on our total economy.

Mr. WYATT. Once this proposition of restriction and retaliation starts, it's an unending path. It goes back and forth and back and forth until you have suddenly the island of America.

Mr. J. CAMPBELL. That is right. We would have very traumatic adjustments to make, with the abolition perhaps of half our farmers.

Mr. WYATT. Mr. Secretary, where we have the enormous potential of growing wood fiber—I am going to limit my question now to wood fiber and not to other agricultural products—the potential we have just on the national forest lands in this country for growing wood fiber and we have a domestic shortage and we have an almost unending demand abroad for our wood fiber, doesn't it make sense that we launch a massive program, such as suggested by the Forest Service?

I am not asking for your endorsement of this particular plan because I understand that it's probably not at that stage yet. But doesn't it make sense that we should launch a massive program to attempt to look to the future when we will have, for certain, domestic shortages and certainly huge foreign demands?

Mr. J. CAMPRELL. Yes, sir. I think long range we should certainly make such plans, because the growing of timber isn't like the growing of a crop which can be changed overnight within 12 to 24 months. We certainly should look for long range to this renewable resource because this is a highly renewable resource. Unfortunately, it's not possible to visualize it within a 12 to 24 months' concept. To meet the future demand to which you refer, it would take long-range planning to do this.

Mr. WYATT. You cannot plant a tree today and harvest it tomorrow.

Mr. J. CAMPRELL. It's somewhat similar to Secretary Butz's statement, right now we have found no way to grow a 2-year old steer in less than 24 months. I think the growing of trees is in the same pattern. I am sure we will find efficiencies in the growing of trees with genetic developments and research where we can shorten that time frame from what it is currently today. Research will bring this about, but still it will be an irreducible point which you will reach where you cannot go any further.

HIGH SUPPLY ALTERNATIVE PLAN

Mr. WYATT. Chief, I am not the least bit interested in your lowest supply alternative or your moderate supply alternative. I am very interested in your high supply alternative plan. Could one of your people give us some idea of what the increased harvest should be by documenting the high supply alternative in another 10 years as far as the national forests are concerned?

Mr. RESLER. We have approached it on a 5-year projection and a 10-year projection. At the high supply level, 1.5 million acres would be treated by reforesting, plus 3 million acres of cultural treatments, such as thinning, commercial thinning and salvage. We could increase the total production from the national forests by accelerating growth by 3.8 billion board feet—International one-quarter inch log rule—in the period.

Mr. WYATT. By 1984. That is, in the private sector in cooperation with the States, how much could you increase the yield during that same period of time?

Mr. RESLER. There would be two kinds of yields. One would come about through technical assistance to 40,000 forest products operators to improve utilization. That would produce an increase of something like 11.4 billion board feet. The other would be technical assistance to 900,000 woodland owners on 60 million acres to improve growth of forest lands. Technical assistance to timber harvesters would produce about 7 billion board feet from 13.3 million acres. These would be very substantial increases.

Mr. WYATT. It would much more than double the current supplies. Certainly the public sector would more than double the current supplies.

Mr. RESLER. Yes; roughly the allowable cut would be at the 20 billion board feet level in 1984 just on the national forest alone.

Mr. WYATT. What about limiting this for the time being to reforestation and your intensive management, the commercial thinning and salvage operations? What would be the cost of the high supply alternative?

Mr. MCGUIRE. It would run $53.1 million on the first year cost. The 5-year cost would run about $415 million.

Mr. WYATT. The first year cost would be the lowest because it takes that long to tool up?

Mr. RESLER. Start-up time, yes.

Mr. WYATT. What would be the other costs involved in the high supply alternative, other than the reforestation and the intensive management of your timber supply?

Mr. RESLER. Are you thinking of the private production?

Mr. WYATT. Yes; and the high supply alternative.

Mr. RESLER. The principle ones would be $16.7 million first year cost in insect and disease control work, or a 5-year total of $95 million. The cooperative tree planting would run $3.6 million the first year and $19 million 5-year period cost. Cooperative forest management and processing would run $10.5 million and $66.8 million. There would also be some other needs in general forestry assistance which would amount to $5.5 million the first year and $33.8 million for a 5-year total.

Mr. WYATT. What would be the total of those first year costs, Mr. Resler?

Mr. RESLER. $67.8 million for the State and private forestry activity.

Mr. WYATT. I mean the total of everything in that whole program, the high supply alternative?

Mr. MCGUIRE. There are several figures that might be offered here. For all of the activities in the plan under the high alternative, the total first year costs we estimate would be $1.0805 billion.

Mr. WYATT. Give me another alternative, Chief, a little lower?

Mr. MCGUIRE. This would compare with the fiscal year 1975 level of $683 million. However, this was put forth more as an illustration than anything else. There are an unlimited number of alternatives between the moderate and the high level, between $768 million and $1.08 billion.

ACCOMPLISHMENTS WITH $150 MILLION

Mr. WYATT. What can you do with $150 million the first year?

Mr. MCGUIRE. We could illustrate what could be done. We would want to follow the pattern which we have laid out in the plan and show the amounts.

For example, if you set a dollar ceiling of some kind, then you have lower outputs in terms of the allowable cut 10 years from now.

Mr. WYATT. Of acres to be reforested?

Mr. MCGUIRE. Yes; and miles of roads to be constructed, landscape architecture and wildlife habitat work to be done, and so on. It would be in proportion.

Mr. WYATT. Would you take $150 million total and produce the product from that if it were added to the budget?

Mr. MCGUIRE. Yes; we could provide the details. I will furnish that for the record.

[The information follows:]

With an increase of $150 million, the following information on program funding and related manpower requirements shows the Forest Service capabilities to provide the products and/or services.

Forest Land Management - total increase $61.1 million.

Sales Administration and Management

Additional funding of $2.8 million with 62 permanent and 28 other man-years of employment would be used: (1) to prepare timber sales that would be available on short notice so as to avert demand-supply stress and (2) to increase silvicultural examinations that would intensify the level of forest management.

The preparation of timber sales is normally a 3-5 year process, a circumstance which limits the size of any immediate Forest Service response in terms of an increased sell offerings program to meet sudden upswings in timber demand. The Forest Service should not only be prepared to respond quickly to short-term increases in timber demand but should also be prepared to steadily increase timber sell offerings to meet higher demands for timber in the long term. The above funding increase would enable the Forest Service to prepare approximately 0.5 billion board feet additional timber needed for sell, when responding to either the short- or long-term timber demands.

Intelligent and responsible management of the timber resource requires in-place examination and measurement of individual stands of timber. Silvicultural prescriptions are made for each stand following the examination and measurement. Programs for timber harvest, reforestation, and stand tending measures depend on these individual stand examinations and there must be considerable correlation among stands to meet the overall needs of the Forest-wide timber growing and harvesting programs. Additional funds are needed for increasing the annual acreage receiving silvicultural examination by 800,000 acres.

Reforestation and Stand Improvement

Additional funding of 17.8 million and increases of 249 permanent and 249 other man-years of employment includes increased reforestation of 30,000 acres of deforested commercial forest lands and 178,000 acres of stand improvement work including 20,000 acres of fertilization.

Recreation Use

An increase of $5.5 million includes 55 permanent man-years, and 50 other man-years will in large measure move toward the currently needed maintenance level of $20.2 million for which only $8 to $9 million are annually available. This includes operation and maintenance of pollution abatement facilities and administration of recreation uses under permit required now by NEPA. It anticipates heavy use of facilities near large population areas during this period of fuel shortage which is expected to decrease long-distance driving to more remote sites. This increase will also make it possible to institute more studies of roadless areas for possible wilderness classification.

Wildlife Habitat Management

Increases to the extent of $2.7 million with 54 permanent and 13 other man-years of employment would be used for protection and development of habitat for rare and endangered species and to increase forage for wildlife in conjunction with increased efforts on rangeland in support of increased production of beef.

Range Resource Management

An increase of $4.9 million and 93 permanent and 34 other man-years of employment will be applied to increasing the capacity of National Forest rangeland and, thus, the production of beef.

Soil and Water Management

The $5.4 million, 102 permanent, and 32 other man-years of employment in soil and water programs would be used for the following purposes:

(1) Respond to upstream land treatment activities on National Forest lands tributary to PL 566 small watershed projects and to expedite reservoir sweeping and clearing where the Forest Service has water surface management responsibility.

(2) Reclamation of critical disturbed lands resulting from mining and other related activities.

(3) Soil, hydrologic, and geology technical support and services for the intensified timber, range, and road and trail programs and land-use planning, especially related to the roadless area studies.

Minerals Management

With the advent of new mining regulations, $3.2 million with 132 permanent and 12 other man-years of employment can effectively be applied in the minerals program.

Forest Fire Protection

An increase of $8.1 million, adding 81 permanent and 81 other man-years of employment would enable the Forest Service to mount an aggressive program to lower the flammability of forest lands through fuel treatment, to provide for availability of specialized fire equipment, and to strengthen fire prevention.

General Forest Land Management

An increase of $6.4 million with 64 permanent and 25 other man-years of employment would be used for the following purposes:

(1) $300,000 for land classification activities in critical land areas.

(2) $700,000 for landline location to prevent trespass, urban sprawl on National Forests, and for support for timber.

(3) $800,000 for maintenance of improvements for fire and general purposes--the physical plant upon which all Forest Service programs depend.

(4) $1,500,000 for increased administrative load for occupancy and use permits, easements, and memoranda of understanding on about 5.8 million acres of National Forest lands occasioned by NEPA and resulting litigation, and the need to comply with air, water, and solid waste disposal standards.

(5) $3,100,000 for a multi-layer map system providing functional overlays of base maps now needed for all major new planning and implementation efforts.

Insect and Disease Control

Additional funding of $3.7 million, 26 permanent and 19 other man-years of employment would be used to intensify the suppression program so that losses from disease, bark beetles, and defoliators can be held to tolerable levels. This increase would also assist the States on a cost-share basis.

Cooperative Law Enforcement

An increase of $600,000 will be used for costs of cooperative efforts by law enforcement agencies that assist in the control of violations of law on the National Forests.

32-043 O - 74 - 15

Forest Research - Total increase $25.0 million

Timber Management Research

An increase of $2.8 million with 32 permanent and 4 other man-years of employment would be used to accelerate the development of new and innovative practices for increasing timber supply through shorter rotations, increasing growth and improved management planning.

Watershed Management Research

An increase of $2.1 million with 28 permanent and 7 other man-years of employment to expand research on sewage sludge and effluent recycling using forest areas and to initiate a major program of resource management research which would provide new information and techniques to more fully manage the soil, water, timber, other vegetation, wildlife, and recreation resources, including restoration of strip mined land in the East.

SEAM (Surface Environment and Mining)

An increase of $7.5 million with 60 permanent and 23 other man-years of employment would be used to accelerate research and development in the restoration and management of lands affected by minerals extraction. This brings the full effort to $9.2 million.

Wildlife Habitat and Range Research

An increase of $2.7 million with 30 permanent and 11 other man-years of employment includes $1.5 million for research to maintain quality wildlife habitat under conditions of intensified timber production and more effective range management. Included also is $1.2 million for research into improving forage on rangelands for production of beef and mutton.

Forest Recreation Research

An increase of $1.0 million with 13 permanent and 3 other man-years of employment would be directed toward research into planning and management of outdoor recreation opportunities.

Fire and Atmospheric Sciences Research

An increase of $600,000 with 6 permanent and 1 other man-years of employment would be used for research on fire control technology and wildfire prevention in the North Central and Northeastern States and to strengthen research in the Southeast on smoke management in relation to prescribed burning.

Forest Insect and Disease Research

An increase of $3.8 million with 61 permanent and 11 other man-years of employment includes $2.9 million for research in an overall USDA effort to develop environmentally acceptable control systems for the Douglas-fir tussock moth, gypsy moth, and southern pine beetle. Also included is $0.9 million for research on spruce budworm, western bark beetles, diseases of high-value hardwoods and trees in relation to air pollution.

Forest Products Utilization Research

An increase of $1.6 million with 19 permanent and 3 other man-years of employment would be used in research to extend the timber supply through improved lumber recovery, advanced processing systems, and effective utilization of residues.

Forest Engineering Research

An increase of $900,000 with 7 permanent and 5 other man-years of employment will provide for research on advanced harvesting systems with emphasis on harvesting environmentally sensitive sites.

Forest Resources Evaluation

An increase of $1.1 million with 19 permanent and 3 other man-years of employment would accelerate Forest Survey toward the objective of more frequent resurvey, thereby more fully meeting the needs for these data.

Forest Economics and Marketing Research

An increase of $900,000 with 13 permanent and 1 other man-years of employment will provide for research on the economics of highly intensified forest management practices and the economics of more effective resource utilization.

State and Private Forestry Cooperation - total increase of $9.2 million.

Cooperation in Forest Tree Planting

An increase of $1.0 million with 3 permanent and 1 other man-years of employment will be used to provide additional tree planting stock which is urgently needed to meet the expanded requirements resulting from the Forestry Incentives Program.

Cooperation in Forest Management and Processing

With added funding of $4.9 million, there would be 5 permanent and 2 other man-years of employment. Funding increases will be used in the following manner: $2 million to implement the authority for urban and community forestry contained in PL 92-288; $2.9 million to States under the Cooperative Forest Management Program to accelerate assistance to private forest landowners and to provide more intensive multiple use management of nonindustrial private forest lands.

General Forestry Assistance

An increase of $3.3 million with 20 permanent and 3 other man-years of employment would be used to accelerate the rate of adoption of new technology developed by forestry research activities. Specialized assistance is provided to States, private landowners, wood processors, and consumers of wood products. Examples are:

a. Accelerate training in new computerized forest inventory techniques throughout this country and to honor requests from Mexico, Iran, and other foreign countries which have outstripped our current capacity to provide this training.

b. Accelerate the implementation of emerging research technology on the improved protection of wood in use from insects and fungus attack.

c. Implement a program of forest rangeland management to increase the production of red meat which is an emerging trend that requires range and forest management technical assistance in order to ensure that environmental, timber, and wildlife values of the forest are not destroyed.

d. Land-use planning assistance to State and local planning groups is an increasing impact upon forestry programs. Until there are funds available from other sources, General Forestry Assistance funding will need to carry the burden of this assistance effort.

Construction and Land Acquisition - total increase $8.3 million

Fire, Administration, and Other Purpose Construction

An increase of $4.2 million with 42 permanent and 25 other man-years of employment would be used to accelerate acquisition of multiple channel radio communication systems for high fire danger areas and construction of critically needed administrative facilities.

Research Construction

Adding $4.1 million and 4 permanent man-years of employment would be used for construction of needed research facilities for which planning has already been completed at Corvallis, Oregon, and Auburn, Alabama.

Forest Roads and Trails - total $45.9 million

Increases are for construction and maintenance totaling $45.9 million with 510 permanent and 479 other man-years of employment.

Funds will be used for timber support in road construction and reconstruction and bridges for the timber program in fiscal year 1975 and later years. In addition, funds would be used for construction and reconstruction of roads and trails in support of other programs. Construction funds will be used to complement development at National Recreation Areas, at reservoir projects, such as Cave Run and Laurel, and to meet the objectives of the National Trails Act.

Youth Conservation Corps .

No increase is requested here. However, a $43 million program could be accomplished.

The Departments of Agriculture and the Interior have conducted a survey which identified a capacity to accommodate 21,363 youth on 554 projects on Federal land. This would require $30 million. The States could accommodate 15,667 youth for $13 million Federal funds. The States match Federal funds on a 50-50 basis.

Assistance to States for Tree Planting - total increase $0.5 million.

An increase of $0.5 million with 1 permanent and 1 other man-years of employment will be used to accelerate tree improvement and the availability of quantities of improved trees needed to increase short- and long-term productivity of private forest lands.

FOREST SERVICE

	FY 1975 President's Budget	Alternative Requested		Man-year Increase above President's Budget		
		FY 1975	Increase above President's Budget	Perm.	Other	Total
FOREST PROTECTION AND UTILIZATION						
FOREST LAND MANAGEMENT						
National Forest Protection and Management:						
Timber Resource Management						
(a) Sales Administration & Management	84.3	87.1	2.8	62	28	90
(b) Reforestation & Stand Improvement	35.3	53.1	17.8	249	249	498
Recreation-public use	46.5	52.0	5.5	55	50	105
Wildlife Habitat Management	9.2	11.9	2.7	54	13	67
Range Resource Management (includes CRI)	16.5	21.4	4.9	93	34	127
Soil & Water Management	15.2	20.6	5.4	102	32	134
Minerals Management	3.6	6.8	3.2	132	12	144
Forest Fire Protection	36.5	44.6	8.1	81	81	162
General Forest Land Management Activities including BCC	26.5	32.9	6.4	64	25	89
Total National Forest Protection & Management	273.6	330.4	56.8	892	524	1,416
Fighting Forest Fires	4.3	4.3	0.0	--	--	--
Insect & Disease Control	11.3	15.0	3.7	26	19	45
Cooperative Law Enforcement	1.6	2.2	0.6	--	--	--
TOTAL, FOREST LAND MANAGEMENT	290.8	351.9	61.1	918	543	1,461
FOREST RESEARCH						
Forest & Range Management Research:						
Timber Management Research	13.6	16.4	2.8	32	4	36
Watershed Management Research	7.0	9.1	2.1	28	7	35
Wildlife Habitat & Range Research	3.9	6.6	2.7	30	11	41
Forest Recreation Research	1.2	2.2	1.0	13	3	16
SEAM	1.7	9.2	7.5	60	23	83
Total Forest & Range Management Research	27.4	43.5	16.1	163	48	211
Forest Protection Research:						
Fire & Atmospheric Sciences Research	8.1	8.7	0.6	6	1	7
Forest & Insect Disease Research	10.9	14.7	3.8	61	11	72
Total Forest Protection Research	19.0	23.4	4.4	67	12	79
Forest Products & Engineering Research:						
Forest Products Utilization Research	9.9	11.5	1.6	19	3	22
Forest Engineering Research	1.6	2.5	0.9	7	5	12
Total, Forest Products & Engineering Research	11.5	14.0	2.5	26	8	34
Forest Resource Economics Research:						
Forest Resources Evaluation	3.8	4.9	1.1	19	3	22
Forest Economics & Marketing Research	3.8	4.7	0.9	13	1	14
Total Forest Resource Economics Research	7.6	9.6	2.0	32	4	36
TOTAL FOREST RESEARCH	65.5	90.5	25.0	288	72	360
STATE & PRIVATE FORESTRY COOPERATION:						
Cooperation in Forest Fire Control	20.2	20.2	0.0	--	--	--
Cooperation in Forest Tree Planting	0.3	1.3	1.0	3	1	4
Cooperation in Forest Management & Processing	5.6	10.5	4.9	5	2	7
General Forestry Assistance	3.7	7.0	3.3	20	3	23
TOTAL STATE & PRIVATE FORESTRY COOPERATION	31.2	40.4	9.2	28	6	34
TOTAL FOREST PROTECTION AND UTILIZATION	387.5	482.9	95.3	1,234	621	1,855
CONSTRUCTION & LAND ACQUISITION:						
Forest Land Management:						
Recreation-public Use	1.9	1.9	0.0	--	--	--
Water Resource Development	2.2	2.2	0.0	--	--	--
Fire, Administration, & Other Purposes	1.7	5.9	4.2	42	25	67
Total Forest Land Management	(5.8)	(10.0)	(4.2)	(*)	(*)	(*)
Research Construction	0.0	4.1	4.1	4	--	4
Pollution Abatement	16.7	16.7	0.0	--	--	--
Land Acquisition, Weeks Act	1.6	1.6	0.0	--	--	--
TOTAL CONSTRUCTION & LAND ACQUISITION	24.1	32.4	8.3	46	25	71
FOREST ROADS & TRAILS:						
Construction	107.8	148.8	41.0	451	410	861
Maintenance	39.2	44.1	4.9	59	69	128
Total	147.0	192.9	45.9	510	479	989
ACQUISITION OF LANDS FOR NATIONAL FORESTS, SPECIAL ACTS	0.2	0.2	0.0	--	--	--
ACQUISITION OF LANDS TO COMPLETE LAND EXCHANGES				--	--	--
ASSISTANCE TO STATES FOR TREE PLANTING	1.4	1.9	0.5	1	1	2
YOUTH CONSERVATION CORPS	10.2	10.2	0.0	--	--	--
TOTAL, REGULAR FUNDS	569.0	719.0	150.0	1,791	1,126	2,917
END-OF-YEAR EMPLOYMENT				1,800	2,200	4,000

1/ Project SEAM formerly included under Minerals Management (FLM) and Watershed Management Research

4/1/74

TIMBER SALES PROGRAM

Mr. WYATT. In regards to the money that has been budgeted for the increased sales program you said that you can use all of this money. Would that be by stockpiling the sales, in other words, going through all the steps necessary except for just the final offering of the sales?

Mr. MCGUIRE. Yes; we could stockpile the sales. If we could avoid further litigation, we could even offer the sales.

Mr. WYATT. If that amount of money is cut back, then I assume you cannot go forward with the preparation of all those sales?

Mr. MCGUIRE. That is right.

Mr. WYATT. Therefore, when the housing boom hits us, as we all know it's going to, you would not be in a position to respond readily to it.

Mr. MCGUIRE. It would be too late at that time.

Mr. WYATT. Thank you.

Thank you, Madam Chairman. That is all I have at this point.

GENETIC BREAKTHROUGHS

Mr. MCKAY. Mr. Secretary, you indicated that part of our production down the road, aside from reforestation, would be genetic breakthroughs of new products and this type of thing.

Mr. J. CAMPBELL. I can think of many things that the Forest Service is already doing, and that the private wood companies are doing, that will shorten the time of growing timber, such as commercial fertilizer which heretofore has not been profitable because of the low price levels of the finished product in the management of the trees and stands, and things of this type.

Mr. MCKAY. In line with that, there are some things, of course, you haven't got done. You had some projects, production improvement of genetic quality seedlings. I note in here that there is no increase and in a lot of cases there is a decrease in the request for 1975 and even in those areas where you have maintained the proposal it becomes a net decrease with the inflationary factor. Isn't that correct?

Mr. MCGUIRE. That is correct.

DECREASES IN RESEARCH

Mr. MCKAY. Then to increase your production in the forest, we are really not emphasizing it, we are really taking a decrease. Is the reason for that again the "priorities"?

Mr. J. CAMPBELL. I don't think so. Although we may have a decrease in those funds, I don't think that reduces the possibility of having improvements. I don't know to what degree a decrease in that quantity is inhibited to research in that particular area. We have research that is being carried on by private sources and not necessarily the Federal Government. More than 50 percent of all research that is done with regard to production in agriculture, whether it be trees, crops or livestock, is not done by Federal or State money but by private money.

Mr. MCKAY. Has that always been the case?

Mr. J. CAMPBELL. Yes, sir. I couldn't discuss this specific subject because I am not familiar with it. I was speaking of research and production of agriculture across the board.

Mr. McKay. I don't know whether I am right or wrong, but from what you say I gather you intend to decrease here because the private sector will be picking it up.

Mr. J. Campbell. I did not mean that. The point I was making is we may have a decrease in this figure in this budget. That doesn't change my optimism for the future and being able to grow trees and timber in a short period of time because research will be on-going and this may be inhibiting the research possibly. I don't know to what degree it will inhibit this research by the change in the funding figure.

What I am saying is, there may be a shift from year to year of these levels of funding, just as we have shifts in the weather. In the long-range we are going to continue to have research with public and private moneys to shorten the time necessary to grow trees.

Mr. Thornton. We do have a program of assistance to the States that is directed to that in terms of seed orchards. That program is increased in the 1975 budget. That comes under the line item of "assistance to States for tree planting."

Mr. McKay. In cooperation in tree planting with States?

Mr. Thornton. It's farther back in the book. This is the seed production program you are referring to there?

Mr. McKay. Yes.

Mr. Thornton. We do have such a program, and there is an increase in 1975.

Mr. Nelson. This program is listed on page 26 and is entirely operational. You are correct, in that there is a decrease in program funds in fiscal 1975.

Mr. McKay. I wanted to get that in as it related to this whole discussion of production.

Mr. J. Campbell. I don't dispute that point.

REFORESTATION

Mr. McKay. Mr. McGuire, you indicated earlier that reforestation was one of the areas you felt you could postpone easier than you could some others like timbercutting. How long have we had that attitude in the budgets of recent years? How far back does that attitude prevail?

Mr. McGuire. Unfortunately, it has prevailed as long as I have had anything to do with the budget.

Mr. McKay. How long has that been?

Mr. McGuire. For at least the last 10 years. I am sorry to say there are certain things that are just more amenable to postponement than other things. Tree planting seems to be one of them because of the long production period.

Mr. McKay. With that in mind, we will never catch up and we will never be in a position and, as Mr. Wyatt has indicated, we will wake up one morning and be hit on the back of the head with a hammer.

Mr. McGuire. That is exactly right.

Mr. Wyatt. I personally think it's a national disgrace that we have this resource, this land capable of growing commercially wood fiber and we know that we have this enormous domestic demand facing us. We know that this is one way that we can materially assist our balance of trade and balance of payments internationally. The wood fiber crisis

is going to come on us just like the energy crisis has come on us. It's plain. Anybody with any common sense can realize it. Yet we are not going forward to prepare for that day. I for one am going to do everything I can in my last year to see that we take the first step down the road of preparation.

I appreciate the testimony of both of you in that regard.

Mrs. HANSEN. Continuing your discussion, the interesting thing is in the total acreage treated you show a decrease from 1974 to 1975. Why?

Mr. MCGUIRE. Once again, the reasons are the same. The money is insufficient to reforest any more than 152,000 acres.

Mr. NELSON. In addition to the increase in pay and rental costs and the higher costs of getting the work done, we are treating some more difficult and less accessible sites.

Another factor is that we have, of necessity, had to decrease the amount of direct seeding we are doing. This is one of the least expensive ways of reforestation.

Mrs. HANSEN. Why do you have a decrease?

Mr. NELSON. It is, at least, in part due to the restrictions on the use of forest chemicals, such as 1080, Endrin and other pesticides for protection from birds and rodents that must be part of the direct seeding effort.

Mr. WYATT. You not only have the OMB but you have the EPA, too.

NEWSPRINT

Mrs. HANSEN. Please insert in the record the total amount of timber products used in the United States for newsprint and indicate the total amount that is from domestic supply and the total amount that is imported.

Mr. MCGUIRE. We will be glad to provide that.

[The information follows:]

TIMBER PRODUCTS USED FOR NEWSPRINT, 1972

[Amounts in thousands]

	Tons of newsprint	Cords of roundwood
U.S. total production	[1] 3,408	[1] 4,330
Export	−145	−184
U.S. net production for domestic use	3,263	4,146
Imports:		
Canada	6,772	8,520
Finland	328	416
Other countries	1	1
Total imports	7,101	8,937
Use of inventory stock	230	292
U.S. consumption	10,594	13,375

[1] Approximately 400,000 tons of newsprint were manufactured from wastepaper.

Source: Bureau of Census, U.S. Department of Commerce.

RECREATION USE

Mrs. HANSEN. I think this is an interesting part of the total timber use in the United States.

You are requesting an increase of $1,852,000 for recreation use, for a total program of $46,522,000. To what do you attribute an actual program decrease in all activities except one?

Mr. NELSON. Madam Chairman, we have an increase of $80,000 for landscape and design effort in the budget proposal for 1975 .This increase is to go along with the timber sale program. In this particular program it is necessary that we have some indication of the visual impact of our timber sales layout. We opted to place this in the program.

Mrs. HANSEN. This is in recreation use?

Mr. NELSON. Yes, ma'am. We hire our landscape architects under our recreation project and funding, although in this case they are used in conjunction with the timber sales layout and design.

I might also point out that we have not had increases in this area, but that we have had increased costs to operate the sewage systems. Then there will be a decrease of about $2 million as a result of losses in receipts under the land and water conservation fund activities.

RENTAL COSTS

Mrs. HANSEN. What are the rental costs in this activity?

Mr. NELSON. We have rent costs of $1,390,000 for the recreation item.

Mrs. HANSEN. GSA must have decided to absorb all of your increases. If every part of the U.S. Government is going to be charged for rental costs to the extent you are on this program, GSA must be getting ready to do something.

Mr. WYATT. If you will yield, Madam, Chairman, of course, this is a law that we passed in Congress. I probably voted for the thing myself. I would like to have that vote back. It seems to me mandatory and I am running into it in every agency in my other subcommittee.

SKIIERS

Mrs. HANSEN. I would like to see the total amount of rent that is being charged by GSA.

There is an interesting article in the Christian Science Monitor in February on the trails attracting more U.S. skiers. What is the percentage increase you have had in skiing on the national forests in the last 4 years?

Mr. NELSON. We will get the percentage increase in the last 4 years for the record, Madam Chairman. I do know that last calendar year there were about 6 million visitor days on skiing alone.

[The information follows:]

Skiing use increased from 4,777,400 visitor days in 1969 to 7,009,200 visitor days in 1973, an increase of almost 47 percent.

CONCESSIONS

Mr. LONG. On page 29, it indicates that the Forest Service pays about $1 in administrative costs for every $3 it takes in from conces-

sions. Why are administrative costs so high? Please state total sales, profits, and concession fees paid by the Forest Service concessionaires.

Mr. McGuire. Actually the ratio of $1 in administrative costs for every $3 in concession fees is misleading. In the first place, concession fee schedules are reasonable to encourage private investors to provide certain types of recreation facilities on the national forests. Additionally, the administrative cost should be compared to other factors to determine cost benefit. Compared to investment, the ratio would be about 1/200. Compared with concession sales, it is 1/300 and with concessionaire profit, 1/24. Any of the comparisons reflect a very favorable return for the public investment in administration of concessions. These items are summarized as follows: Concession sales, $300,000,000 annually. Concession profits, $24,000,000 annually. Concession fees, $2,200,000 annually.

MOUNT HOOD LODGE

Mrs. Hansen. Did you see the account in the paper the other day that the walls of Mount Hood Lodge are falling in due to heavy snowfall? Aren't you going to be faced with reconstructing this facility?

Mr. McGuire. Yes. We have some preliminary estimates of what it is going to take to repair that lodge.

Mr. Wyatt. I have some questions on it, too.

Mrs. Hansen. Isn't the snow still coming down?

Mr. McGuire. It has been an unusually heavy snowfall year.

Mrs. Hansen. How many feet of snow did they receive?

Mr. McGuire. I haven't heard a figure recently.

I think the point you were making earlier about trails, however, is that there is a growing popularity for ski touring or cross-country skiing, so we are finding more skiiers who want to get away from the downhill runs and head off cross country.

Mr. Gilbert. We have a forecast of skiing demand in the environmental program. We estimate that in the next decade there will be an increase from 15 percent to 25 percent in skiing on the national forests. This includes downhill and crosscountry skiing.

Mrs. Hansen. How about your facilities? Are they keeping up with increased use?

Mr. McGuire. We have quite a backlog of facilities that should be developed. Our appropriations in recent years have not permitted much expansion of facilities. We are getting farther and farther behind in the kind of facilities that are needed to handle the increasing numbers of recreation visitors.

DISPERSED RECREATION USE

Mrs. Hansen. You say in the justifications: "Dispersed recreation used such as hiking, riding, fishing, hunting, sightseeing and snow play take place on the 187 mililon acres of general forest areas. In 1975, this type use will amount to about 124 million visitor days, or almost 60 percent of all recreation use occurring on national forests lands."

Mr. McGuire. This includes the kind of recreational service away from the camp or picnic area, use of wilderness areas, hunting, fishing, this sort of thing.

Mrs. Hansen. What kind of protection do you have to provide for this use with regard to fire and the environmental impact?

Mr. McGuire. In case of fire, if it is severe weather, we close off the area to this kind of use. In the ordinary situation, we try to alert a visitor to the risk of starting a fire, get him to put out his matches, and douse his campfire, and that sort of thing.

The increasing number of these visitors, of course, has put a demand for increased places for them to go, sanitary facilities, guidance help; that is, the maps and signing, and things of that sort.

Mrs. Hansen. Doesn't it involve a certain amount of protective work?

Mr. McGuire. It does increase the search-and-rescue workload. However, here we are working very closely with the local governments which are primarily responsible for this kind of work. The local police department, the local sheriff's office, and the State police will take on the search-and-rescue job, and we will assist them.

Mrs. Hansen. They are not particularly happy about increasing costs in this field.

Mr. McGuire. That is right, and we have a new program that is beginning to work quite well to help them with the additional expenses which they are encountering because of the large number of visitors to the public lands.

BLANCHARD SPRINGS

Mrs. Hansen. Have you completed the Blanchard Springs area?

Mr. McGuire. Blanchard Springs is open. It has been very popular. It has been operating at full capacity since the day it opened. We have had to reduce the number of hours in which we keep the cave open, just to stay within our budget. We do have plans for enlarging the facility in order to accommodate the large number of visitors.

For example, it is a very large cave, but we have only been able to open a small part.

PROJECTION OF VISITOR USE

Mrs. Hansen. Will the visitors increase this year, or due to the energy crisis, decline?

Mr. McGuire. We are not at all sure yet, but we think the total numbers will stay at least as high as they were last year, but we think the distribution is going to be different.

We think we are going to get more use at close-in areas like the Angeles National Forest, less use at the more remote forests. We also think people are going to come and stay longer. This is what has been happening.

Mrs. Hansen. Will the visitor use continue at Blanchard Caverns, or will the gasoline crisis curtail visitations?

Mr. Nelson. Our indications to date are that we are not getting any sizable reduction in the number of people that are coming to Blanchard Caverns. The figures are holding up quite well there.

Mr. J. Campbell. May I make a comment on Blanchard Springs? I have had the privilege of being down in the cave, and to members of the committee who have not visited it, it is quite a spectacular place. It is reputed to be as large a cavern as any in the United States.

Mrs. Hansen. This committee is responsible for providing the funds for Blanchard Springs.

Mr. J. CAMPBELL. I commend the committee on its efforts.

Mrs. HANSEN. You should also commend Congressman Mills for his efforts.

WILDLIFE AND FISH HABITAT MANAGEMENT

You are requesting an increase of $536,000 for wildlife and fish habitat management, for a total program of $9,230,000. What will this provide, aside from the rent and pay increases?

Mr. MCGUIRE. The only program change is some additional money to coordinate wildlife with the requirements of the increase level of timber sale activities. Otherwise, the changes are all for pay increases and rents. There is a small decrease for some work connected with the tussock moth.

RANGELAND MANAGEMENT

Mrs. HANSEN. An increase of $661,000 is requested for rangeland management, for a total program of $16,474,000. $532,000 of this increase is for GSA rental. What are you renting from them?

Mr. NELSON. Parts of our supervisor's offices, ranger stations, regional offices, and the like are occupied by our range personnel. This is a proportionate share of the range funding for this GSA housing item.

Mrs. HANSEN. You don't have any program increase in this activity?

Mr. NELSON. No, ma'am. I believe we have a very small program decrease.

Mrs. HANSEN. Yes, $4,000.

How many acres of rangeland do you manage?

Mr. MCGUIRE. We have about 100 million acres of rangeland in the national forests.

Mrs. HANSEN. You have 105 million.

Mr. MCGUIRE. That is correct, 105 million.

Mrs. HANSEN. How much of your 105 million acres needs revegetation or management work?

Mr. NELSON. We have about 17.6 million acres of rangeland that is in unsatisfactory condition; that is, on which there is inadequate or undesirable vegetation.

Mrs. HANSEN. Where is this located?

Mr. NELSON. This is located primarily throughout all of the Western States.

Mrs. HANSEN. Isn't this in areas where we have some of the lowest income people in the United States who are trying to make a living off of the grazing lands?

Mr. NELSON. That is correct.

Mrs. HANSEN. For how many years has this 17 million acres been undermanaged?

Mr. NELSON. We have had serious range problems, of course, since the beginning—at the time the forests were reserved.

Mrs. HANSEN. The land you purchased was not in good condition or you probably wouldn't have been able to obtain it?

Mr. NELSON. That is correct.

Mr. McGUIRE. It goes back really to World War I when we allowed overgrazing as part of the war effort. We have never been able to recover from that damage completely.

Mrs. HANSEN. Mr. McGuire, some of the cattle in New Mexico, and you wonder how they have strength enough to go from one waterhole to the other.

You should see some of the dwellings that some of these people have to live in. The Office of Management and Budget should be made to go down there and take up quarters for just one winter.

I am deeply concerned about the management of our rangelands, and I expressed the same concern to the Bureau of Land Management. It seems to me that in a year where we do have high food prices that you have a chance, by providing adequate management, to increase the productivity of this land and increase the income of some of the poorest people in America.

Mr. McGUIRE. We fully agree and this is what we have tried to describe in our environmental program for the next decade.

OUTLOOK FOR THE FUTURE

Mrs. HANSEN. Do you think the next decade is going to be any better fiscally than this one has been?

Mr. McGUIRE. I hope so. I don't know.

Mrs. HANSEN. Mr. McGuire, I see no indications of it in our natural resource fields.

Mr. McGUIRE. I think more and more people, however, are becoming aware of this situation.

Mrs. HANSEN. Unfortunately, they are not employed in the Office of Management and Budget.

Mr. McGUIRE. No, but I think they will make their opinions known to their Representatives. What you say about the low-income ranching operations in the Southwest is certainly true. There are many of them and is is very difficult to make a living in the country. We have many examples of what can be done also. Our research program has pointed the way to other things that could be done to increase the productivity.

Mrs. HANSEN. I said to Secretary Rusk and the Foreign Operations Committee one time when the proposal was made to bring some Peace Corps young people over from India, Pakistan, and a few other places to work on our Indian reservations: "If we do that, Mr. Secretary, they are going to go home and they are going to say with one voice. 'What is the United States trying to tell us, how dare she tell us how to manage our affairs' when they see these kinds of conditions."

RANGE MANAGEMENT PROGRAM

Mr. McKAY. Some recent studies in my State and throughout the West indicate that use of the Federal range is important to the economy of the West, and I also have heard Secretary Butz talk about the need to produce more meat. These Federal lands produce grazing—in fact, considerable meat for the Nation, and they generate income that helps support rural communities. Yet I see no recognition in the budget request of this increased importance of these lands. You are requesting no program increases for range. Can the Forest Service

produce more meat and a higher sustained agricultural-ranching income from national forest ranges without program increases?

Mr. McGuire. No, sir. We can only hope to hold the line in the amount of grazing at the current funding level. We will have some problems, too, in doing an adequate job of protecting the range from further deterioration.

Mr. McKay. At a recent meeting of a State livestock association, I understand that mention was made of a proposed accelerated range program. Does that involve the Forest Service? And, if so, would you explain?

Mr. McGuire. Yes, sir. The Forest Service has been studying the need for recommending an acceleration of development and management of the national forest system ranges. This effort springs, in part, from a major study we completed and published last year. That study, "The Forest-Range Environmental Study" revealed a need for more range grazing in the future to help meet expected increased demands for meat. It also showed that some national forest system ranges are in poor condition and need to be improved if we are to do a quality job of management.

The study also suggested need for doing a better job of grazing non-Federal woodlands and forests as well as need for strengthening Forest Service research in range.

Mr. McKay. What would it cost to produce the amount of grazing your study showed should come from the national forest system? And to get the ranges in satisfactory condition? Could you effectively use $28–29 million this year?

Mr. McGuire. We have made some preliminary estimates of cost to produce more grazing. These would start at about $20 million the first year and increase to about $28 or $29 million in the fifth year. Gearing up to sizeable program increases takes some advance planning. However, we have our supervisory personnel in place, we have thought through what we need to do, and we know how to do it. We could effectively use $28 or $29 million this year. With increased funding of this kind,, we could begin to get the fences installed, grass seeded, and management systems in place that would result in increased meat production from the national forest system. At the same time, we could begin to work toward making some of the shifts in grazing needed to get on top of the problem of poor range condition.

Mr. McKay. You mentioned need for better grazing of non-Federal forest land, and range research. How is the Forest Service involved in grazing off the national forests? And, have you made any estimation of what it would cost for the Forest Service to work on non-Federal forest grazing problems as well as to cover needed range research?

Mr. McGuire. As part of our job, the Forest Service assists in the protection and management of non-Federal forests and associated lands through cooperative programs with State and local governments, forest industries, and private landowners. The cooperation includes multiple-use aspects of using forest lands including grazing. On a preliminary basis, we have estimated it would cost about $1.5 million to carry out our cooperation in the initial year of a Forest Service accelerated range program with program increases to about $2.4 million in the fifth year. A third part of the program involves research, and increases of $1.2 million in the first year to $1.8 million in the fifth year

would be required for research to fulfill its role in providing necessary technology for the accelerated range program. The research aspects of the program would apply to forest and related range problems on non-Federal as well as to Federal lands.

Mr. McKay. Are any other agencies in the USDA other than the Forest Service involved in this accelerated range program?

Mr. McGuire. As you know, the USDA has a wide ranging responsibility that includes research, extension, education, and conservation and development as well as administration of federally-owned lands, namely, the national forest system. Several of the agencies have responsibilities that relate to rangeland. These agencies are now looking into the question of accelerated meat production from rangeland. I understand the work group handling this task has not yet completed its study and evaluation of this question but expects to have a report for Assistant Secretary Long this spring.

REPPORT OF UTAH RANGELAND DEVELOPMENT COMMITTEE

Mr. McKay. I have before me a report of a special Utah Rangeland Development Committee appointed by Governor Rampton of Utah. This committee was chairmanned by Dan Freed and made up of representatives from various agencies of Federal and State government, educational institutions, and user groups. This committee, in my opinion, has made a significant contribution in its report. It points out among other things that:

(*a*) Utah rangelands comprise 92 percent of the State's 52 million acres of land.

(*b*) The proper use and development of this range is critical as a source of water, wildlife habitat, livestock forage, scenery, open space, and many forms of recreation.

Do you agree that proper use of the range resources does, in fact, enhance the other uses and resources mentioned above?

Mr. McGuire. When considered in a broad manner, range resource management may serve to enhance other uses and values. This does not mean, however, that one use such as livestock grazing should be maximized to the detriment of other uses and values. National forest lands and resources must be evaluated on an interdisciplinary basis, area by area, the alternatives and tradeoffs between various uses carefully evaluated, and the rangelands managed accordingly.

We consider that the report you are referring to does convey this broad concept of proper rangeland management. We, therefore, agree that proper range resource management can enhance most uses and values.

Mr. McKay. In this report the present situation is described as follows:

> Despite their importance—and while considerable improvement has been made in recent years, Utah's rangelands remain one of our most neglected and underdeveloped resources. Past range use—carried out with inadequate knowledge about the rangeland environment—has caused a deterioration of many ranges. Depleted range has less value for all uses of man and grazing animals than lands that are improved to their potential.
>
> Many diversified plant communities have been replaced by less desirable, nearly pure stands of such species as sagebrush, pinyon-juniper, wyethia, or cheatgrass. This undesirable situation has resulted in accelerated soil erosion, sedimentation, unstable plant communities, and reduced overall productivity

and natural beauty. Range specialist and research findings have proven that proper resource management practices can correct these undesirable conditions and increase desirable plants as much as 5- to 10-times on some of our poorer condition ranges.

Do you have any disagreement with this statement?

Mr. McGuire. No sir; none whatsoever.

Mr. McKay. The committee's specific recommendations were as follows:

Members of Utah's Rangeland Development Committee, established by the Governor's Executive Board of the Agricultural Development Council, encourage all individuals and groups interested in range resource development to provide active support in:

(*a*) Developing a coordinated and accelerated range improvement program that encompasses all rangelands in Utah regardless of ownership.

(*b*) Soliciting funds from all available sources to assist non-Federal landowners to accelerate the development of their rangelands.

(*c*) Soliciting funds for an accelerated program of resource development on Federal ranges.

Do you consider that the proper way to implement a program of this nature is to develop a coordinated and accelerated program that encompasses all rangelands in Utah regardless of ownership?

Mr. McGuire. We concur that a coordinated program encompassing lands of all ownerships is the proper way to proceed, especially when the lands in various ownerships are interrelated insofar as grazing is concerned. This approach is stressed in depth in many places in the Forest Service "Framework for the Future," our statement of objectives and goals. However, we are concerned not only with coordinated programs involving lands of all ownerships within a given State. We also are concerned with the balance of range use and management and development opportunities among the 35 to 40 States within which national forest system land is grazed by livestock. Thus, we are dealing with a very complex matter of coordination—especially in view of the fact that Federal agencies other than the Forest Service, as well as State agencies, have responsibilities that relate to rangeland use and research.

Mr. McKay. The table in back of the Utah report shows a backlog inventory of range improvement work needed on the national forests of Utah, with total costs in 1972 estimated at more than $16 million.

Do you agree that the completion of this work in a reasonable number of years coupled with more intensified management would contribute substantially to better land management and an improved economic situation for rural communities such as we have in Utah?

Mr. McGuire. Investment of $16 million in range programs over a reasonable number of years on the national forests in Utah should contribute substantially to better land management and better rural economic conditions. With that level of investment, actions could be taken that should result in improved range conditions, resulting in better quality watersheds.

Local communities should benefit directly and indirectly from the expenditure of funds for fencing and other materials, labor, and from the additional livestock grazing which should result from such investments.

FUNDS FOR RANGE MANAGEMENT

Mr. McKay. I am proposing that additional funding of $1 million per year, beginning in fiscal year 1975, be appropriated to the Forest Service to implement the Forest Service part of the Governor's Committee's recommendations. Much of the national forest land falls within the so-called Four Corners area, which has long been recognized nationally as a low-income area whose economies must be strengthened. Do you believe these additional funds, if appropriated, could be expended to actually enhance resource uses and values and improve the economy of our low income rural areas in Utah?

Mr. McGuire. Yes, sir. In addition, these funds should benefit less privileged groups who reside in the low income rural areas of Utah.

UNSATISFACTORY RANGELAND

Mr. Evans. You state a number of multiple objectives for national forest rangelands, including "to restore lands with deteriorated or unsatisfactory range condition." Can you give us an estimate of how many rangelands on the national forests are now in this condition, and how much money it will take to rehabilitate them? Are they currently being grazed, and if so, why? Has there been much change in the acres of such lands in the past 10 years or so?

Mr. McGuire. About 17.6 million acres of national forest system land that is suitable for grazing by livestock is estimated to be in unsatisfactory range condition. Costs to get these unsatisfactory lands back into satisfactory condition vary from place to place depending upon what we do and how many years we have to do the job. Before I discuss these costs, I want to explain a point. Unsatisfactory range generally is scattered within a grazing allotment and often is associated with areas that are in satisfactory condition. This gives us more options for correcting the unsatisfactory conditions without employing the economically adverse action of completely removing livestock grazing from an allotment during the time of rehabilitation.

In some cases where we need quick improvement, we must artificially revegetate the land that is in unsatisfactory condition and put in fences to exclude grazing until the areas have healed over. Costs of such corrective action can approximate $12 to $18 or $20 per acre for the revegetation alone, plus costs of fencing at $1,200 to $2,000 or so, per mile. In other situations, especially where we have 5 to 10 or more years, we can correct unsatisfactory range conditions at less cost through adjusting livestock grazing seasons and numbers within the capacity of the range while employing rotation, deferred or other systems of grazing use. This still requires fencing to get necessary livestock control, as well as development of livestock watering places.

In our proposed accelerated range program, we have set a long-range goal to have all 17.6 million acres of unsatisfactory range back into satisfactory condition in 25 years. Annual costs for doing this job, while at the same time meeting national needs for livestock grazing from all national forest system lands under a program that would benefit rural communities, would vary from about $20 million initially to a plateau of about $44 million around 1989.

Some of the unsatisfactory rangelands are being grazed and some

have been temporarily withdrawn from grazing for range protection purposes. As I have indicated, poor condition range usually is not in large blocks of lands but is composed of localized areas interspersed with satisfactory condition ranges. We are implementing improved and more intensive management systems on our grazing allotments as rapidly as finances and circumstances will permit. These systems are designed specifically for each allotment and provide for rest and deferment from grazing of some portion of the allotment each year. With these management systems we can use ranges and improve them at the same time. These ranges have high use value to many farmers and ranchers. Sudden and complete exclusion of grazing would result in severe economic disturbance to many of them, as well as to the rural communities within which they live and trade.

I can't give you specific figures about change in range condition for the past 10 years or so on a national basis. Although exact statistics are not available, we do believe there has been substantial improvement during that period. We base this belief upon our experience with the allotments upon which better management systems have been implemented. Improved management has been started on about two-thirds of our more than 12,000 grazing allotments. Downward trends have been reversed, and in many cases ranges have improved so much that grazing can be sustained or even increased without harming the forage resource.

SOIL AND WATER MANAGEMENT

Mrs. HANSEN. You are requesting a decrease of $2,000 for soil and water management for a total program of $15,215,000. What does this involve?

Mr. MCGUIRE. Here again most of the increase goes to provide for rent and salaries. However, there is an amount of $270,000 for protection of critical soils and unstable slopes, and in the watershed measures connected with timber sales. There is also a decrease of $790,000 in planning, liaison and protection of Forest Service land in connection with water development projects of other agencies. That is because the number of new starts of water projects has been decreasing.

There is a decrease for some work that we have been doing with the tussock moth and there is a small decrease for wild and scenic river studies.

Mrs. HANSEN. Does this mean that your soil and water management is so completely adequate that no additional work is needed?

Mr. MCGUIRE. No, it does not mean that. We have a large backlog of this kind of work and, again, we attempted to provide for doing this work in the program for the future.

Mrs. HANSEN. When is that future going to arrive?

Mr. MCGUIRE. This, like reforestation, is one of those things that always seems to be put off another year. No one disputes the need for it.

Mrs. HANSEN. Water is in the same category as reforestation.

One of the major problems that we face as we develop oil shale is adequacy of water in the entire area of the West.

You also face water problems of varying degrees in mining. So that it doesn't seem to me that this is a very proper time to delay this work. You have to have some answers on these things rather quickly.

Mr. McGuire. It is becoming more urgent with the increasing use of the public lands for energy and for minerals. We not only have to catch up on the large backlog of unfinished work, but we have to prepare for the new work that is coming in the years ahead.

Mrs. Hansen. It seems a strange time, when there is a complete escalation in energy resource programing, which is intricately tied into the water system of the United States, to see a decrease in this activity.

Are the fiscal people aware that water is probably the determining factor on the development of certain resources?

Mr. Nelson. I think they are, Madam Chairman. I think they are also aware of the fact that we have about 50 major adjudications that we have pending on water in the West. Its number is increasing and a great number of these are related to the development of minerals and energy sources.

WATERSHED RESTORATION IMPROVEMENT

Mrs. Hansen. A $59,000 increase is requested for watershed restoration and improvement.

Mr. McGuire. Actually there is a program decrease of $13,000 in that item. The increase is for rent and salary changes.

SOIL AND WATER MANAGEMENT

Mr. Evans. You say on page 41 that on the Tongass National Forest in Alaska, you delineated 4.5 million acres of land which have timbered slopes over the critical angle of repose. And then you refer to timber management procedures on these areas. Are you in fact logging on areas where the timbered slopes are beyond the critical angle of repose? Is this really good timber management? What volume of timber is found on these lands?

Mr. McGuire. The accomplishment described refers to the photogrammetric examination of 4.5 million acres of commercial forest land on the Tongass National Forest for the purpose of identifying those portions which lie on critical slopes which might be subject to damage during winter storms. This is a "stop-look-and-listen" type of identification.

A maximum of perhaps a quarter to a third of the 4.5 million acres has been identified photogrammetrically and designated on maps as possible critical areas. Whether these identified areas are actually critical depends not only on the degree of slope but also on the local soil types, which have to be tested on the ground. Some soil types are much more stable than others.

Those critical areas which are identified will be avoided, by-passed until further research determines feasible ways to handle them, or given special treatment to avoid damage. For example, if special treatment is called for, roads, which are a prime trigger of soil disturbance, will be directed away from critical slopes; or balloon, helicopter or long skyline cable systems will be used, in order that logs can be lifted clear of the ground, to prevent any water-funnelling scars from being scratched into the soil.

It is not good timber management nor good land management to log or construct roads on areas of high landslide potential. These areas

are eliminated, deferred, or given special treatment to avoid damage during timber harvesting operations.

If half the identified cautionary areas turn out to be critical, the volumes of timber involved may be about 10 billion board feet. This volume is then subject to special consideration in the location and preparation of timber sales.

SOIL RESOURCE INVENTORIES

Mr. EVANS. On page 40, you refer to soil, water, and geologic resource inventories. I understand that for some forests, particularly some of those in region 6 (Washington and Oregon), your new soil maps and inventories are quite well underway. How far along are you in your soil mapping program in the same detail that you now have in some of the region 6 forests? When will they be done? Isn't this a most critical kind of data to have before you undertake any large scale timber program?

Mr. MCGUIRE. The regions have now conducted soil resource inventories of about the same intensity as those you mention in region 6 on approximately 48 million acres and have somewhat more detailed surveys on another 24 million acres. The target dates for completing the soil resource inventories vary greatly among regions, depending on manpower capabilities, priorities, and so on. Region 6 will likely have theirs completed within 5 years, but region 10 will require about 25 years at going rates of accomplishment. Most regions, however, are shooting at 10 years or less.

I agree with you that these kinds of data are critical, and especially so on the more fragile areas, areas having difficult terrain problems, and the like. Our regional foresters and supervisors are giving such areas high priority for soil resource inventories and for water and geologic resource inventories or investigations as well.

MINERALS MANAGEMENT

Mrs. HANSEN. You are requesting an increase of $194,000 for minerals management for a total program of $4,630,000.

How much of your increase is for salary and rental costs?

Mr. MCGUIRE. The entire amount is going for salary and rent.

Mrs. HANSEN. What is your inflation rate?

Mr. MCGUIRE. I suspect inflation probably is in the neighborhood of 8 or 10 percent, but that is not provided for here.

Mrs. HANSEN. So it is actually a decrease?

Mr. MCGUIRE. Actually it is a decrease.

PROJECT SEAM

Mrs. HANSEN. What is the status of Project SEAM? Are the funds you are requesting adequate to keep on the schedule you originally developed?

Mr. NELSON. Project SEAM, as you know, is a 5-year research development and application program which is designed to provide the mining industry, the land managers and the States, an array of——

Mrs. HANSEN. Is this the third phase of the program?

Mr. NELSON. Second year of SEAM operations, and it is primarily aimed at reclamation. We are progressing with SEAM. This is an entire U.S. Department of Agriculture effort. In 1974 there is available $1 million in minerals management and $700,000 in research, but we are having some difficulties in mounting a program of the size necessary to meet the immediate needs.

Mrs. HANSEN. What difficulties are you encountering?

Mr. NELSON. Primarily in funding.

Mrs. HANSEN. Where are you mounting your efforts?

Mr. NELSON. We are mounting our efforts in the Northern Great Plains area and the phosphate mining area of Idaho, down in Utah in the mining areas, and in New Mexico.

Mrs. HANSEN. The committee provided money last year, as you will recall, for the effort. What happened to that add-on?

Mr. NELSON. This add-on is still included in the 1975 budget.

Mrs. HANSEN. How did that happen?

Isn't the work being performed at Berea going hand-in-hand with this program?

Mr. NELSON. Yes; the work is going hand-in-hand. The work in Berea is financed out of our research funding entirely.

Mrs. HANSEN. I hope you keep Project SEAM on schedule. There are all types of research being conducted on safer methods of mining, improved techniques for deep mining, improved techniques for your surface mining, and health research. So it is a total effort to bring production on line in time to equate the energy needs of the future, because there is nothing that is short-lived about this energy crisis. It is going to pursue this country for a long time. The degree to which the country is able to provide its needs depends on natural resources. I do not believe that the people of the United States and the Congress of the United States, no matter how much they want energy, are willing to see their streams ruined and their country torn up, when the alternatives are right here within the resource budget of the Government.

Mr. McGuire, do you believe that the country will permit this?

Mr. MCGUIRE. Unless we have made proper provision for reclamation and protecting the environment, we are not going to be able to permit the kinds of activities that the mining industry would like to have.

We have some figures on the scope of this activity. It is not just in energy; it is in all kinds of minerals.

Mrs. HANSEN. Mr. McGuire, last week I believe the Bureau of Mines provided us with the figures that it takes 40,000 pounds of new minerals per year for one American. So you can visualize, as our population grows and as demands grow, what we are going to be faced with in the protection of the land itself.

Mr. MCGUIRE. This is our dilemma. Somehow we have to provide the minerals and do it in a way that is satisfactory from an environmental standpoint.

We have tried to show here in figure 5 mineral leasing, for example, the number of leases requiring some kind of action on our part. As you can see, there was a peaking in 1970 but we are now expecting another peak to arrive in 1975. It will probably continue on up.

Mr. BANTA. This dropoff is related to Secretary of the Interior's moratorium on the development of coal leases and freezing of oil

and gas leases in certain areas because of environmental protection requirements.

Mr. McGuire. We have a pent-up demand here for more leasing activity.

COAL LEASE

Mrs. Hansen. Please provide for the record a copy of one of your coal leases?

Mr. McGuire. We will be glad to do that.

[The document follows:]

Form 3140–1
(October 1967)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

COAL LEASE

Land Office Serial Number

This lease, entered into on , by the United States of America, the lessor,

through the Bureau of Land Management, and

, the lessee,

pursuant and subject to the terms and provisions of the act of February 25, 1920 (41 Stat. 437), as amended, hereinafter referred to as the act, and to all reasonable regulations of the Secretary of the Interior now or hereafter in force which are made a part hereof,

WITNESSETH:

Sec. 1. *Rights of Lessee.* The lessor, in consideration of the rents and royalties to be paid and the conditions to be observed as hereinafter set forth does hereby grant and lease to the lessee the exclusive right and privilege to mine and dispose of all the coal in the following-described tracts of land, situated in the State of

containing acres, more or less, together with the right to construct all such works, buildings, plants, structures, and appliances as may be necessary and convenient for the mining and preparation of the coal for market, the manufacture of coke or other products of coal, the housing and welfare of employees, and subject to the conditions herein provided, to use so much of the surface as may reasonably be required in the exercise of the rights and privileges herein granted.

Sec. 2. In consideration of the foregoing, the lessee hereby agrees:

(a) Bond. To maintain the bond furnished upon the issuance of this lease, which bond is conditioned upon compliance with all the provisions of the lease, and to increase the amount or furnish such other bond as may be required.

(b) Rental. To pay the lessor annually, in advance, for each acre or fraction thereof covered by this lease, beginning with the date hereof, the following rentals: 25 cents for the first year; 50 cents for the second, third, fourth, and fifth years, respectively; and $1 for the sixth and each succeeding year during the continuance of the lease, such rental for any year to be credited against the first royalties as they accrue under the lease during the year for which the rental was paid.

(c) Royalty. To pay the lessor a royalty of cents on every ton of 2,000 pounds of coal mined during the first 20 years succeeding the execution of this lease. Royalties shall be payable quarterly within 30 days from the expiration of the quarter in which the coal is mined.

(d) Minimum production. Beginning with the sixth year of the lease, *except* when operations are interrupted by strikes, the elements, or casualties not attributable to the lessee, or unless on application and showing made, operations shall be suspended when market conditions are such that the lessee cannot operate *except* at a loss or suspended for the other reasons specified in section 39 of the act, to mine coal each year and pay a royalty thereon to a value of $1 per acre or fraction thereof. Operations under this lease shall be continuous *except* in circumstances described or unless the lessee shall pay a royalty, less rent, on such minimum amount of the leased deposits, for one year in advance, in which case operations may be suspended for that year.

(e) Payments. To make rental payments to the manager of the appropriate land office, except that when this lease becomes productive the rentals and

royalties shall be paid to the appropriate regional mining supervisor of the United States Geological Survey, with whom all reports concerning operations under the lease shall be filed. All remittances to the manager of the land office shall be made payable to the Bureau of Land Management, those to the Geological Survey shall be made payable to the United States Geological Survey.

(f) Plats, reports, maps. At such times and in such form as the lessor may prescribe, to furnish a plat showing development work and improvements on the leased lands and a report with respect to stockholders, investment, depreciation, and costs. To furnish in such form as the lessor may prescribe, within 30 days from the expiration of each quarter a report covering such quarter, certified by the superintendent of the mine, or by such other agent having personal knowledge of the facts as may be designated by the lessee for such purpose, showing the amount of leased deposits mined during the quarter, the character and quality thereof, amount of its products and byproducts disposed of and price received therefor, and amount in storage or held for sale. To keep and prepare maps of the leased lands in accordance with the appropriate regulations.

(g) Weights. To determine accurately the weight or quantity and quality of all leased deposits mined, and to enter accurately the weight or quantity and quality thereof in due form in books to be kept and preserved by the lessee for such purposes.

(h) Inspection. To permit at all reasonable times (1) inspection by any duly authorized officer of the Department, of the leased premises and all surface and underground improvements, works, machinery, equipment, and all books and records pertaining to operations and surveys or investigations under this lease; and (2) the lessor to make copies of and extracts from any or all books and records pertaining to operations under this lease, if desired.

(i) Assignment. To file for approval in the appropriate land office within 90 days from the date of execution, any assignment or transfer made of this lease, whether by direct assignment, operating agreement, working or royalty interest, or otherwise. Such instrument will take effect the first day of the month following its approval by the Bureau of Land Management, or if the assignee requests, the first day of the month of approval. The showing required to be made with an assignment or transfer is set forth in the appropriate regulations.

(j) Equal Opportunity clause. During the performance of this contract the lessee agrees as follows:

(1) The lessee will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The lessee will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The lessee agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The lessee will, in all solicitations or advertisements for employees placed by or on behalf of the lessee, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

(3) The lessee will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the lessee's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The lessee will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the lessee's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the lessee may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The lessee will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The lessee will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however,* That in the event the lessee becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the lessee may request the United States to enter into such litigation to protect the interest of the United States.

(k) Land disposed of with coal deposits reserved to the United States. If the lands embraced herein have been or shall hereafter be disposed of under laws reserving to the United States the deposits of coal therein, to comply with all conditions as are or may hereafter be provided by the laws and regulations reserving such coal.

(l) Operations, wages, freedom of purchase. To comply with the appropriate operating regulations, to exercise reasonable diligence, skill, and care in the operations of the property, and to carry on all operations in accordance with approved methods and practices as provided in the operating regulations, having due regard for the prevention of injury to life, health or property, and of waste or damage to any water

ure the coal mined by each miner, to pay all wages due miners and employees, both above and below ground, at least twice each month in lawful money of the United States; to accord all miners and employees complete freedom of purchase; to restrict the workday to not exceeding eight hours in any one day for underground

workers, except in cases of emergency to employ any boy under the age of sixteen and no girl or woman, without regard to age, in any mine below the surface; unless the laws of the State otherwise provide, in which case the State laws control.

(m) Taxes. To pay when due, all taxes lawfully assessed and levied under the laws of the State or the United States upon improvements, output of mines, or other rights, property, or assets of the lessee.

(n) Overriding royalties. Not to create, by assignment or otherwise, an overriding royalty interest in excess of 50 percent of the rate of royalty first payable to the United States under this lease or an overriding royalty interest which when added to any other outstanding overriding royalty interest exceeds that percentage, excepting, that where an interest in the leasehold or in an operating agreement is assigned, the assignor may retain an overriding royalty interest in excess of the above limitation if he shows to the satisfaction of the Bureau of Land Management, that he has made substantial investments for improvements on the land covered by the assignment.

(o) Delivery of premises in case of forfeiture. In case of forfeiture of this lease, to deliver up to the lessor in good order and condition the land leased, including all buildings, and underground timbering and such other supports and structures as are necessary for the preservation of the mine or deposit.

Sec. 3. The lessor expressly reserves:

(a) Rights reserved. The right to permit for joint or several use such easements or rights-of-way, including easements in tunnels upon, through, or in the land leased, occupied, or used as may be necessary or appropriate to the working of the same or other lands containing the deposits described in the act, and the treatment and shipment of the products thereof by or under authority of the Government, its lessees or permittees, and for other public purposes.

(b) Disposition of surface. The right to lease, sell, or otherwise dispose of the surface of the leased lands under existing law or laws hereafter enacted, insofar as said surface is not necessary for the use of the lessee in the extraction and removal of the coal therein, or to dispose of any resource in such lands which will not unreasonably interfere with operations under this lease.

(c) Monopoly and fair prices. Full power and authority to promulgate and enforce all the provisions of section 30 of the act to insure the sale of the production of said leased lands to the United States and to the public at reasonable prices, to prevent monopoly, and to safeguard the public welfare.

(d) Readjustment of terms. The right reasonably to readjust and fix royalties payable hereunder and other terms and conditions at the end of 20 years from the date hereof and thereafter at the end of each succeeding 20-year period during the continuance of this lease unless otherwise provided by law at the time of the expiration of any such period. Unless the lessee files objections to the proposed terms or a relinquishment of the lease within 30 days after receipt of the notice of proposed terms for a 20-year period, he will be deemed to have agreed to such terms.

(e) Waiver of conditions. The right to waive any breach of the conditions contained herein, *except* the breach of such conditions as are required by the act, but any such waiver shall extend only to the particular breach so waived and shall not limit the rights of the lessor with respect to any future breach; nor shall the waiver of a particular cause of forfeiture prevent cancellation of this lease for any other cause, or for the same cause occurring at another time.

Sec. 4. *Relinquishment of lease.* Upon a satisfactory showing that the public interest will not be impaired, the lessee may surrender the entire lease or any legal subdivision thereof. A relinquishment *must* be filed in *duplicate* in the appropriate land office. Upon its acceptance it shall be effective as of the date it is filed, subject to the continued obligation of the lessee and his surety to make payment of all accrued rentals and royalties and to provide for the preservation of any mines or productive works or permanent improvements on the leased lands in accordance with the regulations and terms of the lease.

Sec. 5. *Protection of the surface, natural resources, and improvements.* The lessee agrees to take such reasonable steps as may be needed to prevent operations, including operation of operating plants on the leased premises, from unnecessarily: (1) causing or contributing to soil erosion or damaging any forage and timber growth on the leased lands or on Federal or non-Federal lands in the vicinity; (2) polluting air and water; (3) damaging crops, including forage, timber, or improvements of a surface owner; (4) damaging improvements whether owned by the United States or by its permittees or lessees; or (5) destroying, damaging, or removing fossils, historic or prehistoric ruins, or artifacts; and upon any partial or total relinquishment or the cancellation or expiration of this lease, or at any other time prior thereto when required and to the extent deemed necessary by the lessor to fill any sump holes, ditches, and other excavations, remove or cover all debris, and, so far as reasonably possible, restore the surface of the leased land and access roads to its former condition, including the removal of structures as and if required. The lessor may prescribe the steps to be taken and restoration to be made with respect to the leased lands and improvements thereon, whether or not owned by the United States.

Sec. 6. *Removal of equipment, etc., on termination of lease.* Upon termination of this lease, by surrender or forfeiture, the lessee shall have the privilege at any time within a period of 90 days thereafter of removing from the premises all machinery, equipment, tools and materials, *except* underground timbering placed by the lessee in or on the leased lands, which are necessary for the preservation of the mine. Any materials, tools, appliances, machinery, structures, and equipment, subject to removal as above provided, which are allowed to remain on the leased lands shall become the property of the lessor on expiration of the 90-day period or such extension thereof as may be granted because of adverse climatic conditions, but the lessee shall remove any or all of such property where so directed by the lessor.

Sec. 7. *Proceedings in case of default.* If the lessee shall not comply with any of the provisions of the act or the regulations thereunder or default in the performance or observance of any of the provisions of this lease, and such default shall continue for a period of 30 days after service of written notice thereof by the lessor, the lessor may institute appropriate proceedings in a court of competent jurisdiction for the forfeiture and cancellation of this lease as provided in section 31 of the act. If the lessee fails to take prompt and necessary steps to prevent loss or damage to the mine, property, or premises, or danger to the employees, the lessor may enter on the premises and take such measures as may be deemed necessary to prevent such loss or damage or to correct the dangerous or unsafe condition of the mine or works thereof, which shall be at the expense of the lessee. However, the lessee shall

not be held responsible for delays or casualties occasioned by causes beyond the lessee's control.

Sec. 8. *Heirs and successors in interest.* Each obligation hereunder shall extend to, and be binding upon, and every benefit hereof shall inure to, the heirs, executors, administrators, successors, or assigns of the respective parties hereto.

Sec. 9. *Unlawful interest.* No Member of, or Delegate to, Congress, or Resident Commissioner, after his election or appointment, or either before or after he has qualified and during his continuance in office, and no officer, agent, or employee of the Department of the Interior, except as provided in 43 CFR 7.4(a)(1), shall be admitted to any share or part in this lease or derive any benefit that may arise therefrom; and the provisions of section 3741 of the Revised Statutes of the United States, as amended (41 U.S.C. Sec. 22), and sections 431, 432, and 433, Title 18, U.S.C., relating to contracts, enter into and form a part of this lease so far as the same may be applicable.

THE UNITED STATES OF AMERICA

By _____
(Signing Officer)

_____
(Title)

_____
(Date)

WITNESS TO SIGNATURE OF LESSEE

_____ _____
(Signature of Lessee)

_____ _____
(Signature of Lessee)

_____ _____
(Signature of Lessee)

(If this lease is executed by a corporation, it must bear the corporate seal)

MINING

Mr. McGUIRE. This is the same kind of thing that is happening with other kinds of mining. Here we are talking about the mineral reservations and rights that are outstanding. This is mainly on the acquired lands. Here again these properties are owned by others who are now finding that it is feasible to develop. Again we find ourselves in the position of having to provide administrative actions to make it possible to carry on that activity.

This chart shows the number of mining claims we have to investigate and follow up to see what the miner plans to do, whether he has a valid claim and what measures he is going to take to protect the surface.

Mrs. HANSEN. Would you please send us some figures for the record on what adequate monitoring and administration of your leased lands should be?

Mr. McGUIRE. We will be glad to do that. We have made such estimates.

[The information follows:]

About $12 million in fiscal year 1975 is needed to adequately do the total job of minerals area management. This includes funds to finance the mineral resource segments of administrative studies and land use plans.

MINING REGULATIONS

Mr. McKAY. I have reviewed the mining regulations proposed by the Forest Service and have some questions about them. The regulations stipulate that appeal decisions will be final with the decision of the regional forester. Is this policy consistent with our court system? How can the prospector expect a fair decision if the decision on the appeal is not entered into by other prospectors, as well as Forest Service personnel?

Mr. McGUIR. I can understand that there might be apprehension by some people that the regulations, as proposed, are not adequate in their treatment of appeals. We have had a lot of mail from the public on this point. Unwarranted, unreasonable, or unfair decisions must be avoided. On the other hand, the levels of appeal should not be so numerous that an aggrieved party cannot get a reasonably prompt final administrative decision that he can then appeal to a court of law. We are looking at the problem to see what can be done to meet both requirements.

Mr. McKAY. The regulation provide that the Forest Service can require performance bonds of no less than $2,000, and there is nothing in the regulations about appeal of the amount of these bonds. How can you expect us to approve of the antonomous authority you are giving yourselves in these areas, with no input from the prospectors themselves.

Mr. McGUIRE. Although not explicitly stated in the regulations as proposed on December 19, 1973, the amount of the bond would be subject to appeal, just as any other decision of the forest supervisor would be. Any prospector can appeal the amount of the bond if he feels that it has been set higher than is required to guarantee reclamation. Also, we now think we can do without a mandatory minimum bond and in some cases without any bond at all.

Mrs. HANSEN. As you increase the mineral leases and mineral withdrawals, does your budget adequately provide for these increases and particularly for the supervision that is necessary?

Mr. MCGUIRE. We feel that it is not adequate and we would simply have to postpone some of the review and administration that would be necessary.

Mrs. HANSEN. Can you postpone it?

Mr. MCGUIRE. In some cases we can. In cases where we are dealing with the 1872 mining law, however, there is little we can do. We have proposed some new regulations which have not yet been put into final form. When they are put into final form—and we hope that will be very soon—I think we are going to have to come back and ask for additional funds to administer them.

Mrs. HANSEN. The criticism that has been directed against the Department of the Interior and against all the Government agencies, having anything to do with leasing of these natural resources, has been occasioned by inadequate supervision and administration?

This is the basic cause of 90 percent of the problems. The testimony has been overwhelming about the paucity of funds for this kind of supervision for the last 8 years. The budgets have never recognized that you are not going to adequately monitor your leasing activities without supervisory funds. It cannot be done, Mr. McGuire.

Mr. MCGUIRE. That is right. I fully agree with you.

Mrs. HANSEN. I don't think that within the bureaus themselves there has been this kind of betrayal of their country. But there has been a deliberate shortfall of funding to make the monitoring widespread, accurate, and careful.

Mr. MCKAY. How can you require that the prospectors be well versed in the damage done to fish populations, soil, water and vegetation by the kinds of things they are doing? Wouldn't that take an extensive knowledge of environmental impact that prospectors don't have?

Mr. MCGUIRE. Of course you are right, Mr. McKay. That is another point in the proposed regulations about which we have received complaints and on which a change will be necessary. The prospector cannot be expected to fully evaluate the effects his operations are having or may have on the environment. Forest Service specialists will have to assess those impacts and the prospector will not be required to state what those impacts are when he files his operating plan.

Mr. MCKAY. The regulations require that the prospector who has several claims that he is not working but holds must submit a notice of intent to use that claim again each year. Doesn't this just involve a lot of unnecessary paperwork? Wouldn't the original plan submitted at the outset of the claim work continue through the years regardless of whether the claim was in use? Won't this put a great burden on the small prospector who has a number of small claims to keep track of, as opposed to the big companies who can afford staffs to keep track of all these forms?

Mr. MCGUIRE. We certainly do not want to impose an unreasonable burden on the prospector by requiring him to file useless forms every year. On the other hand, we do believe that structures and equipment should be removed and the site cleaned up when the operations have finally ceased. So long as the prospector is doing the annual assessment work he is required to do under Federal law, that work would con-

stitute operations sufficient to establish that the prospector has not finally stopped work. Operations interrupted by winter and resumed the following year would not require the filing of a notice of intent to operate. Only where operations are interrupted and not resumed the following year would the notice be required.

Mr. McKay. I understand that the Forest Service recently collected information from the field as to funds and manpower required for handling the minerals area management and energy activities. What were the results of the inquiry?

Mr. McGuire. The inquiry indicates that about $12 million will be needed in fiscal year 1975 to adequately do our job in minerals area management. The manpower requirements are still under study. Some of the work can be accomplished by temporary employees during the field season and thus permanent additions to the manpower force are not necessary. In other cases, where special skills are called for, some full-time personnel additions are indicated. The problem is in determining how many of each, temporary and full time, are needed.

Mr. Wyatt. Before we adjourn I would like to personally thank Secretary Campbell for spending the day with us.

Mrs. Hansen. I would also like to thank Secretary Campbell.

Mr. Wyatt. I have had many dealings with Secretary Campbell over my years in Congress. I certainly have found him to be very responsive and understanding of the problems that I have had, particularly with the Forest Service and with other agencies of the Department. We certainly appreciate your being here all day, Mr. Secretary.

Mrs. Hansen. We do appreciate it, Mr. Secretary.

Mr. J. Campbell. Thank you, Madam Chairman. It has been a real delight for me to watch a very professional committee operate under a very professional chairman and very professional members. It has been a delight to come up and be with the Chief. We are going to miss you, Madam Chairman. It has been a great delight.

Mrs. Hansen. The committee is deeply disturbed by the funding priorities.

Mr. J. Campbell. I can understand that.

Mrs. Hansen. The committee will adjourn until tomorrow morning at 10 o'clock.

Tuesday, March 19, 1974.

MODULAR AIRBORNE FIRE FIGHTING SYSTEM COST-BENEFIT RATIOS

Mrs. Hansen. The committee will come to order.

You are requesting an increase of $159,000 for forest fire protection, for a total program of $36,518,000. You testified yesterday on your success relative to the modular airborne firefighting system. Do you want to give us a few more details on cost-benefit ratios?

Mr. Nelson. We feel that the modular airborne fire equipment will have some excellent payoff, Madam Chairman.

As I mentioned yesterday, we expect to have two units available by August of 1974 and the remaining units before the end of the calendar year. The project is going along as well as we can expect. I do not have any specific cost-benefit ratios on it. We can provide those, however.

Mrs. HANSEN. Please provide the information for the record because I think some of the members are interested in the success of the program.

[The information follows:]

The present concept or system was developed to fill a need for air tankers in disastrous fire situations when all commercial sources have been exhausted. The Air Force will be called on in these situations to employ modular airborne firefighting systems to lay down massive retardent lines for the protection of lives, property, and resources.

It is estimated the system would have been used on 22 major fires during the 10-year period 1961–70, with 110,000 acres saved from burning.

It is projected that over a 10-year period this system will result in a cost-effectiveness ratio of 15 to 1. The savings expected on 110,000 acres of forest lands are reduced firefighting costs of $9 million and resource damages averted of $15 million.

FOREST FIRE PROTECTION

Mrs. HANSEN. Under the same activity an increase of $1,847,000 is requested to provide for payment to the General Services Administration for the cost of space rental. It doesn't seem to me considering this increase that you are going to make much progress on modular airborne firefighting system.

Mr. NELSON. No, Madam Chairman.

We have a decrease of $1.4 million in the modular airborne firefighting system. But we were able to provide an increase of $210,000 for hazard reduction and fire prevention in support of the timber sale program.

Mr. MCGUIRE. There is one item here, Madam Chairman, that gives us a little concern. There is a decrease of $824,000 which reflects nonrecurrent timber salvage and rehabilitation work in the tussock moth infested areas. This work will be accomplished in 1974, but there is a possibility that the problem will continue in 1975.

Mrs. HANSEN. You won't know the result of this year's tussock moth invasion until 1975?

Mr. MCGUIRE. That is a possibility that we are not sure of yet. After we have completed our control program we will have a better idea.

I just wanted to mention the possibility that the problem may continue in 1975. This decrease in this year's budget proposal may be a problem if the tussock moth——

Mrs. HANSEN. Would a supplemental be foreseen in time so that you could continue with your timber salvage and rehabilitation?

Mr. MCGUIRE. It will be close. We would have the information probably by June.

Mrs. HANSEN. So this could be included in the final supplemental?

Mr. MCGUIRE. It is possible. I just wanted to alert you to that.

Mrs. HANSEN. I hope you will advise the committee as soon as you can on this matter.

Mr. MCGUIRE. We will do that.

NEW YORK TIMES

Mrs. HANSEN. There was an article in the New York Times, entitled: "Smokey Bear's Bosses Now Say Natural Fires Help The Forests."

By the way, there is a substantial amount of the world's forests used in the publication of newspapers.

Mr. McGUIRE. It takes quite a bit of newsprint to print the New York Times.

Mr. WYATT. Why don't we have inserted in the record, how many acres of trees it takes to run the Sunday edition, a typical Sunday edition of the New York Times.

Mr. McGUIRE. I am sure that information exists and we will provide it.

[The information follows:]

Sunday editions of the New York Times consumed about 3,500 tons of newsprint each issue in 1973 and 1974.

The forested acres that would have to be harvested in order to get the wood needed to make 3,500 tons of newsprint would be about 175 acres.

Mr. WYATT. I have seen it, Chief, and I think it would be interesting.

Mrs. HANSEN. I suppose that is Canadian pulp.

Mr. McGUIRE. Yes, ma'am.

FIRE AS A TOOL

Mrs. HANSEN. Please discuss the article on natural fires for us, Mr. McGuire.

Mr. McGUIRE. I think that article, and I don't recall it in detail, may have exaggerated a policy that we are trying out. In some areas, particularly in wilderness where there is a great deal of rock with intermingled vegetation, we can treat fire as a natural occurrence.

We use prescribed fire as a silviculture tool in many parts of the country. This does not diminish the basic problem of preventing man-caused fires. The prevention of such wild fires is the one area where the Smokey Bear program has been extremely helpful.

It is a program contributed by the Advertising Council. We get a great deal of contributed advertising time and space. Surveys have shown that Smokey Bear is one of the best known, probably the best known, advertising symbol in the United States.

Mrs. HANSEN. Mr. McGuire, I can understand fire as a tool for certain land management. However, in those areas where your lands border a State or the private sector if a fire is allowed to burn uncontrolled wouldn't you be liable for damages to your neighbors?

Mr. McGUIRE. Our policy in that case has not changed and we do not plan any changes.

Where there are private lands or non-Federal lands or other values in Federal ownership obviously we cannot let the fire burn. We do not intend to do so. There are some places, especially in high mountain areas, particularly in wilderness, where it is possible to let the fire burn itself out.

The values there are not the kind that would warrant much suppression expenditure and also there is some merit——

Mrs. HANSEN. I wanted to make sure this wasn't an open invitation for people in the country to go out and set a fire.

Mr. McGUIRE. It certainly is not.

Mrs. HANSEN. What kind of a weather season do you anticipate this year?

Mr. NELSON. Madam Chairman, we anticipate a fairly good weather season except in one section of the country. At present we have a drought underway in New Mexico and Arizona that is about a 100-

year drought. It looks as though they will have some severe fire problems early in the fire season in that part of the country.

Mrs. HANSEN. You certainly have enough water in the Northwest.

Mr. NELSON. Yes, Madam Chairman.

BICENTENNIAL AND FORESTRY CENTENNIAL

Mrs. HANSEN. You are requesting an increase of $1,719,000 for general and management activities for a total program of $26,460,000.

Included in this amount is a $20,000 item for a Bicentennial project. What does this involve?

Mr. DEINEMA. We have a publication that was last issued in 1968 that is going to be updated and reissued for the Bicentennial program. The name of it is, "Highlights in the History of Forest Conservation."

Mrs. HANSEN. Do you have a copy of that booklet that you could send the committee?

Mr. DEINEMA. Yes, ma'am, we would be pleased to.

Mrs. HANSEN. Is the $20,000 you are requesting the total amount that will be directed toward this effort?

Mr. DEINEMA. No, ma'am. We are putting some of our own money into this as well.

Mrs. HANSEN. Your own money? What do you mean?

Mr. DEINEMA. My choice of words wasn't quite right. We are asking for an additional $20,000 in order to distribute an additional 750,000 copies. We plan to print the first 250,000 copies out of funds that come through our regular appropriations in the general assessment group.

Mrs. HANSEN. Your general appropriated funds?

Mr. DEINEMA. Yes, ma'am.

Mrs. HANSEN. The $20,000 is in addition to this?

Mr. DEINEMA. Yes, ma'am.

Mrs. HANSEN. But your 250,000 copies has to be paid for out of an appropriation.

Mr. DEINEMA. Yes, ma'am.

Mrs. HANSEN. So basically you are going to have how much money?

Mr. DEINEMA. I don't have the exact figure as to what the first 250,000 copies will cost.

Mrs. HANSEN. Insert the information in the record.

Mr. DEINEMA. Yes, ma'am.

[The information follows:]

The total cost for preparing, publishing, and printing 1 million copies of a revised "Highlights in the History of Forest Conservation" is $48,000. The initial preparation and printing of the first 250,000 copies will cost an estimated $28,000. Printing of 750,000 additional copies for Bicentennial distribution will cost $20,000.

GSA RENTAL CHARGES

Mr. WYATT. Madam Chairman, would you yield at that point?

Mrs. HANSEN. Yes.

Mr. WYATT. For my information and also for the record, Chief, where you have a regional Forest Service office such as in Portland, in that office you conduct all sorts of Forest Service activity.

Now, is the rental that you are charged in Portland, for example, in your regional office broken down by activity in the Portland regional office?

Mr. McGuire. We have a formula that we use for general assessments pretty much based on the number of employees and dollars utilized in that office.

Mr. Wyatt. But in the Portland office part of your rental will be charged to this purpose in the Forest Service, part to this other purpose?

Mr. McGuire. Yes.

Mr. Wyatt. My question is in dividing the pie up, the total amount that you pay in Portland, for example, did the Forest Service divide that up, or did GSA divide it up among the purposes?

Mr. McGuire. The Forest Service divided it up.

Mr. Wyatt. And all you did with the GSA was to negotiate the overall figure then?

Mr. McGuire. Yes, sir.

Mrs. Hansen. GSA gave you the overall figure?

Mr. McGuire. Yes, and then we had to charge the various items in the budget in some proportion.

Mr. Wyatt. Was there any negotiation between you and GSA over the overall figures?

Mr. McGuire. The Department has been negotiating with GSA not only for the Forest Service but for all agencies. There was this problem of average square foot rentals in urban areas. I think we got the GSA people to see that there are different values in rural areas.

Mr. Wyatt. Mr. Secretary, were you involved in any of those negotiations?

Mr. Long. Yes, indeed. I was very upset with the original figures provided by GSA, particularly for our rural offices. Most of our offices are in rural areas. We felt the value for the foot usage in those areas is quite different from the urban areas, and they are of course. What we have managed so far is to get a reduction of 25 percent across the board out in the rural areas with a further understanding that if this still is inconsistent with prevailing rates that might be out there, that GSA will negotiate to more adequately balance out what is being charged generally for office space.

Mrs. Hansen. The thing, Mr. Secretary, that bothers me is I could see that this could be used in a rural area as a pattern device to raise the rents of everybody.

Mr. Long. That is right, and we were, I think, justifiably concerned over that.

Mr. Wyatt. Are you generally satisfied with the rates that were finally settled on?

Mr. Long. They are still being negotiated. We have just come to this position in recent days. We have one further thing that we can do. Failing to come to an agreement with GSA on what they may do, we may have the further option to negotiate on our own. We really have created the flexibility that we wished, so I would say yes to that.

Mr. Wyatt. Are these rental figures used in the budget a little high?

Mr. Long. They conceivably could be.

Mrs. Hansen. Supposing the committee reduces your requests for GSA space costs?

Mr. LONG. What we would like to do is find out where we are on this since we are just in this negotiation stage.

Mrs. HANSEN. Should we give you the opportunity to do some negotiating?

Mr. LONG. We do want to have that opportunity and I am sure we will do so. I don't know what the dollar figure should be. It probably won't be substantially lower, but certainly some.

Mr. WYATT. It would certainly help us if we can get any direction from you prior to markup.

Mr. LONG. Yes, I think the Department will attempt to provide this for all——

Mr. EVANS. Would the gentleman yield?

Do you have a policy now that directs people out in the field to compare the rent they are being charged to other rent charged in the same area?

Mr. LONG. We haven't specifically asked individual agencies to do this. The administration within the Department is assessing it, analyzing it, with their help, so we have followed a procedural administrative pattern on this. Where we found them to be substantially out of line in our judgment, then we have brought these back in to discuss with GSA. That has been the pattern of negotiation.

Mr. EVANS. Wouldn't you be able to do that at all places where you have the reports from the field on what comparable rents were from your people?

Mr. LONG. That is right and we do.

Mr. MCGUIRE. In fact, using those reports we have been able to obtain a 13 percent reduction over the original GSA figures.

Mrs. HANSEN. Did you obtain that before you prepared your budget?

Mr. MCGUIRE. Yes; the budget reflects the 13-percent reduction.

LAND CLASSIFICATION

Mrs. HANSEN. How much progress have you made in your land classification program?

Mr. NELSON. In land classification, I think we can report some excellent successes.

Mrs. HANSEN. Give us some examples.

Mr. NELSON. Items (a) and (b) are primarily involved with the land and water conservation fund activity and we have made substantial purchases over the years under L. & W.C.F.

Mrs. HANSEN. You could not have been purchasing too much land considering the allocations that have been given the Forest Service. I think the Forest Service has been shortchanged in these programs through the years.

Mr. NELSON. We think that there has been some shortchanging. We appreciate the efforts of the committee.

Mrs. HANSEN. I think your visitations show a larger percentage increase than agencies which have been given the largest percentage of the land and water conservation fund.

Mr. MCGUIRE. Madam Chairman, this particular money is used for a variety of purposes. There are many instances where Indian claims are involved with national forest lands and studies have to be made. There are proposals for national recreation areas or for other special areas such as the Hell's Canyon-Snake River proposal.

Mrs. HANSEN. How much of that land have you purchased already?

Mr. MCGUIRE. We bought all of the land for which you provided money. The Alaskan Native selections are continuing. This requires special studies and so on. It is not just the recreation lands that are involved as mentioned by Dr. Nelson.

SPIRIT LAKE LAND EXCHANGE

Mrs. HANSEN. As you are well aware, the committee has been very interested in your land management pattern so that you eliminate checkerboarding wherever possible. What is the status of the land exchange at Spirit Lake?

Mr. MCROREY. You will recall from prior explanations to the committee, that a phased program on the basis of about seven exchanges would be used to complete the work in that area. We are now coming down to the last one.

Mrs. HANSEN. When will they be completed?

Mr. MCROREY. Hopefully we will complete the program this coming year in the Spirit Lake area.

Mrs. HANSEN. Is that the railroad lands?

Mr. MCROREY. Yes, they involve railroad grant lands.

LAND EXCHANGES

Mrs. HANSEN. In fiscal year 1975 the land exchange program will involve the examination and appraisal of 200,000 acres involving 250 proposed exchanges. How many exchanges actually occur per year?

Mr. NELSON. Out of the 250 proposed exchanges, it is expected about 200 cases will be approved during the fiscal year, involving about 160,000 acres, Madam Chairman.

Mrs. HANSEN. Isn't this improving your management pattern?

Mr. NELSON. Yes, ma'am. It is markedly improving our management pattern.

Mrs. HANSEN. It also should improve the rights-of-way problem in the access to your lands.

Mr. MCGUIRE. That is correct.

LAND STATUS RECORDS

Mrs. HANSEN. What is the present status of your land status program?

Mr. NELSON. Madam Chairman, we have our land status information nearly brought up to date. We have 12,862 mapping units completed out of a total of 15,561 at the end of fiscal 1972. We will essentially be at the end of this program at the end of fiscal 1975.

LAND LINE LOCATION

Mrs. HANSEN. You say you have an additional 210,900 corners not on the property lines but needed to control the property corners. What kind of a backlog is that?

Mr. NELSON. I think, Madam Chairman, the best answer to that is that we had approximately a 200-year backlog on our corners and lines. We were able to develop a laser method of determining lines

which is very helpful and it probably has reduced our backlog down to about 100 years at the current level.

Mrs. HANSEN. When do you expect to get the remaining 100 years' backlog complete?

Mr. NELSON. We are working on it, Madam Chairman.

Mr. MCROREY. At the present funding it will take the 100 years, Madam Chairman.

Mrs. HANSEN. It looks to me like you are not moving much faster than the Bureau of Land Management, and they are far behind.

GEOMETRONICS PROGRAM

Do you want to explain your geometronics program.

Mr. NELSON. Yes, ma'am.

Geometronics is just really a fancy word for some up to date and modern mapping techniques. We have been developing these techniques and are using them in our resources inventory and our general management mapping practices, Madam Chairman.

We have been able to develop and use some of this equipment so that our output of necessary maps has increased.

HELICOPTERS

Mrs. HANSEN. You are requesting $4,275,000 for fighting forest fires. What are your helicopter requirements for the upcoming fire season?

Mr. NELSON. We calculate that it will take about 90 helicopters under contract to meet our average requirements during the 1974 fire season. We estimate that this will cost $1,569,000. We currently plan to spend $315,000 in regular funds for this availability and the additional expenses from firefighting funds as the committee has agreed to in past years.

Mrs. HANSEN. Don't you have to keep your helicopters on a standby contract?

Mr. NELSON. Yes, ma'am.

Mrs. HANSEN. Otherwise you couldn't obtain them at the time you need them.

Mr. NELSON. That is correct.

Mrs. HANSEN. What additional cost does that entail?

Mr. NELSON. We do not have figures readily available. We will furnish those for the record, ma'am.

[The information follows:]

During the 1973 fire season, the Forest Service paid a total of $1,739,318 to helicopter contractors to have their helicopters in position and ready for use in firefighting. A small proportion of this cost covered contractual guarantees for minimum flying hours which were "flown off." The bulk, however, was paid to insure the availability of the helicopters in position. In these cases, additional charges were made to cover the actual flying hours in addition to the "availability" payments. The estimated cost for helicopter standby for the 1974 fire season is $1,569,000.

AIR TANKER SERVICE

Mrs. HANSEN. Are you able to secure adequate air tanker service for your firefighting needs, and do you have to keep them on standby contracts?

Mr. NELSON. Yes, ma'am. Action by your committee 7 years ago authorized $1,016,000 for air tankers. A revised current availability rate structure based on improved business management principles and increased costs for contract services has raised the cost of this air tanker availability to approximately $1.4 million. Again, we propose to spend the $1,016,000 of regular funds for this availability and the additional expenses from the fighting forest fires fund, as the committee has agreed we could do for helicopter availability.

Mrs. HANSEN. What portion of that cost is the standby charge?

Mr. MCROREY. $1.4 million.

Mr. NELSON. It is all standby.

FOREST INSECT AND DISEASE CONTROL

Mrs. HANSEN. You are requesting an increase of $57,000 for forest insect and disease control, for a total program of $11,276,000. It should be noted that the level shown for 1974 does not include the supplemental we considered last week for this activity. If Congress approves this supplemental, your 1975 program will actually show a significant decrease.

What effect will this decrease have on your program?

Mr. THORNTON. It is difficult to project this far ahead what the season will be in 1975. It is true that with the supplemental we testified about last week there would be about $6.2 million above this regular program level. The conditions for pest development are continuing high. We anticipate next year there will be some continuation of the current problems in mountain pine beetle, southern pine beetle, and so forth.

Our 1975 budget actually shows a $250,000 decrease as far as the regular program goes.

Mrs. HANSEN. Supposing that you find the necessity to continue some of this work? I have received many letters from Members of Congress on the southern pine beetle and I am sure Mr. McDade will want to continue with the gypsy moth program in the event that it is necessary. So what impact is that going to have?

Mr. THORNTON. Madam Chairman, one of the problems we have with the pest management program is the fact that it is seasonal in nature. The bugs don't respect the end of a fiscal year. There is a problem of continuity in programs because of the way the funds are appropriated.

One part of that problem is that some of the State governments are unable to make their plans until they are assured of the matching dollars from the Federal side. We cooperate with 38 States in this program.

Mrs. HANSEN. Do you want to insert a list of the States in the record and indicate their participation?

Mr. THORNTON. We will be glad to do that.

[The information follows:]

States participating in the cooperative forest pest action program

[Fiscal year 1974]

State:	*Amount*
Alabama	$50,232
Arkansas	22,556
California	18,900
Colorado	18,200
Florida	33,488
Georgia	21,411
Hawaii	15,000
Idaho	13,104
Indiana	11,648
Kansas	5,824
Kentucky	21,000
Louisiana	26,675
Maine	59,696
Michigan	38,584
Minnesota	31,668
Mississippi	45,864
Missouri	22,568
Montana	16,100
Nebraska	5,824
New Hampshire	15,000
New Jersey	15,000
New Mexico	8,010
New York	29,120
North Carolina	44,408
Ohio	15,288
Oregon	33,475
Pennsylvania	48,776
Rhode Island	4,368
South Carolina	29,848
South Dakota	5,096
Tennessee	21,000
Texas	45,136
Vermont	17,472
Virginia	42,224
Washington	34,125
West Virginia	33,488
Wisconsin	47,320
Wyoming	5,096
Total	972,592

FLEXIBILITY OF FUNDS

Mr. McGuire. Madam Chairman, this problem, and we discuss this almost every year, is similar to the problem with suppressing forest fires. There we have the opportunity of putting out the fire and then coming up with a supplemental request.

However, in the case of insect and disease control we do not have that opportunity so we must continually reprogram to meet the current needs.

Mrs. Hansen. Isn't this very comparable to the problem of forest fire rehabilitation funds? You should have the flexibility which would allow you to reprogram funds and then request a supplemental for the actual costs.

Do you require additional legislative authority to allow you to have this flexibility?

Mr. McGuire. We have discussed this in the past. Mr. McDade I know is very interested in this problem. The alternatives are to reprogram the appropriated funds until we run out and then come up with a supplemental request.

Mrs. Hansen. The committee finds that the only reprograming funds that are available are the congressional add-ons.

Mr. McGuire. In any event, we may, in some years, quickly run out of appropriated funds and then we have the problem of what to do until we get the supplemental appropriation. The alternative, as we have discussed in previous hearings, is to have authority to cope with the problem and then come up and ask for funds to repay wherever the borrowings take place like we do with fire.

Mr. McDade. Our report drew the Forest Service's attention to the transferability provisions. I urged that transfers be made where necessary and the funding replenished through supplementals because of the timing.

Do you recollect that?

Mr. McGuire. Yes, I recollect that.

Mr. McDade. Does that not assist you?

Mr. McGuire. It doesn't fully meet the major problems that we run into. It is somewhat like the situation we have when we have a big fire year. There just isn't enough money available to borrow from, so——

Mr. McDade. It was our intention, and I think in fact the record would even demonstrate that there was a colloquy that we ought to treat it rather like a forest fire.

Mr. McGuire. That is what I was reminding you of, that we have been over this ground in previous hearings and we still have not found the ideal solution.

Mr. Thornton. One solution might be if we could have the funds available until expended.

For example, in the supplemental that we talked about last week——

Mrs. Hansen. This is correct but if that language is not authorized it would be subject to a point of order. We may be faced with that challenge and that is one of our difficulties. I would hope your legal counsel in the Department would develop some kind of an answer that will alleviate this situation.

The same thing is true with fire rehabilitation, because there are thousands of acres that should be rehabilitated right after the fire, as you yourself testified, and as the Bureau of Land Management testified.

Mr. McGuire. That is the problem. We can talk to our attorneys and lay out the alternatives for you if you would like to have that.

Mrs. Hansen. If you please, because if there is some way that we could have the necessary language that would not be considered legislation on an appropriation bill it would be of great assistance. The other alternative is an amendment to your basic authorization.

Mr. McDade. It was felt, and there were discussions between the staff of the Appropriations Committee and the budget officers at that time down at the Forest Service, that transferability provisions might see you through. If there are other alternatives I wish you would let us know about them if that is not working satisfactorily. We thought that would allow you the necessary flexibility but if it does not we would like to know.

Mr. McGuire. It has worked in many cases but recently we have had so many of these emergency situations.

We will give you an analysis of the possibilities.

Mr. McDade. Very good.

[The information follows:]

CHANGES IN FUNDING INSECT AND DISEASE CONTROL PROGRAM

Insect and disease development has little regard for the appropriation process, with populations typically bridging 2 fiscal years. Most suppression efforts must be initially timed to coincide with the proper stage of a pest's life cycle or the efforts will fail. Because these suppression projects cannot be arbitrarily initiated, their overall effectiveness is greatly decreased, since the current fiscal process usually does not provide sufficient time to carry them through to a successful completion.

Under normal conditions, suppression efforts for most pests cannot be started until mid-May or June, with the actual treatment then extending until late June or later. The pest control evaluations and monitoring which follow treatment must necessarily be conducted in the next fiscal year. If weather conditions are cool or rainy, projects must be delayed. Suppression efforts themselves may then extend into the next fiscal year.

Control work for bark beetles, such as the southern pine beetle and mountain pine beetle, and many of the western pests, normally extends into August, yet funds available for the fiscal year involved end on June 30.

The problem is compounded by the fact that a number of the cooperating States are understandably reluctant to staff up for projects that must be curtailed abruptly, causing layoffs only after 4 to 6 weeks since control moneys can no longer be used. State requirements generally include documented advice of fund availability.

At the committee's request, we are considering with our General Counsel the alternatives available that could provide the necessary language for legislation authorizing the use of forest pest control funds on a program year basis. Since a program year normally spans 2 fiscal years, to be effective such language would authorize the use of funds over several fiscal years or for the period involved in the project. We will also explore the possibilities of legislation that would authorize the emergency use of pest control funds as is done in the case of fighting forest fires. We will keep the committee advised of our findings.

Mr. Evans. Would it not be more effective if these funds were appropriated on a no-year basis, or in a manner analogous to fire control funds?

Mr. McGuire. Yes, sir, since insect and disease development has little regard for the appropriation-of-funds process.

WEATHER FACTOR ON FIRES

Mrs. Hansen. Is weather the major controlling factor on the emergency problems you have within the Forest Service?

Mr. Thornton. Yes, that is the major problem.

For example, a cold spring will delay the impact and in the southern pine beetle case the warm winter will aggravate the problem.

FOREST RESEARCH

Mr. Long. Madam Chairman, we feel, speaking of the southern pine beetle, that a lot of research is yet to be done here. This is a big job. I think the Chief has probably already mentioned to you that we are going to be coming back shortly with a fairly large undertaking well coordinated with the areas involved and we will be happy to present some of the details.

Mrs. HANSEN. You need flexibility so that you don't have to stop your research and wait until the appropriation bill is enacted, because your insects can increase during that time and you have no way to cope with it.

COOPERATIVE LAW ENFORCEMENT

You are requesting a decrease of $958,000 for cooperative law enforcement. Why do you estimate an unobligated balance of $2,128,000 at the end of fiscal year 1974?

Mr. DEINEMA. That is the carryover from the previous year. On the program level we actually will have an increase of $290,000 for fiscal year 1975.

Mrs. HANSEN. To what do you attribute that carryover?

Mr. DEINEMA. It takes time to work out the agreements. We started with an initial $2.5 million and each year we carried part of that over. This is the balance remaining.

Mrs. HANSEN. Four hundred counties in 40 States are eligible to participate. How many counties do you have participating and in how many States?

Mr. DEINEMA. As of today, we have 325 agreements.

Mrs. HANSEN. Is that 325 counties?

Mr. DEINEMA. Most of them are with counties, but a few are with other State or local law enforcement agencies, such as State highway patrol or city police departments.

Mrs. HANSEN. How many States?

Mr. DEINEMA. They are in 36 States.

FOREST RESEARCH

Mrs. HANSEN. Please insert justification pages 68 through 89 in the record at this point.

[The pages follow:]

Projects (12) - (21)

GEOGRAPHIC BREAKDOWN OF APPROPRIATION

Forest Research

State	Headquarters or Project Location	FY 1974 estimate	FY 1975 estimate	Change
		(in thousands)		
Alabama	Auburn	$400	$414	$14
	Tuskegee	27	28	1
Alaska	Fairbanks	505	421	-84
	Juneau	677	604	-73
Arizona	Flagstaff	840	871	31
	Tempe	925	960	35
	Tucson	278	287	9
Arkansas	Fayetteville	267	277	10
California	Arcata	270	281	11
	Berkeley	2,704	2,769	65
	Fresno	377	341	-36
	Redding	162	169	7
	Riverside	2,700	2,764	64
Colorado	Fort Collins	1,950	2,025	75
Connecticut	Hamden	1,111	1,169	58
District of Columbia	Washington	484	502	18
Florida	Lehigh Acres	161	168	7
	Marianna	201	208	7
	Olustee	689	718	29
Georgia	Athens (including Atlanta)	1,659	1,723	64
	Macon	1,259	1,297	38
Hawaii	Honolulu	426	441	15
Idaho	Boise	436	451	15
	Moscow	1,194	1,235	41
Illinois	Carbondale	902	806	-96
Kentucky	Berea	406	369	-37
Louisiana	Pineville	2,066	2,139	73
	New Orleans	949	990	41
Maine	Orono	324	281	-43
Maryland	Beltsville	302	314	12
Massachusetts	Amherst	361	374	13
Michigan	East Lansing (including Cadillac)	612	634	22
	Houghton	437	450	13
	Marquette	270	281	11
Minnesota	Duluth	315	323	8
	Grand Rapids	358	373	15
	St. Paul	1,374	1,334	-40
Mississippi	Gulfport	1,522	1,593	71
	Oxford	314	325	11
	State College	217	225	8
	Stoneville	925	856	-69

Projects (12) - (21)

GEOGRAPHIC BREAKDOWN OF APPROPRIATION

Forest Research -- continued

State	Headquarters or Project Location	FY 1974 estimate	FY 1975 estimate	Change
		(in thousands)		
Missouri	Columbia	$281	$292	$11
Montana	Bozeman	643	658	15
	Missoula	3,193	3,285	92
Nebraska	Lincoln	244	255	11
Nevada	Reno	471	163	-308
New Hampshire	Durham	942	875	-67
New Jersey	Pennington	394	410	16
New Mexico	Albuquerque	353	360	7
New York	Syracuse	88	92	4
North Carolina	Asheville	948	989	41
	Franklin	262	272	10
	Research Triangle (Raleigh-Durham)	834	872	38
North Dakota	Bottineau	241	251	10
Ohio	Delaware (including Columbus)	1,464	1,525	61
Oregon	Bend	308	316	8
	Corvallis	2,768	2,695	-73
	LaGrande	551	511	-40
	Portland	1,616	1,677	61
Pennsylvania	Upper Darby	599	625	26
	Warren	375	390	15
Puerto Rico	Rio Piedras	278	288	10
South Carolina	Charleston	291	302	11
South Dakota	Rapid City	341	354	13
Tennessee	Sewanee	213	221	8
Texas	Nacogdoches	307	319	12
Utah	Logan	778	802	24
	Ogden	550	576	26
	Provo	385	403	18
Vermont	Burlington	476	494	18
Virginia	Blacksburg	90	93	3
Washington	Olympia	477	391	-86
	Seattle	731	701	-30
	Wenatchee	334	347	13
West Virginia	Morgantown	347	359	12
	Parsons	363	377	14
	Princeton	1,157	1,191	34
Wisconsin	LaCrosse	118	122	4
	Madison	7,530	7,685	155
	Rhinelander	721	749	28
Wyoming	Laramie	398	408	10
Total		63,816	64,485	669

Project (12)

TREES AND TIMBER MANAGEMENT RESEARCH

1973	$12,838,000
1974	13,118,000
1975	13,602,000
Increase	+484,000

An increase of $484,000 is proposed as follows:

(1) To provide for the full year costs of the pay increase effective in fiscal year 1974, $127,000.

(2) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $357,000.

Timber management research develops scientific knowledge of forest ecosystems with trees as a principal component and develops methods for culture of trees and management of forests for production of timber and for modification and improvement of man's environment. This includes:

(1) Development of cultural methods for timber and timber-related crops.

(2) Techniques of timber measurement.

(3) Techniques of forest management planning.

(4) Techniques for environmental tree culture.

(5) Research in forest genetics.

The core of this research is determining the proper culture for over a hundred different commercial timber species based on a thorough knowledge of their ecology and growth requirements. This research determines how the Nation's needs for timber and other forest benefits can be met on Federal, State, and private lands through measures such as brush control, forest establishment, protection from animals, stand culture, soil and site improvement, and reestablishment of tree species valuable for timber or environmental purposes.

Research is being accelerated on intensive culture of important timber types to help meet the Nation's growing needs for domestic forest products.

Timber management research also provides forest managers with reliable information on growth and yield of forests and on the influence of cultural practices on yield and quality of the stand.

This program includes research on methods of producing timber-related forest crops such as gum naval stores, maple sap, Christmas trees, and other income-producing natural products from forests.

Forest genetics research includes scientific study of variation and inheritance in trees and development of techniques for producing strains or hybrids which are superior in growth rate, wood quality, resistance to insects, diseases, and other damaging factors, or special value for use in environmental improvement.

Examples of Recent Accomplishments

Silviculture handbook summarizes options for all major forest types in the United States. In response to the surge of national interest in forest management, a handbook has been prepared synthesizing research information regarding biologically feasible systems of forest culture for harvesting, renewing, and maintaining 37 major forest types in the Nation. The handbook, entitled "Silvicultural Systems for the Major Forest Types of the United States," presents systems appropriate for intensive timber production as well as systems for combining timber production with other forest uses. The book also describes limitations in the use of certain

systems imposed by species requirements, natural hazards, and the makeup of existing stands. It should help dispel controversies about silvicultural options and their consequences in the major forest types of the United States. The handbook is the product of continuing research in a series of silvicultural projects that have responsibility for developing and improving the cultural options for multiple use management of the major timber types of the United States.

Genetically improved trees are increasing timber supplies. Past efforts to increase the Nation's timber supplies by intensive management of plantations were seriously hampered by the lack of fast-growing and disease-resistant planting stock. Genetics research in the South has made rapid progress in developing high yielding disease-resistant pine strains and fast-growing commercial hardwood species. Improved strains of both southern pines and cottonwood which will outproduce unimproved strains by 20 to 40 percent are now becoming available for certain areas and are being distributed to nurseries for mass production. In the Pacific Northwest, genetic selection research has led to an improvement in rate of seedling height growth of Douglas-fir and an increase in rate of volume growth compared to unselected seedlings. Even greater gains are expected when second generation genetically improved Douglas-fir planting stock becomes available in the future.

Monograph on true firs covers taxonomy and distribution of these species. Although true firs are among the most important coniferous trees in the world, their taxonomy has long been in a state of confusion because of their great variability. The botanical relationships among the 39 species and 23 varieties have now been clarified in a comprehensive investigation conducted by members of the staff of the National Taiwan University in cooperation with the U. S. Forest Service. Results of this research are given in a fully illustrated monograph which provides detailed descriptions.

Tree scientists the world over will find this book of immediate use in the identification of the true firs, in hybridization studies, and in selecting the proper species to be planted for forest production and other uses.

Book (420 pages) describes research natural areas in Oregon and Washington. A guide to the use of Research Natural Areas (areas of essentially virgin vegetation) on Federal lands in Oregon and Washington has been compiled to facilitate scientific study. The guide describes the physical and biological features of the tracts reserved for this purpose.

Summaries for each area include a brief ecological description at the time of establishment. The book will be a key reference for scientists and educators who study the biota and ecological processes of selected natural environments. The Forest Service now has a system of 113 Research Natural Areas totaling 123,681 acres.

Guides established for increasing yields from upland oak forests. Long-term studies in thinned stands of upland oaks in the Central States have provided growth and yield estimates for a wide range of stand conditions, ages, site qualities, and stand densities.

Stands in which density was regulated produced one-third to one-fourth more timber than fully stocked stands that were not managed. This information will considerably improve the accuracy of estimates of allowable cut on managed forest properties.

Small openings improve wildlife habitat in northern hardwoods. Dense stands of northern hardwoods do not produce much food and cover for wildlife, particularly game animals. Research has shown how small openings throughout these stands will provide an abundance and variety of herbs, grasses, and shrubs that supply vital nutrition for game animals and desirable nesting and brood-rearing sites for game birds. Careful location of openings in areas of poor tree growth, such as on shallow soils, in frost pockets, and in areas of poor or excessive drainage, can prolong their value for wildlife by delaying return of tree cover.

Project (13)

FOREST WATERSHED MANAGEMENT RESEARCH

1973	$6,726,000
1974	7,710,000
1975	7,716,000
Increase	+6,000

A net increase of $6,000 is proposed as follows:

(1) Increase of $79,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(2) Increase of $177,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(3) Decrease of $250,000 is based on the discontinuation of research for which funding was increased in fiscal year 1974.

Watershed management research is conducted to:

(1) Develop methods and techniques for managing forest and forest-related watersheds to protect and improve soil and water quality, improve the yield and timing of water flows, and restore and rehabilitate degraded landscapes.

(2) Develop adequate means of protecting soil and water resources, especially on fragile or unstable soils, while forest and forest-related lands are being managed for other products and services.

(3) Provide basic knowledge of vegetation, soil, water, and atmospheric relationships in wildland and related forest areas.

Examples of Recent Accomplishments

Initiating research in the Surface Environment and Mining Program (SEAM). SEAM is a research, development and applications program designed to help meet the Nation's energy crisis and produce needed minerals in harmony with a quality environment and other natural resource values. Plans are complete for initiating studies to:

(1) Determine and evaluate the environmental impacts of mining and related activities in the western United States.

(2) Develop alternative engineering-reclamation systems to prevent or reduce future environmental damage.

(3) Develop alternative land treatments designed to return or transform disturbed areas to beneficial use.

These studies are scheduled to take place in the Interior West, including Wyoming, Montana, the Dakotas, New Mexico, Utah, and other States.

Properly controlled applications of forest chemicals will not significantly impact stream organisms. Insecticides, herbicides, and fertilizers are important chemical tools in the intensive management of forests. Research shows that overland flow and leaching do not contribute significant quantities of these chemicals to forest streams. Unintentional direct application to surface waters is the principal means of entry of chemicals to forest streams. Therefore, stream organisms can be protected from heavy exposure to chemicals by using extreme caution in necessary application of chemicals to the forest.

Surface mining may cause chemical pollution of streams in areas where acid is no problem. A four-year study of the chemical quality of water in watersheds in Kentucky showed that some rocks when exposed to weathering and erosion following mining caused water pollution. Increased concentrations of sulfate, calcium, and magnesium were noted in water samples taken from recently mined watersheds. Information on the amounts and kinds of chemicals added to streams will be useful for developing methods to control chemical pollution of streams.

Fertilizers increase black locust growth on acid surface-mine spoils. Black locust is commonly planted to control erosion on acid surface-mine spoils. Seedlings survive, but height growth is often quite slow, thereby reducing the development of effective tree cover for soil-site protection. Research showed that black locust on acid surface-mine sites should be fertilized with nitrogen and phosphorous to achieve rapid site protection.

Erosion from construction and grooming of ski slopes can be minimized. It is desirable to revegetate promptly forest areas cleared for use as ski runs to prevent erosion and to restore the balance of soil-plant nutrient cycles. Studies conducted near Wenatchee, Washington, revealed that low soil fertility was one factor limiting success of revegetation. Also, covering the seed fertilizer was at least as important as the choice of species for revegetation. Methods developed in these studies will serve as guides to successful revegetation of ski slopes in other places.

New methods to establish vegetative cover on western surface-mined lands provide rapid cover. Tests on coal spoil banks in Montana and on cobalt and phosphate surface-mined areas in Idaho, show that native and introduced species can provide rapid vegetative cover for disturbed sites. The key to this success was chemical analysis of the spoil material followed by application of counteractive soil amendments and planting of tolerant plant species.

Project (14)

WILDLIFE, RANGE, AND FISH HABITAT RESEARCH

1973	$4,656,000
1974	4,482,000
1975	3,860,000
Decrease	-622,000

A net decrease of $622,000 is proposed as follows:

(1) Increase of $37,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(2) Increase of $116,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(3) Decrease of $775,000 is based on the discontinuation of research for which funding was increased in fiscal year 1974.

The Nation's forests, ranges, and associated waters provide a home for millions of livestock, game animals, and countless numbers of other forms of fish and wildlife. These populations provide recreation, food, fiber, and income for a broad spectrum of the Nation's population. Mammals, birds, and fish vary widely in social and ecological requirements, but the basic ecological processes are common to all species; all are products of the habitat.

Land management decisions must be made with full knowledge of the probable impact upon habitat productivity. Where competitive uses exist and where habitat values are low, more effective management systems are essential for rapid improvement in the years ahead.

Wildlife, range, and fish habitat research is conducted to maintain and increase the diversity and productivity of fish and wildlife, as well as domestic livestock populations by:

(1) Defining the habitat requirements of the many species of fish, wildlife, and livestock.

(2) Assessing the impact of alternative land-use practices upon habitat values.

(3) Generating strategies to optimize the habitat values of forests and ranges.

Examples of Recent Accomplishments

Chemical control of sagebrush in Wyoming does not disrupt the normal behavior and activities of elk at calving time. Sagebrush control, an accepted range improvement practice, has been successfully applied to several million acres of western rangeland. Since, in some areas, elk calve on sagebrush ranges, it was essential to know if the practice was compatible with maintenance of habitat quality for elk at calving time. A 3-year research study indicates that sagebrush control has little or no effect on elk calving behavior and feeding habits.

Wildlife can enhance the quality of urban environments. Researchers at Amherst, Massachusetts, have formed guidelines for a staged program of urban landscape development that provides the essential elements of wildlife habitat--food, water, cover, and nesting areas--while also meeting the other esthetic goals of landscaping. The guides provide a management plan for the homeowner, including how, what, and when to plant.

Principles for managing livestock on rangeland are established. Numerous research studies have defined the proportion of range forage that can be utilized without depleting the soil or vegetation. In a wide array of ecological conditions, research has shown the season when forage can be utilized with the least impact

upon the plants. Grazing systems have been developed in a spectrum of ecological regions that integrate intensity and season-of-use to give optimum economic return and sustained yield.

Precommercial thinning of direct-seeded slash pine stands increases the yield of understory vegetation. Direct-seeded southern pines may result in stands so dense the production of usable wood is reduced. Forage production is also diminished, especially if prescribed burning is curtailed. Research in Louisiana shows that precommercial thinning is a practice that complements both wood and forage production.

Project (15)

FOREST RECREATION RESEARCH

1973	$1,374,000
1974	1,326,000
1975	1,222,000
Decrease	-104,000

A net decrease of $104,000 is proposed as follows:

(1) An increase of $12,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(2) An increase of $34,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(3) A decrease of $150,000 is based on the discontinuation of research for which funding was increased in fiscal year 1974.

Growing public demands for forest-based recreation opportunities has generated new needs for both public and private developments, new forest management requirements, new conflicts among users and resource managers, and new threats to both the quality of recreational experiences and the health of the natural resource base. Conflicts and environmental impacts faced by today's resource managers were quite rare only 25 years ago.

Forest recreation research is being conducted to:

(1) Develop new and better resource management practices which enhance amenity values.

(2) Understand man's need for, and use of, forests, open space, and parks as environments for living, working, and recreation.

(3) Analyze and understand the interactions between people and forests, social and economic factors underlying outdoor leisure activities, esthetic quality of forest landscapes and environmental situations, trends in recreation uses, use and management of wilderness areas, and alternative management strategies for meeting the public demands.

(4) Identify interrelations among recreation, environmental amenities, and other uses of forests and open spaces--and find better ways of coordinating these uses.

The program includes research on planning and management of forest-based recreation opportunities, landscape scenery, preservation and use of wilderness resources, and the interactions between man and his forest environment.

Examples of Recent Accomplishments

Modern techniques have been adapted to help plan management of wilderness areas. Visits to wilderness and primitive areas have increased at about 10 percent per year for the past 25 years. With over 5 million visitor-days of use annually, some parts of the wilderness are crowded and, in some areas, the environment is threatened by overuse. Other areas are relatively untouched. Wilderness managers face a very difficult task in planning and managing to preserve the wilderness and to provide a quality wilderness experience for visitors.

A new system for analyzing wilderness management problems, and for strengthening the manager's hand in planning, has been developed. This is a simulation model of wilderness travel behavior. It is based on the results of prior Forest Service research on the preferences, choices, and behavior of wilderness visitors plus modern mathematical modelling methods. With this new tool, managers can test in advance and predict the practical effects of alternative management decisions and select the most effective one for use on the ground.

Project (15)

A method for objective analysis of public interest in resource management issues has been developed and field tested. Recent years have seen a new increase in the level of general public interest in how their forests and other publicly owned resources are managed. Officials often are deluged with letters, petitions, and formal testimony on management alternatives. Handling and understanding large volumes of this kind of information is difficult. Forest Service scientists have developed, tested, and refined a system for processing large numbers of varied kinds of messages from the public. This system simplifies handling the information and expedites analysis of the contents of the messages. The system is called CODEINVOLVE and has been used successfully by several National Forests.

People's reactions to changes in forest scenery can be measured. Americans are more concerned today than ever before about preservation of quality forest scenery. Resource managers need to include landscape scenery in the overall management planning process. This is difficult partly because there is no generally accepted method of quantifying scenery. We will never reduce all scenery esthetics to quantifiable terms, but development of some quantified indices will contribute greatly to improved environmental management. It also will make it possible to validate new landscape design concepts. A beginning step in this direction has been made. Researchers have developed and tested a method of quantifying scenic beauty as viewed by the public. The method involves an adaptation of a technique developed a few years ago by researchers, the theory of signal detection. Their studies showed that this approach can be used to find out whether people really observe forest management practices. It also can be used to develop index numbers for relative preferences for alternative scenes, landscapes, or management practices.

Knowing forest visitors' preferences leads to improved service to the public. Data on forest visitors' preferences can improve planning and management of recreational opportunities. When collected and analyzed, this information can help managers do a better job of serving the public, as well as protecting the resources. For example, analysis of users of campgrounds on the Superior National Forest in Minnesota showed that some campgrounds were used six times as much as others.

Preferences revealed by the research were: Sites near water, a scenic view, fishing opportunities nearby, uncrowded conditions, being away from main roads and towns, and small campgrounds (fewer than 15 campsites). In the southern Appalachian forests visitors' preferences for features of developed campsites have been measured. The location of the comfort station was the most important factor people considered in selecting a campsite. Shading was next most important with moderate shade preferred over either full shade or little shade. Accessibility of drinking water also is important, but most campers want to be 50 to 100 feet away from community hydrants. Findings to date also provide clues about management of grass and shrubs, arrangement of facilities, and the importance of fairly level but well-drained campsites.

Trees and shrubs for difficult recreation sites. Many Western areas that offer recreational opportunities such as fishing, boating, or hunting do not have enough native trees or shrubs to provide adequate shade, screening, windbreaks, traffic barriers, or pleasing scenery for visitors. Research in California is finding better ways of establishing and growing trees and shrubs in difficult areas, such as at reservoir sites. Methods that work include irrigation, fertilization, mulching, selection of adapted species, and horticultural care of trees and shrubs.

Project (16)

FIRE AND ATMOSPHERIC SCIENCES RESEARCH

1973	$7,964,000
1974	7,847,000
1975	8,067,000
Increase	+220,000

An increase of $220,000 is proposed as follows:

(1) To provide for the full year costs of the pay increase effective in fiscal year 1974, $43,000.

(2) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $177,000.

The fire research program develops knowledge and technology to reduce forest fire costs and to protect the quality and productivity of American forests. This research is designed to aid all private, State, and Federal agencies in protecting 1.2 billion acres of forest and watershed lands. Although research has aided in bringing about a major percentage reduction in total forest fire losses, increasing use of forest lands makes the forest fire control job more difficult than ever before.

Opportunities to make substantial savings through development of new technology for fire prevention and control are clearly evident. Timber supply impacts from fire loss now average 1.5 million acres of commercial forest land burned per year. Environmental quality degradation results from fires on some five million acres on all classes of lands each year. The devastating fires of 1973 in the Northwest and California provide current evidence to the increasing severity of forest fire problems. The current fire research program is focused on:

(1) Fire prevention.
(2) Fire hazard reduction.
(3) Fire control systems.
(4) Prescribed burning smoke management.

Examples of Recent Accomplishments

New modular fire retardant system is used operationally on Western forest fires. A modular fire retardant system which can be quickly adapted to a wide range of aircraft, including helicopters, has been developed and tested in cooperation with the Air Force. This system allows aircraft to be temporarily equipped for fire-fighting under emergency situations and to fulfill other missions the rest of the year. Successful testing of this unit in large helicopters was recently completed. A C-130 aircraft with this system installed was used operationally on forest fires in the West last summer and demonstrated its projected capabilities during rigorous field operations.

National Fire Danger Rating System is used by the entire Forest Service and several related agencies. The National Fire Danger Rating System was made operational nationwide in 1973. The system measures potential fire suppression requirements due to fuels and weather changes. This integrated system is the operational payoff from various long-term research efforts and is used for the allocation of manpower, equipment, and fire protection funding. It is completely automated and has provisions for data storage, trend analysis and continuous updating to incorporate new technology.

Airborne infrared forest fire system used to monitor spread of wildfires in southern California. As part of the current effort to develop a unified, multi-agency command and control system for emergency operations in southern California, sequential rate of spread measurements have been made using remote sensing. The airborne infrared sensing system, developed by the U.S. Forest Service, was used successfully to make sequential fire images to measure and predict the rate of fire

spread. This technique enables a command and control center to update its fire behavior predictions and make more efficient allocations of manpower and equipment to conflagration type fires.

New wilderness fire management plan becomes operational. In order to gain information to help the managers of several million acres of dedicated wilderness protect and maintain these natural environments, a wilderness fire management plan was put into operation in western Montana. The plan was designed to allow wilderness managers to safely reintroduce fire into these environments where appropriate, thus preventing long-term ecological change, degradation and hazardous fuel buildup. Suppression efforts were modified on five lightning fires and the results were successful in both cost savings and predicted effects. This effort will be expanded to include other regions and conditions.

Project (17)

FOREST INSECTS AND DISEASE RESEARCH

1973	$10,697,000
1974	10,761,000
1975	10,936,000
Increase	+175,000

A net increase of $175,000 is proposed as follows:

(1) Increase of $91,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(2) Increase of $444,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(3) Decrease of $240,000 reflects completion of the non-recurring tussock moth research in 1974.

(4) Decrease of $120,000 is based on the discontinuation of research for which funding was increased in 1974.

The mission of forest insects and disease research is to provide the knowledge and technology to:

(1) Define, measure, and evaluate the impacts of destructive insects and diseases on forest resources, and on wood in storage and use.

(2) Detect, assess, and predict changes in the occurrence of these pests.

(3) Reduce their numbers and impacts to tolerable levels by means of control techniques and management strategies that are ecologically sound, economically practical, and environmentally acceptable.

Current research is strongly oriented toward developing comprehensive integrated pest management systems for major forest insects and diseases.

Special emphasis is being given to:

(1) Understanding and quantifying the full impacts of pests such as the gypsy moth, southern pine beetle, Douglas-fir tussock moth, mountain pine beetle, spruce budworms, dwarf mistletoes, fusiform rust, and root rots.

(2) Finding and developing specific microbial and other biological agents for control of the gypsy moth, Douglas-fir tussock moth, root rots, and similar major pests.

(3) Finding and developing safer chemicals for suppressing or manipulating pest populations. These materials include systemic fungicides; insect attractants, repellents, deterrents, and other behavioral chemicals; as well as more selective, nonpersistent toxicants.

(4) Developing specialized equipment and improved techniques for efficient and safe application of pesticidal materials to individual trees and to forested areas.

(5) Developing technology to detect, monitor, evaluate, and reduce adverse environmental effects of air pollutants in forest and related ecosystems.

(6) Integrating control techniques and strategies into pest management systems that utilize pest-resistant varieties and cultural, chemical, and biological methods.

Examples of Recent Accomplishments

Microbial insecticides effective against Douglas-fir tussock moth. Aerial applications of two microbial insecticides, a virus and a bacterium, gave promising results in small-scale field tests in Oregon in 1973. Preliminary evaluation showed that the virus caused much mortality of tussock moth larvae while trees were not defoliated as in untreated areas. The bacterium applications in an experimental formulation were equally effective but commercially available formulations did not give adequate protection. Research is continuing to improve formulations, and methods of application, and to provide the data needed for registration.

Bt registered for aerial application to reduce gypsy moth damage. The registration of the microbial insecticide Bt (Bacillus thuringiensis) for aerial application as a foliage protectant against the gypsy moth and associated hardwood defoliators makes available an acceptable alternative to the use of chemical pesticides in heavily populated suburban areas. This achievement resulted from extensive field tests conducted by Forest Service researchers and cooperators in New York, New Jersey, and Pennsylvania. Additional tests are planned for 1974 to further evaluate both the formulation and the delivery system.

Silvicultural control for Southwestern ponderosa pine dwarf mistletoes. A computerized system for optimizing silvicultural control treatments against dwarf mistletoe in lodgepole pine now has been extended to include Southwestern ponderosa pine. With this new computer program, future timber yields resulting from various cultural treatments such as choice of regeneration system, frequency and intensity of sanitation thinnings, and stand rotation ages can be predicted. These yield predictions will permit decisions on how best to reduce dwarf mistletoe impacts and will help the Southwest meet and upgrade sustained-yield timber production goals.

Borer problems quantified in North Dakota shelterbelts. The threat of borer damage has reduced the planting of green ash, a highly desirable tree for Great Plains windbreaks. A Forest Service survey revealed the extent and severity of the problem in North Dakota. The two borers--the carpenterworm and the ash borer--were most abundant in the Southwestern part of the State. The ash borer was found in about half the plantings sampled, and the carpenterworm in 28 percent. A borer problem of this magnitude should not prevent planting green ash because practical pest control practices can provide adequate protection for wind barriers.

Controls developed for preventing brown spot disease of Scotch pine Christmas trees. Prevention of brown spot is necessary for profitable Christmas tree production in the North Central States. Losses to brown spot needle disease in Scotch pine Christmas tree plantations can be reduced by newly devised cultural and chemical control techniques. The disease often can be prevented or reduced by establishing Christmas tree plantations in disease-free areas and by avoiding the transmittal of disease inoculum from diseased to healthy plantations on shearing equipment. For areas where cultural controls are inadequate, a single, properly timed application of Bordeaux fungicide will protect trees from the disease for an entire season.

Treatment costs for application of pesticides can be reduced. Lower concentrations and improved application of pesticides can reduce costs and environmental contamination in western bark beetle control programs. Field tests in Wyoming have shown how to reduce the amount of pesticide needed to kill spruce beetle larvae and pupae in downed trees. Studies on mountain pine beetle in ponderosa pine have shown that height of bole treatment can be reduced. Large-scale tests are now needed to determine the practicality of altering current operational control recommendations.

Project (18)

FOREST PRODUCTS UTILIZATION RESEARCH

1973	$9,394,000
1974	9,723,000
1975	9,895,000
Increase	+172,000

An increase of $172,000 is proposed as follows:

(1) To provide for the full year costs of the pay increase effective in fiscal year 1974, $79,000.

(2) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $93,000.

The recently published "Outlook for Timber in the U.S." explains why America's demand for lumber, plywood, and paper will greatly increase in the decades ahead. If present price structures continue, shortages in softwood sawlogs and fine hardwoods are likely to occur. It is imperative, therefore, to conduct research leading to more efficient utilization of timber from public and private forest lands. It is equally imperative that utilization practices be concerned with protecting the environment and that consideration be given for the conservation of energy in conversion processes.

Within the major Forest Service goals of supplying timber and improving environments, the focus of forest products utilization research is on:

(1) Producing the knowledge and technology necessary for improved utilization practices.

(2) Reducing losses in quality and quantity of wood in storage and use, and extending the service life of wood in use.

(3) Developing technologies to manufacture wood products without impairment of environments.

(4) Developing technologies to utilize wood and paper wastes.

(5) Developing technologies that will produce or conserve energy in forestry-related activities.

In fiscal year 1974, research leading to the utilization of forest residues in structural particleboard is being emphasized.

Examples of Recent Accomplishments

Improved utilization.

(a) A research and development program is directed toward making technically and economically possible the industrial production of a structural particleboard suitable as sheathing. The goal of the program is to have the board commercially available within four years. Progress to date includes the development of technical and economic specifications, a comprehensive search of significant patents, an initial market analysis, and the first steps toward development of a laboratory prototype board. Industry representatives are in close liaison with this program. Program benefits will include both an extension of timber supplies and a reduction of the undesirable effects of forest residues on harvested sites.

(b) Research and design efforts have led to a new machine for converting small logs to lumber. At the same time it produces high yields of engineered flakes suitable for structural particleboards. A small prototype model has been manufactured and a full-sized prototype is now under contract. This

shaping lathe headrig, which is under public patent, can revolutionize log conversion where lumber and flakewood products are the objective.

(c) A report prepared for the Forest Service by the consulting firm of H. C. Mason and Associates, Inc., shows the importance of improved utilization in stretching available timber supplies to meet demands for lumber and other wood products. The report, using cost-benefit analysis, identifies and quantifies three major short-term opportunities for increasing processing efficiency of logs: (1) application of currently available sawing and planing technology; (2) commitment of rigorous quality control practices; (3) installation of automatic sawmill controls.

(d) A continuing program effort in forest utilization research has been the development of new knowledge and technologies to improve the efficiency of lumber recovery in the sawmilling process. In order to get the new technologies into use, Forest Service teams are taking research results directly to the sawmills. Working on an invitation basis, the teams have analyzed 109 mills for ways to increase efficiency and have a waiting list of 100 mills. It is estimated that implementation of rigid quality control programs with little or no capital investment can increase yields by 10 percent. Adoption of new manufacturing and machinery systems could increase efficiency by another 15 percent.

Loss of wood in storage and use.

(a) There is no completely satisfactory preservative treatment for Rocky Mountain Douglas-fir. Pilot tests of a new approach involving introduction of an enzyme solution into Douglas-fir poles markedly improved the creosote treatment. Enzyme pretreatment increased depth of creosote penetration to full sapwood increment, increased total creosote retention, and produced an essentially "dry" surface. Results show strong promise for a suitable treating method which could make this and other difficult-to-treat species a valuable reserve timber supply for poles.

(b) Twenty-five percent of the pulpwood comes from primary wood processing plant residues in the form of wood chips. During storage, wood chips undergo significant deterioration (one percent per month). Recent research has shown that green liquor generated from kraft pulping wastes can provide effective control of degradation of pine and aspen chips.

Technologies to manufacture wood products without impairment of rural and urban environment.

(a) The pulping and bleaching of wood, using oxygen in place of sulfur and chlorine compounds, offer possibilities for the reduction of pollution associated with currently used pulping methods. A disadvantage of oxygen pulping, however, has been the degradation of wood fibers. Recent research on oxygen-wood pulping reactions has identified and quantified degradation products. This information is essential to the continuing development of oxygen pulping as a commercially viable system.

(b) Conventional papermaking requires large quantities of water. Research seeking to reduce the water requirements necessary for quality paper manufacture has determined the least amount of water to be added to dry-formed sheets of paper in order to develop adequate sheet strength. Adding moisture to a 60 percent level results in sheet strengths comparable to those of conventional sheets. Density and stiffness levels of about 60 percent of those of conventional sheets can be attained by adding only 20 percent moisture to dry-formed sheets.

Technologies to utilize or dispose of wood and paper wastes. In the recycling of waste paper from urban trash, there have been no generally applicable adequate mechanical methods for separating mixtures of plastic films and paper. Forest Service research has developed two effective methods. One utilizes the principle of thermoplastic films adhering to a heated surface. The second method consists of suspending the mixtures of waste papers and thermoplastic films in a hot gas to contract the film to ball-like forms. Both methods are practical and the second method uses presently available equipment.

Production and conservation of energy in forestry-related activities. A study was conducted to determine the potential of wood residues in the Pacific Coast States for production of electrical energy. A major objective was to provide information necessary to facilitate increased use of wood residue and reduce waste and pollution associated with disposal of logging wastes.

It was determined that some of the wood-to-energy conversion costs would need to be absorbed by the public in order to use residues for fuel for commercial power generation today. However, this situation may be improved as other fuels become more costly. Use of more factory residues for generation of processing steam at wood industry processing plants was shown to be feasible now.

Project (19)

FOREST ENGINEERING RESEARCH

1973	$1,498,000
1974	1,547,000
1975	1,593,000
Increase	+46,000

An increase of $46,000 is proposed as follows:

(1) To provide for the full year costs of the pay increase effective in fiscal year 1974, $11,000.

(2) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $35,000.

Forest engineering research provides direct support to managers and planners through development of essential new forest management technologies. Timber harvesting, transportation planning, and mechanization of other forest practices have engineering components that require systematic study. Solutions have far-reaching implications affecting many forest management practices.

Forest engineering research has the following objectives:

(1) Producing the knowledge and least cost technology necessary for more efficient and environmentally sound harvesting and transportation practices.

(2) Developing engineering criteria for minimizing environmental and socio-economic impacts of mineral development on forest and related lands.

(3) Developing the engineering systems needed to permit more effective and economical reforestation and silvicultural improvement operations.

Examples of Recent Accomplishments

Running skyline logging system operational. A first generation running skyline suitable for long span harvest of timber typical of the Pacific Northwest is now industrially operational. A second generation running skyline suitable for smaller timber typical of Interior West is nearly ready for pilot testing. A third generation is in the early design stages and will be pilot-tested within three years. This family of new skylines will provide techniques for logging environmentally sensitive slopes under almost any set of terrain, tree size, or environmental situations.

Weight estimating procedure permits efficient helicopter logging. Log weights and centers of gravity must be efficiently predicted to enable skyline, balloon, or helicopter logging to be conducted safely and economically. Helicopters, especially cannot operate profitably unless near-maximum loads are carried. Research has provided interim procedures for estimating average weights for logs of different size for different species. This method can serve to safely allocate helicopter loads until more rapid and accurate techniques are developed.

On-site chipping increases wood recovery by 35 percent. More intensive utilization of post-logging forest residues depends upon economical methods for materials handling and conversion to chips or other transportable-sized material suitable for papermaking or particleboard. Recent research has developed a whole tree logging system for on-site conversion of logs into chips. In a Wyoming test, on-site chipping increased wood recoveries by 35 percent over logging for sawlogs only.

This not only significantly increases wood recovery but greatly enhances esthetics, facilitates migration of game animals, and provides an easier and more assured planting or seeding bed. Complete tree removal obviates the necessity for post-logging slash burning with attendant reductions in fire hazards and air pollution.

Project (20)

FOREST RESOURCES EVALUATION

1973	$3,496,000
1974	3,649,000
1975	3,820,000
Increase	+171,000

An increase of $171,000 is proposed as follows:

(1) To provide for the full year costs of the pay increase effective in fiscal year 1974, $34,000.

(2) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $137,000.

Forest land in the United States varies greatly in productivity, ownership patterns, availability for industrial use, and opportunities for management intensification. Accelerating changes in forest conditions result from changing land uses, timber growth, cutting, and losses to destructive agents. Demands on forest lands for nontimber uses are also increasing. Consequently, up-to-date inventories of forest land and timber resources are essential to guide programs for production of timber and other forest values.

Forest resources evaluation is carried out to:

(1) Determine current trends in the timber resource situation.

(2) Determine the outlook for timber growth and supplies available for future harvests.

(3) Identify prospective timber and nontimber resource management problems.

(4) Analyze the effects of alternative programs for meeting prospective forest resources demands.

(5) Identify opportunities for economic development based on forest resources.

Examples of Recent Accomplishments

Major analysis of outlook for United States timber published. "The Outlook for Timber in the United States," the latest in a series of periodic appraisals of United States timber supplies and demands, was published in October 1973. Timber inventories on the commercial timberlands of the United States contained 715 billion cubic feet of wood in 1970. This was somewhat greater than the inventory estimated in 1963. This analysis revealed further that American forests, in response to programs of forest fire control, tree planting, and other forestry measures registered a gain of 14 percent in net growth between 1962 and 1970. The study also shows that additional investments in timber growing are needed to enable the Nation's forests to meet the expanding demands for wood products without increases in the real prices of these products. This situation may be accentuated by further reductions in the area of commercial forest land and by restrictions on timber harvesting in order to protect and enhance other forest values.

Forty-seven million acres of commercial forest land were reinventoried during fiscal year 1973. Field surveys were conducted in Alabama, Alaska, California, Georgia, Iowa, Kentucky, Louisiana, Mississippi, Missouri, New Hampshire, North Carolina, Oregon, South Dakota, Vermont and West Virginia. Reports appraising the forest resource situation were issued for six States and portions of States. At this rate, all States are being reinventoried on an average of every 11 years, which is less frequent than desired by many users.

New survey techniques developed. Evaluation of timber producing capacity and efficiency of timber surveys have been enhanced by new procedures. Many forest areas, especially in the West, have timber stocking capacities so limited that they are not reflected in customary productivity measurement tools such as normal yield tables. Two procedures which were developed to overcome this limitation were (1) discounting techniques to apply to normal yield tables and (2) equations based on site index, elevation and the presence of certain indicator plants. Aerial photography, long a traditional tool of forest survey, was further evaluated as a means of efficient double sampling for timber inventory; and new procedures for avoiding "oversampling" bias on non-forest lands from aerial photography were developed.

Survey shows southern pulpwood production at all-time high of 44.3 million cords in 1972. Timber products output surveys such as the Southern Pulpwood Survey help relate timber supply to demand. The South's 11 States produced 44.3 million cords of pulpwood in 1972, or about 60 percent of the Nation's total. Three quarters of this total for the South was roundwood harvested from standing timber, and the remainder was residue from other wood using plants. New pulpmills under construction in the South appear likely to increase need for pulpwood output from Southern forests.

Project (21)

FOREST ECONOMICS AND MARKETING RESEARCH

1973	$3,500,000
1974	3,653,000
1975	3,774,000
Increase	+121,000

An increase of $121,000 is proposed as follows:

(1) To provide for the full year costs of the pay increase effective in fiscal year 1974, $35,000.

(2) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $86,000.

Forest economics and marketing research seeks to improve economic benefits from use of the Nation's forest land for timber and other values, including water, recreation, range, and wildlife. Research is conducted on:

(1) Uses and demands for wood products and other forest values to provide necessary inputs for assessing future demands on the Nation's forest lands.

(2) Reducing costs in timber growing, harvesting, processing and product distribution to achieve more efficient use of available timber resources.

(3) Timber growing and multiple use management policies and practices, including impacts on environmental quality, to provide guidelines for development of forest resources.

(4) Evaluations of new technology to help guide implementation of a wide range of technical advances.

Collectively, the results of forest economics and marketing research constitute a major source of information for formulating forest management and use policies and practices at the national, State, and local levels.

Examples of Recent Accomplishments

Opportunities for improving timber management analyzed. As part of "The Outlook for Timber in the United States," forest economists completed a major program of identification, screening, and financial analysis of opportunities for improvement in timber management in the United States. Included were all lands in public and non-industrial private ownership, with particular emphasis on opportunities in the Southeast, Northeast, North Central, and the Washington-Oregon-California forest types. Management practices considered were reforestation, stand release, pre-commercial thinnings, and commercial thinnings and salvage. The study found that opportunities for timber management improvement are likely to increase significantly if timber prices rise over the next few decades.

Demand for wood estimated. In "The Outlook for Timber in the United States," consumption of timber products in major end uses such as new housing, nonresidential construction, manufactured wood products, wood pulp products, shipping and miscellaneous uses was analyzed. Projections of potential future demand for timber products in each of these uses to the year 2000 were made under three levels of assumptions as to population and economic growth, and relative prices of timber products. Total requirements for lumber, veneer and plywood, pulpwood, and other timber products were converted to roundwood equivalents to arrive at estimates of total current and future demand for roundwood from United States forests.

With prices of timber products relative to other materials at 1970 levels, the "medium" projection of United States demand for roundwood rises from 12.7 billion cubic feet in 1970 to nearly 23 billion cubic feet by the year 2000.

Postal Service anticipates savings $3 to $15 million per year by adoption of new pallet marketing systems. The Forest Products Marketing Laboratory at Princeton, West Virginia has given major attention to marketing research designed to improve product distribution systems using wooden pallets and utilization research to provide for efficient pallet construction through use of the abundant low grade hardwood resource. This research culminated in October 1973 with an announcement by the U.S. Postal Service of adoption of these marketing systems and pallets. In addition, a major private firm has entered into a one year exploratory pallet leasing program which is also based on research conducted at Princeton.

The Postal Service program is designed to move fourth class mail, primarily magazines, from major sources to major distribution points around the country. A separate study by the Postal Service confirmed the advantages cited by the Forest Service researchers and showed that use could range from 200,000 - 2,000,000 pallets per year at a savings to the Postal Service of $3 - $15 million. This program is scheduled to start in January 1974.

Long-term timber contracts in the South aid landowners and industry. A study in 11 Southern States disclosed that under long-term contract arrangements, Southern wood-using industries control almost 7 million acres of privately-owned, non-industrial forest land. While pine is the predominant timber type under contract, there are also substantial acreages of hardwood. Nearly all agreements are written on an individual basis. Such agreements have advantages for both owners of non-industrial forest lands, and for forest industry firms leasing or contracting for timber from such lands.

New system developed for multiple product measurement. Forest Service scientists in the South have developed a computer-based methodology for the simultaneous weight-scaling of multiple-products in tree-length log shipments. While weight-scaling of pulpwood is now widespread in the South and elsewhere, recent trends toward tree-length logging and hauling have created a need for a fast and accurate method of simultaneously measuring both sawlog and pulpwood material. This new system should have wide application throughout the South, as well as other regions of the country.

TREES AND TIMBER MANAGEMENT RESEARCH

Mrs. HANSEN. An increase of $484,000 is requested for trees and timber management research, for a total program of $13,602,000. Please give us a review on your trees and timber management research?

Mr. DICKERMAN. Madam Chairman, I would like to refer to the first item of accomplishments there, the silviculture handbook, a copy of which I have here. We consider this one of the more valuable contributions, and it is being put to widespread use.

It summarizes the silviculture systems for 37 of the major forest types in the United States. It gives a basis for managers to know the most current information that we have from all of our research stations around the country. Several other items of accomplishments I might refer to briefly.

In the Oregon-Washington area, we have put out a booklet which describes the research natural areas, their location, and their potential for research not only by the Forest Service but by universities.

Another item which is of continuing benefit is the research on genetically improved trees. Here we point out the potential for increasing timber yields.

In southern pine, for example, some of the improved strains show a potential increase of 20 to 40 percent. In the Douglas-fir area, in first selection material, we have increases of 8 to 15 percent, and looking forward to the second selection, we see increases of 15 to 18 percent, or a potential from genetic improvement of around 30 percent.

These are a few of the things that have been accomplished in research in timber management this year.

Mrs. HANSEN. I may point out you really don't have an increase at all if you consider pay and rental costs.

Mr. MCGUIRE. As we were discussing yesterday, Madam Chairman, none of the committee add-ons from last year are carried forward in research except in timber management, forest fire, utilization, and SEAM research. Last year the committee added $1,590,000 to these kinds of research and that amount is carried forward in the 1975 proposal.

HARDWOOD RESEARCH

Mrs. HANSEN. What are you doing in the hardwood research area? I have a clipping which states that a walnut tree is worth $12,000. I would think this is becoming an important segment of your research program.

How much are you requesting for hardwood research?

Mr. DICKERMAN. I don't have that figure.

We would be glad to furnish it for the record.

Mrs. HANSEN. If you please, because we are going to have many inquiries and we will undoubtedly have some requests.

[The information follows:]

The Forest Service research expenditures in fiscal year 1974 for work that deals primarily with hardwoods are $15,825,000 while expenditures that deal primarily with softwoods are $34,094,000. The remainder of the budget, $13,897,000, goes to research activities such as recreation that cannot be properly assigned to either hardwoods or softwoods.

PROJECT SEAM

Mrs. HANSEN. An increase of $6,000 is requested for forest watershed management research for a total program of $7,716,000. What is the difference between the work done on SEAM in this activity and the work done under minerals management? How much is in the budget, in total, for this project in 1975?

Mr. DICKERSON. The SEAM research activity is budgeted at $700,000. This research is at four locations with emphasis upon revegetation research on mine sites in the Northern Plains area. It also places emphasis on engineering and transportation systems, revegetation in the Southwestern coal mine sites, and includes research relating to the ecology and wildlife habitat aspects of surface mine reclamation.

There are four locations for this SEAM research.

Mr. MCDADE. What are the four locations?

Mr. DICKERMAN. Logan, Utah; Bozeman, Mont.; Albuquerque, N. Mex.; and Laramie, Wyo.

Mr. MCDADE. Public and private land?

Mr. DICKERMAN. Yes, both.

Mr. LONG. Maybe, Madam Chairman, I might comment that the Department really does not feel that we are putting enough in this program and is going to make a substantial effort to increase the effort. This probably will come to you in the near future, providing we can find some form of an agreement in terms of the level of the program.

Mrs. HANSEN. Secretary Long, yesterday when the Forest Service testified we warned them that with the increased impact of coal land leasing and the increased impact of coal use to solve part of the energy problems, it is mandatory that you come in with some answers on reclamation, and it is only through the research programs that you will provide these answers and that is what distresses me.

Your forest research budget is not reflecting the needs, for example, in Fresno you are not including anything for the deer herd this year. Isn't that correct?

RESEARCH FUNDS

Mr. MCGUIRE. Fresno I believe is under the wildlife, range, and fish habitat research item.

Mrs. HANSEN. I know.

Mr. MCGUIRE. Last year the committee added $775,000 to the requested appropriation, but this year that add-on is not in the——

Mrs. HANSEN. Not in your base.

Mr. MCGUIRE. And that includes Fresno.

Mrs. HANSEN. It also includes Carbondale, Berea, St. Paul, Reno, Durham, Corvallis, LaGrande, Olympia, and Seattle.

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. Many of these projects need to be continued.

Funds for Olympia were added to provide an increase in your research base because you have a problem of animal damage in the two Northwestern States.

The price of that timber has increased and we were trying to develop some answers on that animal damage.

Doesn't this mean you are going to cut that program back?

Mr. McGUIRE. That is right. It is impossible to operate a research program on an 8-month basis which is what this amounts to. It is a start-and-stop operation and it won't work.

Mrs. HANSEN. I suppose the OMB thought that the committee could occupy itself by reinstating the add-ons from last year instead of venturing into new fields.

On Corvallis, what work did you perform with the additional funds added for the Corvallis Laboratory?

Mr. McGUIRE. I believe that was for the tussock moth research.

Mr. WYATT. Is that the research which the EPA says you have been negligent to the point of dereliction, Chief?

MT. WHITNEY

Mrs. HANSEN. It seems to me with all the problems you have in recreation areas that you shouldn't start and stop all the time. If you don't believe me just look at this article:

> The U.S. Forest Service has been forced to limit public access to Mt. Whitney. The solitude of the highest point in the continental United States is being threatened by trampling feet.
>
> Last year 15,700 people used the trail, including 1,164 during the Labor Day weekend. During summer months, it's not unusual to have more than 250 people on the trail in one day.

You have a trail camp which is a popular overnight stop for hikers on the Sierra Nevada peak. "You literally can't find a square yard of ground without human feces on it. The smell is just horrible because the wilderness is desolate. . . ."

This is the kind of recreation research that should be going on because you may be able through recreation research to offer some compatible answers to situations like this.

DECREASES IN RESEARCH FUNDS

You are requesting a decrease of $96,000 for Carbondale. Doesn't that involve hardwood research?

Mr. DICKERMAN. Yes, ma'am.

Mrs. HANSEN. The price of a hardwood walnut tree is up to $12,000 apiece?

Mr. LONG. Black walnut.

Mrs. HANSEN. I just don't think that you are going to get the answers in time at this funding level for research.

You have the Mt. Whitney problem all over your forests, Mr. McGuire. Whenever you have a great many people going into the forests and away from established campgrounds, you are going to have an increasing problem of not only litter but really the worst kind of pollution probably you have ever seen.

Mr. McGUIRE. We fully agree with you. I doubt that even research, though, is going to be able to help us at Mt. Whitney.

Mrs. HANSEN. No, but you can begin to develop some kind of answers to present to your travelers and people in your forests.

Mr. McGUIRE. That is correct.

Mrs. HANSEN. You also have to have some facilities.

Mr. McGUIRE. That is correct. The problem on Mt. Whitney, how-

ever, is that this is a wilderness area. We are limited in the facilities we can install.

Mrs. HANSEN. I agree, but the thing is perhaps you should be carrying on a campaign to get them away from Mt. Whitney into some other area by suggestions of similar types of experience.

Mr. MCGUIRE. We fully agree with you and this is one of the reasons for conducting forest recreation research, to see how this can be done.

Mrs. HANSEN. To cut research funds that would find an answer to something that causes $15 million worth of damage is penny wise and pound foolish.

WILDLIFE, RANGE, AND FISH HABITAT RESEARCH

You are requesting a decrease of $622,000 for wildlife, range, and fish habitat research, for a total program of $3,860,000.

Why is this item down?

Mr. MCGUIRE. Last year you recall the committee added $775,000 for research at seven locations, Reno, Olympia, St. Paul, Stoneville, Orono, Fresno, and La Grande. The budget request does not include that $775,000.

FOREST RECREATION RESEARCH

Mrs. HANSEN. A $104,000 increase is requested for forest recreation research for a total program of $1,222,000. You have an increase, of course, for pay annualization and GSA rental space.

I think in this morning's paper I saw an urgent request of about $500 million for South Vietnam. That is bigger than your whole budget.

FIRE AND ATMOSPHERIC SCIENCES RESEARCH

You have an increase of $220,000 for fire and atmospheric sciences research, for a total program of $8,067,000. The increase, interestingly enough, is for pay and rental costs.

Mr. MCGUIRE. That is right. There are no program changes proposed in this item.

Mrs. HANSEN. Is this where your laboratory research at Delaware is being funded?

Mr. DICKERMAN. Madam Chairman, most of this fire research is in the western fire laboratories.

Mrs. HANSEN. Yes; but you have some fire research being performed in the Southeast because they have problems which are specifically related to that area.

Is that included?

Mr. DICKERMAN. This $200,000 increase was a $200,000 increase for smoke management research.

Mrs. HANSEN. That is right.

Mr. DICKERMAN. This is included in the budget this year.

Mrs. HANSEN. So that will continue.

Is the Delaware, Ohio laboratory part of your fire and atmospheric sciences research activity?

Mr. MCGUIRE. It comes under the next item I believe, insect and disease research.

Mrs. HANSEN. I thought this involved an urban air pollution program.

Mr. McGuire. That is right, Madam Chairman, but here they are looking at it from the other side, not so much how to prevent air pollution. That is part of fire and atmospheric sciences research.

The effect of pollution on vegetation and the effects of vegetation on reducing pollution are the problems that Delaware is looking at.

Mrs. Hansen. That is right. Is that money in the budget?

Mr. Dickerman. This is not in the budget.

FOREST INSECTS AND DISEASE RESEARCH

Mrs. Hansen. You are requesting an increase of $175,000 for forest insects and disease research for a total program of $10,936,000.

This provides no money in some of the basic categories that the committee thought important last year?

FOREST PRODUCTS UTILIZATION RESEARCH

An increase of $172,000 is requested for forest products utilization research, for a total program of $9,895,000. This is one subject that the committee has been greatly interested in because, as you are well aware, some of these funds are for the Madison Laboratory.

Mr. Dickerman. Yes, ma'am.

MADISON LABORATORY

Mrs. Hansen. What is the status of your land exchanges at Madison?

Mr. Dickerman. Madam Chairman, that is completed. As soon as the money was released to us we went ahead and have now completed the exchange with the University of Wisconsin.

Mrs. Hansen. What do you have programed for the laboratory?

Mr. Dickerman. The laboratory there was being used by the Wisconsin Alumni Foundation. They are completing a structure which they will move into in about 1 year. They will continue to occupy one of the buildings. There were two other buildings which we are now in the process of modifying to use as a part of the Forest Products Laboratory program.

WOOD RESIDUE RESEARCH

Mrs. Hansen. As there is more pressure to clean up all possible waste in the timber production you are going to have an increasing amount of research in utilization.

What about the development of structural particleboard which is important to timber utilization. What are you doing on research in this direction and is the effort adequate?

Mr. Dickerman. Madam Chairman, last year one of the add-ons that was available was $100,000 for residue research at the Forest Products Laboratory. This is continued this year.

Mrs. Hansen. It continues in the budget?

Mr. Dickerman. Yes, ma'am.

Mrs. Hansen. Is that the level of effort that it should be?

Mr. Dickerman. We have a forest residue program underway in several locations of the country. In order to handle one part of this,

which is the utilization of the residues, the work at the Forest Products Laboratory could be stepped up above the current level.

We are studying at our Portland station the residue quantities and descriptions of material there. We had a study underway last year in Wyoming on the production of chips from wood residue on location.

At Houghton, Mich., we have the bark-chip separation which is again part of trying to utilize the wood residue.

At the Athens, Ga., laboratory, where we are working in cooperation with the University of Georgia, we have been doing some work in structural dimension. I would like to pass this item around as a sample of a structural dimension stud for homes which is made out of particleboard with a veneer face on the two sides. This particular product has strength qualities comparable to those needed in home construction.

This is the kind of product which will make it possible to bring the residues out of the woods and increase utilization and make our timber supply go further. The nails are in here to show that we can get——

PARTICLEBOARD

Mrs. HANSEN. Is this research which is of maximum importance right now to make this full utilization possible, at the level that it should be?

Mr. DICKERMAN. We feel that it could be stepped up, particularly in this utilization of residues for particleboard with the emphasis on structural qualities.

Mr. WYATT. Madam Chairman, at this point, would you yield?

Mrs. HANSEN. Yes.

Mr. WYATT. I understand for structural particleboard research that you could well use up to, say $750,000 this year.

Is that correct?

Mr. DICKERSON. Congressman, yes; that is correct. This would permit accelerating the particleboard activity at the Forest Products Laboratory.

Mr. WYATT. One other question, Madam Chairman.

About a year ago the Forest Products Laboratory at Madison issued a pamphlet called "Homes From Forest Residues." I was greatly impressed with the potential and possibilities presented for turning a troublesome forest residue into a much-needed particleboard building product.

Now, the question really is, and this is repetitious to a degree but I want to get this in the record, is this research being followed up as aggressively as it should be?

Mr. DICKERMAN. With the funds available we are moving forward I think on a very broad front. This is a problem that involves many facets—development of specifications, some concept of what the market demands are, and other factors relating to structural particleboard production. We think this has tremendous possibilities.

Mr. WYATT. You could do more with more money?

Mr. DICKERMAN. That is correct.

Mr. MCGUIRE. Mr. Wyatt, this problem has many aspects. To reduce pollution from burning of debris, for example, we need to utilize the debris. That is to cut down on the smoke problem, for example. It

would make reforestation easier if we can get this material off the site. One of the principal problems that we face is meeting future demands for wood. In the plan we were talking about yesterday we took into account the possibilities of stretching the timber supply, getting more out of the log. We are getting close in this paneling approach that we were talking about, but there are many other things we could be doing. We see great opportunities in the future for getting more useful products out of the log and having less residue at the mill and in the woods.

Mr. McDade. Did we get any kind of a cost analysis?

Mr. Dickerson. This particleboard work has been done in the laboratory and at this point I don't have any figures on what commercial production might amount to.

What we are trying to do is to develop a technique.

Mr. McDade. And you have the technology in pretty good shape and the costs?

Mr. Dickerman. Yes, we will continue to work on the technology. We are trying to develop the strength characteristics and to meet the code requirements in various systems.

RESEARCH IN PENNSYLVANIA

Mr. McDade. Very interesting.

Chief, my area of Pennsylvania is about 90 miles or so from about 30 million people and we are getting increased utilization. I have talked to some of the people at Upper Darby about whether or not they have sufficient resources to begin to cope with the flow of people in and out of that area.

They indicate to me that they do not, that their current budget for that purpose is completely inadequate. Have you had any conversations with them about that?

Mr. McGuire. Yes, I have, Mr. McDade.

We recognize this, too, and we have taken those needs into account in our long-range planning and the details are available. The overall picture is described in the plan that we provided to the committee. We recognize like you do, though, that the increase in population in these Eastern areas close to the forests, and three-quarters of our commercial forest lands are in the East, those problems are going to have to be attacked and soon.

Mr. McDade. And there is no funding to do that in this budget, is there?

Mr. McGuire. There is funding in this budget for a beginning, but as Mr. Dickerman has pointed out, we do have the capability to go farther than funding levels would now permit.

Mr. McDade. Would you provide me with an estimate of what would be a reasonable level of funding for this purpose in the next fiscal year? I would like to draw your attention, too, to project SEAM which is operating in many parts of the country but not at all in the Pennsylvania area where there have been extensive stripping operations that have not been examined.

I would like you to get me a cost estimate on those, what would be a reasonable level of research in the next fiscal year.

Mr. McGuire. We will be glad to provide that.

[The information follows:]

A program increase of $450,000 would be adequate to initiate and move forward a sound research program dealing with the problems of multiple use management in crowded forest areas of Pennsylvania and neighboring Eastern States. Although it is planned as a nationwide program, the initial SEAM effort is concentrated in the West. We have been conducting research for some time on rehabilitation of surface mined areas in the East. That research is headquartered in Berea, Ky., but is applicable to Pennsylvania conditions and includes on-the-ground work in Pennsylvania. A program increase of $875,000 in fiscal year 1975 would bring the Berea program up to an optimum level of productivity.

Mr. McDade. Then compounding the problem, you have already discussed the gypsy moth and I appreciate the efforts you are going to take to see if we can do something to protect this forest area that is within a short distance of so much of the Nation's population.

We have a huge wood product industry now developing. The largest paper plant in the world exists in this area. We have had other wood product industries locate here.

I don't know what impact this is going to have on our forests. Our local agricultural producers of course are happy there is a new cash crop for them when they deliver the products to these industries, but I am concerned about what happens when this package comes together. Defoliation, because of the insect population, increased usage because of the access to the huge metropolitan area, a thriving and expanding hardwood industry.

When I talked to the people in Upper Darby I don't believe they have the necessary funds to look at this total area. Then if you crank in areas that are unrestored because of previous strip mining and absence of resources for SEAM or any approach to them on a SEAM basis, I am afraid you people once again are strapped.

Mr. McGuire. You pointed to one of the major problems in your area. In addition to the point you make, these areas are also of tremendous importance for wildlife. They are essential for watershed protection and somehow we have to tie together all these aspects so that we continue to provide not only for the recreation and amenity needs of people who live in the vicinity but also employment opportunities.

I think it can be done but we need much more knowledge than we have now.

Mr. McDade. There is no question in your mind that it would be a prudent investment to make now in terms of the Nation's resources?

Mr. McGuire. I think that investment is long overdue.

Mr. McDade. I wish you would indicate to me a reasonable level of effort that would do a good job in the current fiscal year.

Mr. McGuire. We will be glad to provide such information.

[The information follows:]

A program increase of $875,000 in fiscal year 1975 is needed to bring the funding of this program on restoration of surface mined lands in the East up to optimum productivity.

FOREST ENGINEERING RESEARCH

Mrs. Hansen. You are requesting an increase of $46,000 for forest engineering research. This increase is related to pay cost and GSA space rental, with the same program level. The development of new methods in order to maintain a forest road system with as little damage as possible is dependent on some of the answers you develop in the field.

When you consider your inflationary costs this is actually a reduction you are requesting.

Mr. McGuire. That is what it amounts to.

Mrs. Hansen. How are you going to get the answers in time for them to be useful?

Mr. McGuire. This program will go along at the same base about as last year. There is no change. As you point out, with inflation there will be a reduction in the program level because of rising costs. This program also is related to project FALCON which we have talked about before. Part of the work that would be done under FALCON is now being carried on under this kind of research.

However, at this level of funding it will be many years before we have the answers leading to more efficient systems of logging.

Mrs. Hansen. You mention that onsite chipping increases wood recovery by 35 percent.

This is a part of the total economic picture.

Mr. McGuire. Yes; this is similar to the problem we were talking about before—how to stretch the timber supplies and utilize more of the tree.

Mrs. Hansen. You think you would be requesting additional funds for this program to equate with the economic values. This is the same problem we found in the whole energy area anticipating that oil was going to be available without developing the kind of methods that had to be done. We now find ourselves with an oil crisis.

You are going to find yourselves with a severe housing shortage and a crisis of production of timber.

Isn't this correct?

Mr. McGuire. That is right and this is the very thing that you have been saying to us for these many years. We fully agree with what you have been saying.

FOREST RESOURCES EVALUATION

Mrs. Hansen. An increase of $171,000 is requested for forest resources evaluation. Again this increase is for GSA space rental costs and for pay annualization.

Isn't this correct?

Mr. McGuire. There is no change in the program level here and as you point out there will be some reduction for inflation.

Mrs. Hansen. 47 million acres of commercial forest land were reinventoried during fiscal year 1973. How many acres remain to be reinventoried and in what States?

Mr. Dickerman. Madam Chairman, the reinventorying is a continuing process.

The difference between the 47 and the total forest acreage, approximately 700 million, would be the reinventory need. We had field surveys underway in 15 States this last year.

I will provide for the record a list of the individual States.

[The information follows:]

The forest survey is a continuous assessment of our Nation's entire forest area. Forty-seven million acres of commercial forest, or about 9 percent of the total for the United States were included in field reinventories of varying intensities in fiscal year 1973 and included portions of 15 States. Since 1930, when forest survey was initiated, all States have been inventoried at least once; 18 States twice; 14 States three times; and 6 States four times.

Reinventory schedules and the length of time required to completely reinventory a State vary from one part of the Nation to the other because of variation in cooperator support and scheduling, the relative importance of forests and forestry to a State, the concentration of high-valued timber in particular portions of States, and the relative costs of field inventory work.

States that are scheduled for reinventory in 1974–75 at present levels of funding are Alaska, Iowa, Kentucky, Louisiana, New Mexico, North Carolina, Oregon, South Dakota, Utah, and West Virginia.

Mr. WYATT. Madam Chairman, would you yield?

Mrs. HANSEN. Yes.

TIMBERLINE LODGE

Mr. WYATT. In connection with the operation of the Timberline Lodge I am advised that there are $60,000 for operation and maintenance in the 1975 budget and that they need actually about $103,000 more. Perhaps you want to furnish your answer for the record, but I would appreciate your confirmation or correction of those figures.

Mr. MCGUIRE. We will provide that.

[The information follows:]

Total operation and maintenance needs from appropriated funds for Timberline Lodge is $163,000. Of this amount, our appropriation request includes $60,000 for essential planning, recurrent maintenance, and operation and maintenance of the sewage treatment plant. The $103,000 not included in our appropriation request is needed for "one time" items including completion of the master plan revision, replacement of siding and insulation and miscellaneous maintenance.

The annual recurring maintenance needs are high, due to the extreme heavy snow conditions. These conditions also result in the need for major maintenance items at frequent intervals. Completion of the master plan is essential to provide for increasing public use while protecting the unique features of the lodge.

The items are summarized as follows:

Forest land management-recreation use	In fiscal year 1975 budget request	Additional increment, fiscal year 1975
Master plan revision	$10,000	$40,000
Recurrent maintenance	20,000	
Operation and maintenance, sewage treatment plant	30,000	
Replace siding and insulation		40,000
1-time miscellaneous maintenance		23,000
Total	60,000	103,000

RESEARCH FUNDS

Mr. WYATT. I am going to ask several questions now in regard to research funds generally and I think in order to shorten the procedures I will just ask the questions and ask that you furnish answers for the record, Chief.

Mr. MCGUIRE. We will be pleased to do that.

FALCON

Mr. WYATT. I would like to know the budget history of the FALCON program. Is there still a need for advanced logging systems?

[The information follows:]

Funds for the FALCON program were first appropriated in fiscal year 1973. The House allowed $7.5 million, the Senate allowed $4 million, and the conferees agreed to $5 million. These funds were not apportioned for FALCON but were reprogramed to cover a portion of the fiscal year 1973 forest firefighting costs.

In fiscal year 1974 the House did not include any dollars in the appropriation bill, the Senate allowed $1 million, and the conferees agreed to the zero level.

FALCON is not included in the President's fiscal year 1975 budget.

In our opinion, the need for advanced logging systems is even more critical today than when FALCON was first conceived in 1972.

LABORATORY AT SEATTLE

Mr. WYATT. What could a $1 million, or $1.1 million, or $1.2 million increase do for engineering research at the Seattle Laboratory?

[The information follows:]

In the absence of a fully funded FALCON program, a $1 million increase to the forest engineering research effort in Seattle will permit advancing the essential engineering components of FALCON. Of course, the rate of application and the scope of development will be significantly less than would be the case with a fully funded FALCON program.

We anticipate that a $1 million increase would permit the development of long span skyline yarders that would double the reach of present systems. This would be done by the end of the first year.

Within 3 years, a medium sized skyline yarder system suitable for the interior West or for partial cuttings on the Pacific coast could be developed, tested, and evaluated. In addition, a still smaller "peewee" skyline system could be developed for logging small timber typical of parts of the interior West or Eastern forest types.

TUSSOCK MOTH RESEARCH

Mr. WYATT. Also, is it reasonable that you could use $1 million or a figure in that neighborhood for further Douglas-fir tussock moth research?

I think this would be important to elaborate on at this point in the record, Chief.

[The information follows:]

We are presently planning an accelerated program of research and applications to develop environmentally acceptable control systems for the Douglas-fir tussock moth. That research is needed to develop, within the next 3 years, effective means of (1) predicting tussock moth outbreaks and impacts, (2) suppressing and regulating moth populations, and (3) minimizing future moth damage by application of integrated pest management strategies. This is part of a coordinated USDA program aimed at controlling the Douglas-fir tussock moth, the southern pine beetle, and the gypsy moth. We estimate that the Forest Service research component of the effort on the tussock moth will require an increase of $1,200,000 in fiscal year 1975.

SILVICULTURE RESEARCH AT OLYMPIA AND CORVALLIS

Mr. WYATT. Also, whether or not additional funds could be used economically at the silviculture research project both in Olympia and Corvallis.

If you could furnish that for the record, I would appreciate it.

[The information follows:]

There is urgent need for a coordinated program of research on the intensive culture of genetically improved trees, especially those growing on the most productive timber growing sites of the Pacific Northwest. Demands for this renewable resource are expected to nearly double in the next 30 years, but production is being concentrated on a constantly shrinking land base. Accelerated research is needed in several closely related fields.

At the Corvallis, Ore., Forestry Sciences Laboratory there is a need for a program increase of $400,000 for research on more efficient use of genetically improved material, brushfield reclamation techniques, regeneration and planting systems, and tree breeding for improved wood quality, higher growth rates, and

better pest resistance. In addition to Douglas-fir, work will be expanded to other fast-growing species such as western hemlock and Sitka spruce

At the Olympia, Wash., Forestry Sciences Laboratory there is a need for a program increase of $450,000 for research on intensive culture methods such as fertilization, thinning, and weeding, and growth and yield analysis and economic studies to plan orderly harvesting schedules.

FOREST ECONOMICS AND MARKETING RESEARCH

Mrs. HANSEN. You are requesting an increase of $121,000 for forest economics and marketing research for a total program of $3,774,000. Again I think this increase amounts to the pay and rental costs.

Mr. MCGUIRE. That is correct. There is no change from the base.

Mrs. HANSEN. What are you doing in this total picture of forest economics?

In this kind of effort, and as you are well aware, your market acceptibility is part of the use of these products, isn't this correct?

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. To what extent does industry work with you in the adaptation of these new products for the market?

Mr. DICKERMAN. Madam Chairman, one example of the work that we do with industry in this particular item that I showed you is we are working with the National Particle Board Association and American Plywood Association. They are cooperators in terms of giving us market valuations from their knowledge of market developments.

In this particular case, we are also working with HUD. They have been very much interested in structural dimension as an item for meeting housing construction needs. These are just two examples of how we work with other organizations.

Mr. EVANS. Would the chairman yield there for a question?

Mrs. HANSEN. Yes.

COMMERCIAL PRODUCTION OF PARTICLEBOARD

Mr. EVANS. While we are on this example that you passed around to the committee, is that in commercial production now?

Mr. DICKERMAN. This is not in commercial production. It is a prototype developed in the laboratory to develop the process. This type of information is being sought and we expect that the item will go into production. It still has to be costed out from a manufacturing standpoint. There will be the related problem with equipment development to mass-produce an item such as this.

Mr. MCKAY. I don't know as far as particleboard studs are concerned, but I have a whole half side of my basement that is shelved with this kind of stuff in 10-inch wide pieces, so it is in production somewhere.

Mr. DICKERMAN. Our emphasis on this is to develop qualities for structural dimension. We have particleboards that are usable for shelves but they do not meet the code requirements for structural use.

Mr. VEYSEY. Madam Chairman, may I ask a question here? What is the glue that you use? What is the source of it or is that a secret?

Mr. YOUNGS. One that is used most commonly in material of this sort for exterior use is a phenolic resin which is made from petrochemicals.

Mr. VEYSEY. Where do you get this?

Mr. YOUNGS. They are running short, as other things are.

Mr. VEYSEY. Is there any other type of material that can be substituted?

Mr. YOUNGS. Yes, sir.

Mrs. HANSEN. This is why I think you should be aware of the wood waste research that is being performed by the Bureau of Mines. You can't determine the economics of this material until you determine whether you are going to use this material for particleboard or oil.

Mr. McGuire remembers the time when EPA decided that all the rafts on the Columbia River should be removed. This meant it would require a logging truck every 30 seconds to supply one mill alone on a road that was not adequate.

Nobody took the time to figure out what air pollution was going to result versus the economics of what river pollution was going to be done by the rafts of logs.

The air pollution wasn't going to vanish but you are not going to stop beavers from cutting down trees. This is an example of the lack of discussion in this whole field of economics and marketing.

I urge you to talk to the Bureau of Mines on this entire Albany Laboratory effort.

Mr. MCGUIRE. We will certainly do that, Madam Chairman. We have been talking to the Bureau of Mines on this. We probably didn't have information here to dig out today on their Albany Laboratory but I do know, for example, that the Bureau of Mines, the Forest Service, and the city of Madison, Wis., are working together on ways of utilizing materials in the city dumps.

We can separate the cellulosic materials, the metals, and the glass. It takes a joint effort, however, to figure out what to do with this material once you grind it up and sort it out.

I am sure there are many areas where we have a joint interest with the Bureau of Mines, but I agree with you that we need to step up our coordination so that we do not overlap and so that we each benefit from the research the other is doing.

Mr. EVANS. Just one final question.

How far away are you from having this product being commercially acceptable?

Mr. DICKERMAN. Congressman, I think the point here is that we are developing the design which can meet the code requirements and structural requirements generally. The product will be available for any company that wants to adopt this kind of a process.

As to a timing basis specifically, I don't believe that I could give you an answer.

Mr. EVANS. Is industry interested and are they proceeding?

Mr. DICKERMAN. There have been many industrial groups that have shown an interest in structural particleboard. I think this is an area that we are going to see them move into fairly rapidly once they recognize the great volume of raw material that is available.

This information has never been aggregated in a sense that many of the industries underestimate the volume of timber that is in residue. Here is a big source of unused timber resource.

Mrs. HANSEN. Is that termite-resistant?

Mr. DICKERMAN. Frankly, I don't know.

Mr. YOUNGS. That is not treated for termite resistance.

Mrs. HANSEN. That brings me to another point.

How about the weather effects on this board? You have varying climates. In a community in southwest Washington you have to withstand the rain, dampness, moisture, and so forth.

In performing your research do you take into consideration the areas of the country where it may be applicable? The termites I gather are a part of a large section of the United States. Certainly they are in the West.

Mr. DICKERMAN. This would be part of the development and testing program that goes with research on the products.

USE OF FIRE RETARDANTS ON SHINGLES

Mrs. HANSEN. Do the majority of shingle producers today use fire retardants?

Mr. DICKERMAN. I would like to submit that for the record.

[The information follows:]

Less than 1 percent of all wood shingles and hand split shakes produced are fire retardant treated.

No shingle or shake producers are currently equipped to do treating at the manufacturing plant. Treating is done at an outside facility. The only treatment generally recognized as adequate is the pressure treatment using a process developed and controlled by Koppers Co. Koppers treatment facilities are located at Orrville, Ohio, and Oroville, Calif. Koppers has also licensed the J. H. Baxter Co. to use their process at Eugene, Ore.

Mrs. HANSEN. As you are well aware, some ordinances in some areas prevent the use of wood shingles and shakes because of the fire danger, so that it seems to me that they should begin to treat them with some kind of a fire retardant.

I know you have done the work in this area at your Madison laboratory.

Mr. MCGUIRE. That is right.

Mr. LONG. Madam Chairman, many insurance companies now require this, you know, as part of the insurance policy. It is a very strong, persuasive argument to do the treatment work. I suspect the percentage would be very high.

ECONOMICS OF PARTICLEBOARD

Mr. VEYSEY. On the economics of particleboard for structural purposes, what would be the value of the timber that goes into the particles by the time you figure back the cost of processing as compared with using the regular lumber?

Mr. DICKERMAN. The value of the residue material in structural particleboard would be quite low compared to lumber. In some cases it is almost nil because the process of harvesting and converting it into particles is the big expense in this connection.

Mr. VEYSEY. Even at these high lumber prices it is not really economic or very attractive to do it.

Mr. DICKERMAN. I think as prices move forward the opportunity for this is certainly going to increase.

Mr. VEYSEY. The price is going to move upward?

Mr. DICKERMAN. Forecasting prices is difficult, but the indications are that over the long period of time prices will increase.

Mr. MCGUIRE. I think this has some tremendous application possibility not only in the United States but elsewhere in the world. In Mr. McDade's State there is a lot of low-grade hardwood material that is not satisfactory for lumber at all. Yet it is occupying growing space. If we could find markets for this material this way it would certainly not only improve the growing conditions in these eastern forests but would also provide a way of stretching timber supplies.

But beyond the United States the world has a great deal of hardwood. Look at the Amazon Basin, where you find all kinds of species. Here if you can chip them up and put them back together in board form you have a chance of satisfying a demand in those countries that otherwise cannot easily be met.

They are going to be trying to buy our softwoods I am sure as they grow wealthier. They may be able to build structures out of their own materials if we can figure out the technology.

STATE AND PRIVATE FORESTRY COOPERATION

Mrs. HANSEN. Please insert justification pages 90 through 103 in the record at this point.

[The pages follow:]

GEOGRAPHIC BREAKDOWN OF APPROPRIATIONS

State and Private Forestry Cooperation

	1974 estimate	1975 estimate	Change
		(in thousands)	
Alabama	$760	$835	$75
Alaska	540	550	10
Arizona	145	150	5
Arkansas	685	735	50
California	1,410	1,510	100
Colorado	395	400	5
Connecticut	245	250	5
Delaware	325	330	5
District of Columbia	991	1,006	15
Florida	985	1,045	60
Georgia	1,040	1,160	120
Guam	5	5	- -
Hawaii	100	105	5
Idaho	485	500	15
Illinois	330	335	5
Indiana	575	580	5
Iowa	120	125	5
Kansas	330	320	-10
Kentucky	650	680	30
Louisiana	770	820	50
Maine	670	690	20
Maryland	395	405	10
Massachusetts	310	315	5
Michigan	825	875	50
Minnesota	545	565	20
Mississippi	805	880	75
Missouri	780	825	45
Montana	425	440	15
Nebraska	280	285	5
Nevada	345	345	- -
New Hampshire	205	220	15
New Jersey	410	415	5
New Mexico	230	235	5
New York	1,060	1,120	60
North Carolina	1,010	1,120	110
North Dakota	90	95	5
Ohio	395	410	15
Oklahoma	380	390	10
Oregon	775	870	95
Pennsylvania	1,005	1,065	60
Puerto Rico	110	115	5
Rhode Island	245	250	5
South Carolina	810	885	75
South Dakota	160	165	5
Tennessee	795	855	60
Texas	610	645	35
Utah	255	255	- -
Vermont	175	190	15
Virgin Islands	30	30	- -
Virginia	845	875	30
Washington	850	920	70
West Virginia	375	400	25
Wisconsin	890	945	55
Wyoming	205	210	5
Total	28,181	29,746	1,565

Project (22)

COOPERATION IN FOREST FIRE CONTROL

1973	$25,025,000
1974	20,079,000
1975	20,177,000
Increase	+98,000

An increase of $98,000 is proposed as follows:

(1) To provide for the full year costs of the pay increase effective in fiscal year 1974, $13,000.

(2) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $85,000.

Protection of non-Federal land from destruction by fire is primarily a State and local responsibility. The Federal role is one of providing technical support and financial assistance as incentive to the States in their effort.

Protection from fire is a necessity for the development of all forest resources--water, timber, special forest products, wildlife, forage, and recreation. The Cooperative Forest Fire Control program is authorized by the Clarke-McNary Act of 1924. During the first five-year period of the program (1924-1928) losses from wildfire were high with an average of 262 fires and 58,800 acres burned per million acres protected. This compares with 177 fires and 2,802 acres burned per million acres protected during the most recent five-year period (1968-1972). Another positive factor is the increase in protected area from 284 million acres in 1924 to over 631 million acres in 1972. Protection costs have grown from $1.9 million in 1924 to over $120 million in 1973. Much of the increase in fire control costs is due to the greater use of more effective and expensive new types of equipment and higher operating costs. There has been a significant increase in the use of aircraft in fire detection and suppression which is costly. Also, the decrease in purchasing power of the dollar has had a marked impact. Use of the most effective and modern firefighting equipment is essential in order to get the maximum production of goods and services from the Nation's non-Federal forest and non-forest watershed lands.

Risks of fire continue to increase as a result of greater accessibility of forest lands and a rapidly increasing public use of forest areas. To offset this increased risk, the development of better and more efficient fire equipment must be made. A well trained and properly equipped fire organization is essential if rural America fulfills the expectations of its residents for a safe place to live with adequate job opportunities. Also, if increased investments are to be made and have some assurance they will not be destroyed by fire, protection capability must be improved and increased.

This program enables the State forestry agencies to organize and train effective fire control organizations. Air and water pollution will be lessened by reducing the number of wildfires, especially the large (over 300 acre) disaster-type fires. These are the most destructive as well as the most costly fires. A new fire protection analysis is now underway. Information obtained from this thorough analysis will help to better direct fire organizations efforts in coming years. Law enforcement training will be increased to provide a better means to reduce man-caused fires. Increased emphasis will be made in use of fuels management, including the use of prescribed fire as a tool in the overall fire prevention effort. Results of the national fire prevention study, currently in progress, will be used in implementing an action program.

A formula that applies uniformly to all 50 State cooperators is used in distributing the Federal funds. The formula recognizes the two factors most directly related to fire control:

(1) Extent of the fire protection job.

(2) State and local performance as represented by expenditures.

Each of these factors is given equal weight. The half based on need is termed the "regular allotment" and is determined by a periodic fire protection analysis. A new analysis is currently in progress. The half based upon expenditures uses the average of the most current 3-year State and private expenditures and is termed the "extra allotment." The total of these two parts becomes the Federal allotment to each State. A sliding scale is used to reduce the total allotment to bring total State payments equal to available funds.

The table following this section shows proposed financing for fiscal year 1975 compared with fiscal years 1973 and 1974.

Examples of Recent Accomplishments

Prevention. The results of the fire prevention contactor program initiated in 1968 by the Louisiana Forestry Commission in a high man-caused fire area have indicated very significant results. Average fire occurrence was reduced 50 percent during the 4-year period 1968 through 1971, and 66 percent through 1972 as compared to the 4-year average fire occurrence during the 1964 through 1967 period preceding the project. Other States which have started or plan to use contactor type prevention programs are: Alaska, Colorado, Georgia, Florida, Kentucky, Mississippi, and Tennessee. California hired 43 fire prevention aids under the student assistance program. They were all college students, both male and female, and worked on prevention, inspection, and permit programs. Smokey Bear summer reading programs were established or expanded through local public libraries in Arizona, Florida, South Carolina, California, and Pennsylvania.

Other. Hawaii used helicopters for fire surveillance and early detection. There were State bans on open burning in Nebraska and Alaska, and Wyoming had Smokey Bear Day proclaimed by the Governor. Maryland started a Junior Forest Ranger Program, and Minnesota held a special meeting with railroad officials operating in the State which helped to reduce fires caused by railroad operations. Wisconsin held special fire investigation training prior to the fire season which helped to increase apprehension of fire starters. One group apprehended had started 20 fires. Effective and fast first attack held the number of large fires to 327 which is the least number in the past 10-year period.

32-043 O - 74 - 20

Project (22)

COOPERATIVE FOREST FIRE CONTROL

	State and Private Funds Expended FY 1973	Federal Allotments FY 1973	Federal Allotments FY 1974	Federal Allotments FY 1975 (estimate) 1/
Alabama	$1,948,085	$582,500	$582,200	$582,200
Alaska	3,750,024	359,200	387,400	387,400
Arizona	111,940	65,200	65,200	65,200
Arkansas	1,852,751	536,800	531,200	531,200
California	21,588,809	1,284,500	1,243,100	1,243,100
Colorado	1,573,930*	246,600	297,700	297,700
Connecticut	243,303*	144,300	138,000	138,000
Delaware	69,114	50,600	50,400	50,400
Florida	8,311,208	720,500	706,700	706,700
Georgia	7,004,065	760,100	735,500	735,500
Hawaii	107,188	66,300	65,700	65,700
Idaho	691,489	399,200	388,600	388,600
Illinois	434,519	144,800	162,100	162,100
Indiana	293,587*	98,900	101,100	101,100
Iowa	122,754	71,500	69,200	69,200
Kansas	884,310	228,800	242,200	242,200
Kentucky	1,287,434*	434,400	435,100	435,100
Louisiana	3,228,476	645,400	635,300	635,300
Maine	2,062,305	507,100	501,000	501,000
Maryland	974,513	277,800	281,500	281,500
Massachusetts	598,377	250,500	242,200	242,200
Michigan	3,304,423	638,900	625,300	625,300
Minnesota	970,544	410,100	396,800	396,800
Mississippi	3,493,727	623,300	628,500	628,500
Missouri	1,043,866	522,200	531,200	531,200
Montana	1,044,626	221,000	234,700	234,700
Nebraska	817,163	199,500	207,800	207,800
Nevada	385,278	220,500	228,100	228,100
New Hampshire	426,849	137,800	134,700	134,700
New Jersey	1,000,882	290,500	295,600	295,600
New Mexico	104,045	89,600	88,300	88,300
New York	2,012,513	537,200	537,600	537,600
North Carolina	4,128,762	672,000	662,200	662,200
North Dakota	36,901	38,700	38,200	38,200
Ohio	535,798	234,400	228,600	228,600
Oklahoma	739,614	277,000	298,200	298,200
Oregon	3,844,517*	676,500	660,100	660,100
Pennsylvania	3,316,676	503,500	506,000	506,000
Rhode Island	233,343*	78,400	76,300	76,300
South Carolina	3,440,253	611,500	613,000	613,000
South Dakota	359,613	94,400	102,000	102,000
Tennessee	2,535,917	613,200	607,400	607,400
Texas	1,641,258	439,700	443,300	443,300
Utah	466,277	156,700	158,000	158,000
Vermont	97,575*	78,900	76,400	76,400
Virginia	2,279,647	566,000	565,200	565,200
Washington	5,655,418*	677,400	663,300	663,300
West Virginia	699,824	259,300	258,100	258,100
Wisconsin	3,032,610	615,400	616,000	616,000
Wyoming	284,570	132,900	149,200	149,200
Administration, inspection, prevention and special services		1,533,500	1,587,500	1,685,500
Reserve		5,000,000		
Total	105,070,670	25,025,000	20,079,000	20,177,000

* Estimated expenditures. Actual fiscal year 1973 expenditures not available.

1/ While the amount available to a State may, if the allotment is small, exceed previously computed expenditures by that State, the actual payment to a State never exceeds State and private funds expended by or under the control of the State.

Project (23)

COOPERATION IN FOREST TREE PLANTING

1973	$327,000
1974	332,000
1975	333,000
Increase	+1,000

An increase of $1,000 is proposed to provide for the full year costs of the pay increase effective in fiscal year 1974.

This program provides financial and technical assistance to cooperating States in the production, acquisition, and distribution of tree seed and planting stock for forest and windbarrier plantings on non-Federal lands. Seed and trees thus furnished at modest cost form the backbone of current public forestation efforts which contribute to increased timber production and the enhancement of environmental values, including public recreation, wildlife habitat, and pollution abatement.

Program funds are used to assist the States in meeting the cost of seed extraction, seedling production, nursery maintenance, and other operations.

The procedure for allotment of funds provides for a project approach with funds to be allocated on the basis of projects which will be designed to stimulate more efficient nursery operations. Proposals to date include projects such as:

(1) Containerized seedling production.

(2) Mechanized seedling harvest.

(3) Development of improved methods for seedling storage.

The number of trees that States shipped to landowners during each of the past four fiscal years follows:

Year	Federal-State Coop. Program--Seedlings
1969	523,986,000
1970	494,941,000
1971	550,797,000
1972	552,997,000

Examples of Recent Accomplishments

Production of improved genetic quality seedlings. Improved genetic quality forest tree seed is becoming available for seedling production at a rapidly increasing rate. For example, during the 1972-73 season, seed orchard seedling stock amounted to over 100 million seedlings, which means that about 140,000 acres will be growing more wood than would be the case if regular seeds were used.

REGULAR ALLOTMENTS TO STATES

	FY 1974	FY 1975
Arizona	$3,000	$6,000
Colorado	7,000	7,000
Delaware	2,500	2,500
Guam	2,500	2,500
Idaho	12,000	10,000
Kansas	12,000	10,000
Montana	12,000	10,000
Nebraska	8,000	8,000
Nevada	12,000	12,000
New Jersey	2,500	2,500
New Mexico	12,000	10,000
North Dakota	12,000	12,000
Oklahoma	9,000	9,000
Puerto Rico		2,500
Rhode Island	2,000	2,000
South Dakota	12,000	10,000
Utah	12,000	10,000
Wyoming	4,000	4,000

Project (23)

SPECIAL PROJECT ALLOTMENTS TO STATES

	FY 1974	FY 1975
Alabama (Auburn University Project--weed control)	$26,000	$26,000
Arkansas (soil analysis)	750	
California (packing shed)	2,400	
Colorado (containerized seedlings)	1,000	
Connecticut (irrigation)	618	
Delaware (cold storage)	1,750	
Idaho (transplanter)	3,000	
Illinois (foliage analysis)	955	955
Indiana (drainage)	3,000	
Kansas (containerized seedlings)	10,000	
Maine (seedling harvester)	3,000	
Mississippi (seedling harvester)	2,500	
Nebraska (seed source)	2,000	
Nevada (tree nursery)	3,000	
New York (seedling storage)	6,784	
Pennsylvania (cone harvester)	4,000	1,000
Utah (seed production)	3,000	

Project (24)

COOPERATION IN FOREST MANAGEMENT AND PROCESSING

1973	$5,015,000
1974	5,052,000
1975	5,574,000
Increase	+522,000

An increase of $522,000 is proposed as follows:

(1) To provide accelerated technical assistance in systems analysis to sawmill operations through State forestry agencies, $460,000.

(2) To provide for the full year costs of the pay increase effective in fiscal year 1974, $19,000.

(3) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $43,000.

This assistance will ultimately increase volume recovery of lumber by 15 percent over current yields from cooperating sawmills. Teams of Forest Service-State forestry specialists will work with medium-size sawmills having a combined annual capacity of 3 billion board feet. An increase in production of 450 million board feet per year is anticipated at a Federal cost of $1.25 per thousand board feet. General forestry assistance funds (Project 25) will be used to supplement the total cost ($550,000) of this project.

Through State-Federal cooperative programs, technical assistance is provided to private nonindustrial woodland owners, loggers, wood-using industries, communities, and organizations concerned with the protection, management and use of forest resources. On-the-ground assistance is provided by State professional personnel with training and expert backstopping by Federal specialists.

Three-fifths of the productive forest land in the United States, or 296 million acres, is in the hands of nonindustrial private owners. Most of them lack the technical forestry skills required to manage the lands to provide their share of the Nation's needs for forest products and services. The program provides technical assistance to these landowners through State service foresters to increase the flow of timber and nontimber products and to improve environmental values. State service foresters provide on-the-ground leadership for the forestry practices under the Rural Environmental Conservation Program, particularly Forestry Incentives. Technical assistance is given to loggers, sawmill, and other plant operators to improve logging, processing and business methods to improve the supply of softwood lumber and plywood through the reduction of wood waste and increased utilization of wood residue.

State forestry personnel and rural communities provide specialized forestry assistance to Rural Development Committees throughout the Nation. State personnel serve State committees, sub-State units, and rural communities, thereby strengthening the overall effectiveness of local rural development efforts.

Technical assistance is provided in cooperation with the State forestry agencies in 50 States, Puerto Rico, and the Virgin Islands. Significant thrusts of the programs are to develop opportunities for private consulting foresters to establish and expand their forestry assistance operations.

Base level Federal appropriated funds are distributed to the States by formula which is applied to each State's need and performance.

(1) Need is based on the number of small woodland owners in the State and the acres of commercial forest owned expressed as a percentage of the total in the Nation.

(2) Performance is based on State funds expended in excess of Federal funds. The excess is determined for each State and then expressed as a percentage of the total excess for all States.

(3) The average of the need and performance percentages for each State represents the State's share of total funds available for distribution.

(4) The minimum allotment to any participating State is $30,000.

Increase will be distributed to States on the basis of appropriation intent and opportunities for increased productivity and accomplishment. Distribution factors will include:

(1) Number of sawmills in the State expressed in terms of national ranking.

(2) Roundwood removals in the State expressed in terms of national ranking.

(3) Ability and interest of the State in participating in sawmill analysis.

Major work accomplishments are shown in the following table:

Major Benefits	Unit	FY 1973	FY 1974
Woodland owners assisted	No.	107,600	110,000
Forest products operators assisted 1/	No.	5,900	7,200
Incidental forestry assistance	No.	178,000	178,000
Area of woodland involved	Acres	5,400,000	7,200,000
Volume harvested under improved practices 2/	MBF	765,970	800,000
	Cords	1,912,995	1,500,000
Area of timber stand improvement 2/	Acres	266,000	373,000
Area planted or seeded 2/	Acres	295,000	344,000

1/ The reporting in this category reflects only those operators assisted which resulted in known product output increases. Assistance is reflected in incidental assistance when product output is unknown.

2/ The reported figures reflect the changing program thrust and increased emphasis on stand establishment and stand management in woodland owner assistance.

Examples of Recent Accomplishments

Maine. Increased demand for wood products coupled with decreasing numbers of woods operators to harvest these products caused the Maine service foresters to target activities towards assisting the remaining operators. This assistance was directed toward improving methods of operations, putting operators and woodlot owners in contact, and periodic visits to cutting operations to insure that the landowner, the woods operator, and the forest resource of the State received equal consideration in carrying out the harvest operation.

Timber stand improvement activities increased through the efforts of the service forester in organizing contract crews to perform woods work for forest landowners. Speculation in land and greatly increased land values result in some reluctance to make capital investments in forest improvement. However, there is increasing awareness that a fully-stocked, well-managed forest can provide regular income and enhance property values.

Assistance to a wood processing firm in the form of an operations analysis resulted in an increased production of nearly 200 thousand board feet of lumber from material that was previously chipped. The firm is also constructing facilities for kiln drying lumber to reduce losses by drying defects. Employment has increased from 60 to 100 people. It is estimated that the State of Maine will realize an additional $26,000 in taxes annually from the increased production. Total Federal Government cost of the assistance was $1,500.

Wyoming. Technical assistance to landowners whose primary interest is cattle grazing has demonstrated that timber growing and grazing are compatible uses for their ownerships. Thinning recommended in mountain pine beetle infested stands: (1) produced immediate income for the owner; (2) will result in increased forage production; (3) increased the growth rate of remaining timber stand; and (4) reduced the likelihood of more serious loss from an increased mountain pine beetle population.

Idaho. Farmers Home Administration required an appraisal of standing timber in order to approve a loan. On the advice of the service forester the owner hired a private consulting forester to prepare the necessary appraisal and management plan for the woodland property. The consultant referred the owner to the service forester for: (1) training in timber marking; (2) recommendations on improving his recreation business; and (3) carrying out logging operations.

The close cooperation between private, State, and Federal employees has contributed to the success of the property owners' operation.

North Carolina. In a three county area in North Carolina, 25 forest landowners have retained private consulting foresters under continuing management contracts. The local service forester is responsible for direct referral of the landowners to private consultants on 17 of the 25.

Alaska. Sawmill clinics were again conducted in the villages of Tanana and Ruby, Alaska, and one in Huslia by State and Forest Service teams. Instruction was given in proper sawing of lumber and processing logs for house construction. Cooperation with the Bureau of Indian Affairs is initiating a program to construct 1,200 homes in Native villages. Locally manufactured lumber will play an important role in construction. The end result will be to raise the quality of the living structures in these remote areas.

Nebraska. As a result of one individual's work on promoting the establishment of wood shavings mills, there are now 7 mills employing 34 people. Annual production is over 1 million bales of shavings through a capital investment of nearly $500,000. The shavings are made from wood waste that was previously burned.

Florida. How much is standing timber worth? During the average work week of a forester, this question often arises and is not easily answered unless a specific tract of timber is under discussion. Many factors affect price--species, quality, size, volume per acre to be cut, logging conditions, distance to the mill, and market demand. The efficiency and equipment of the logger doing the cutting and the marketing knowledge of the landowner also play a part in the price received for standing timber.

Recently a farm was listed for sale for $75,000. No offers were received for 6 months. Finally, a businessman offered to buy the farm without the timber for $59,000. He thought that the value placed on the merchantable timber was too high. At this point, the landowner requested marketing assistance for the timber from his local service forester. After a detailed explanation of timber values and present demand, the landowner was referred to a local consulting forester for a timber cruise and marketing assistance. Recently, he advised that the timber appraisal indicated a merchantable volume of nearly 500,000 board feet of sawtimber and over 700 cords of pulpwood. The timber was advertised and sold lump sum--the highest bid received was $45,000.

Project (24)

The following table shows proposed financing in fiscal year 1975 compared with fiscal years 1973 and 1974:

	FY 1973	1974 estimate	1975 estimate
Alabama	$115,200	$111,200	$133,600
Alaska	21,800	23,000	23,000
Arizona	19,400	20,000	22,400
Arkansas	95,600	92,300	109,500
California	90,400	78,300	111,500
Colorado	53,200	52,800	57,200
Connecticut	34,100	33,900	33,900
Delaware	23,000	22,000	22,000
Florida	196,500	189,600	194,800
Georgia	215,200	207,700	228,100
Hawaii	18,800	28,000	28,000
Idaho	40,500	39,100	52,300
Illinois	66,500	69,100	71,500
Indiana	61,500	62,500	67,300
Iowa	42,900	42,500	42,500
Kansas	34,900	35,100	35,100
Kentucky	152,300	155,000	163,800
Louisiana	92,600	89,400	102,200
Maine	108,800	105,000	109,000
Maryland	77,100	78,200	82,200
Massachusetts	42,400	41,900	41,900
Michigan	130,800	126,200	135,400
Minnesota	96,100	97,500	101,500
Mississippi	124,100	126,000	144,400
Missouri	146,300	150,100	152,500
Montana	55,000	53,100	61,500
Nebraska	36,300	36,100	36,100
Nevada	34,000	33,000	33,000
New Hampshire	54,500	52,600	55,000
New Jersey	43,100	42,900	42,900
New Mexico	46,700	43,600	47,200
New York	162,300	167,600	174,000
North Carolina	249,800	258,000	282,000
North Dakota	30,300	30,200	30,200
Ohio	104,900	106,100	110,900
Oklahoma	37,300	37,600	37,600
Oregon	65,900	63,600	108,800
Pennsylvania	143,900	147,300	156,100
Puerto Rico	30,000	30,300	30,300
Rhode Island	30,000	25,000	25,000
South Carolina	126,000	121,600	135,600
South Dakota	32,300	32,300	32,300
Tennessee	91,400	92,500	104,500
Texas	83,300	84,600	96,200
Utah	35,400	33,800	33,800
Vermont	85,600	82,600	86,200
Virgin Islands	7,600	13,000	13,000
Virginia	193,700	202,600	220,600
Washington	72,000	72,200	95,400
West Virginia	80,300	81,100	90,300
Wisconsin	189,300	193,600	200,400
Wyoming	33,400	32,200	32,200
Total to States	4,254,300	4,245,500	4,636,700
Forest Service administration	760,700	806,500	937,300
Total appropriation	5,015,000	5,052,000	5,574,000

Project (25)

GENERAL FORESTRY ASSISTANCE 1/

1973	$2,670,000
1974	2,718,000
1975	3,662,000
Increase	+944,000

An increase of $944,000 is proposed as follows:

(1) $90,000 for accelerated technical service to sawmill operators aimed at increasing lumber recovery through improved sawing efficiency. This will supplement a major effort in cooperation with State forestry agencies (see Project (24)).

(2) $750,000 for conducting an intensive technical assistance program directed at loggers to improve harvesting methods. An additional 400 million board feet of lumber can be put on the market annually at a cost of $1.40 per thousand board feet by providing expanded assistance to loggers in felling and bucking practices, use of tree length logging systems, and increasing topwood and stump utilization. Improved harvesting techniques would also reduce the environmental impact of logging operations. Assistance would also be provided to landowners, loggers, and pulp companies to assure the best end use for products from the woods through log sorting and installation of chipping saws. Services would be made available through various contractual arrangements with State foresters, training institutions, private consulting firms, and equipment manufacturers.

(3) $46,000 to provide for the full year costs of the pay increase effective in fiscal year 1974.

(4) $57,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(5) $1,000 for wild and scenic river studies on State and private lands.

General forestry assistance funds are used to accomplish highly specialized forestry assistance not available through other Forest Service cooperative programs. A major portion of the funds is used to provide professional assistance to State forestry agencies, woodland owners, associations, and the wood industry to enhance rural community development and to achieve more efficient management, increase production, and improve processing of the Nation's timber resources.

General forestry assistance funds are used to provide expert forest resource management and use assistance in such activities as:

(1) Land use planning.
(2) Multiple use management.
(3) Dissemination of forest research findings.
(4) Forest products utilization.
(5) Continuous forest inventory.
(6) Forest hydrology.
(7) Advisory management services provided to State forestry agencies, including organizational management training.
(8) Special studies.
(9) Wild and scenic river studies.

- - - - - -

1/ For comparability, following amounts for Wild and Scenic River Studies on State and private lands are shown under this activity rather than under Soil and water management as appropriated: 1973, $200,000; 1974, $159,000; 1975, $160,000.

Technical assistance is provided directly by the Forest Service or through specific agreements with State foresters, colleges, and/or private contractors.

The Forest Service has lead responsibility for the Department of Agriculture relating to studies under the Wild and Scenic Rivers Act of 1968. In addition to the rivers assigned to the Department, the Forest Service coordinates USDA input to Interior-led studies. For fiscal year 1975, some work remains on the original 17 Interior-led studies. In addition, a number of rivers have been proposed for detailed study, under Section 5(a) of Wild and Scenic Rivers Act (PL 90-542). Funds ($160,000, an increase of $1,000) will be used to carry out the full Federal responsibility and to augment the States' efforts under the Act. These activities are needed to fulfill the Nation's demand for a quality environment.

Examples of special projects currently being conducted are:

(1) Rural development and cooperative area land use planning. Special efforts are being made to involve State foresters in cooperative area land use planning and rural development. These efforts are directed toward improving the use of forest resource in all aspects of State and local planning and development. Forest planning and development provides a multitude of benefits to rural communities, such as:

  (a) Employment for local workers.
  (b) Recreation for resident and non-resident visitors.
  (c) Adequate supplies of quality water.
  (d) Raw materials such as timber and specialty products that will increase income and jobs.

(2) Special emphasis is being directed toward involving State forestry organizations in the land use planning effort. State forestry personnel are being placed in State Planning Agencies to insure forestry and natural resource inclusion into State land use plans. This is extremely important in order to provide ample consideration for the natural resources and be able to supply adequate timber, recreation, range, water and wildlife resources for the future. Such efforts are underway in Alabama, Alaska, Arkansas, Maine, New Mexico, Pennsylvania, Texas, Utah, and Washington.

(3) Forestry aggregate. Many private nonindustrial forest landowners lack knowledge of forest management and marketing practices. Because of this many of these ownerships are not managed to produce forest products beyond a level which accrues in unmanaged forest stands. A pilot test of aggregation to improve the effectiveness of technical assistance delivery and to provide management and marketing assistance to members of the aggregate organization through the hire of a private consulting forester is underway in Alabama.

(4) Forest products utilization. State and Forest Service personnel, working closely with private consultants and university staff members are extending the Nation's supply of forest resources by determining new and better uses for logging and milling residues and low quality trees. For example, the processing and merchandising of sawdust, bark, and even twigs and needles, has expanded dramatically since foresters began analyzing the benefits of using these materials for soil amendments and as a mulch.

(5) Minority forest landowners. Application of operational governmental programs to further the potential of minority landowners to manage their forest land is the major emphasis of an on-going project in the South. This effort is the culmination of a project completed in the summer of 1973.

(6) A project in New York is directed at analyzing various machines and systems for logging small woodlots in Northeastern United States and the development of suitable systems for the utilization of forest products.

(7) In Vermont, a project is underway to stimulate the acceptance and use of hemlock, heretofore a little used species, for building materials in residential and industrial construction. Expanded use of local woods will relieve pressures on construction material processed in the West and South.

(8) An on-going project in Maine is providing foresters the means to carry out an effective salvage program on the approximately 500 thousand of acres of spruce-fir timber that has been killed by the spruce budworm. Millions of board feet of lumber are being saved while providing jobs and income to local citizens.

Additional projects currently in operation provide special assistance in forest land inventory and multipurpose management techniques--all designed to improve the Nation's forest land.

Examples of Recent Accomplishments

Sawmill improvement program. An accelerated technical assistance program aimed at increasing lumber recovery at sawmills has produced dramatic results since its inception in June of 1973. In four months' time, teams of State forestry and Forest Service personnel have analyzed 110 sawmills. This service identifies ways of reducing wood waste and predicts, through the use of a computer, what recovery standards can be expected if certain changes are made. Preliminary data show that a 13 percent improvement in lumber recovery can be obtained through quality control alone. One hundred sawmills, in addition to those already served, have requested the assistance. The program is operating in 32 States and is limited to softwood lumber producing mills. Requests for followup assistance in mill design and installation of new equipment will be referred to private consultants.

Development of nonindustrial private forest resources in Texas. Under contract with the Texas Forest Service, a proposed 30-year program for the development of the nonindustrial private forest resources of East Texas was drawn. This in-depth study provides the guidance and framework for targeting activities in timber management for the present and immediate future. The report shows that the greatest need is in reforestation and timber stand improvement on the 7,178,000 acres of farmer and miscellaneous private forest ownerships in East Texas. The State forester has directed his organization to give emphasis to this need in all of their activities.

The "Trees for Texas" program that is suggested to motivate private forest landowners requires State, industry, and private funding in order to be fully implemented. Efforts are currently directed toward obtaining this funding.

Utilization of low-grade hardwood logs, Princeton, West Virginia. A workshop was held in Princeton, West Virginia in 1971 to fully acquaint forest products utilization practitioners with innovative ways developed by research of utilizing low-grade hardwood logs through the so-called "SHOLO" process. As a result of this workshop, subsequent follow-up, and promotional activities of forest products utilization specialists, two new wood pallet processing "SHOLO" plants have begun operations in West Virginia. Total production exceeds 50 thousand board feet of previously unused timber and 12 local workers have secured gainful employment.

Use of pine bark for mulch. As a direct result of assistance provided by a Forest Service marketing specialist, a large, national wood-using firm went into the production and marketing of pine bark for use as mulch. Annual production is now nearly 8,000 tons of bark -- material that was previously burned. The company is now considering producing hardwood bark mulch and compressed fireplace logs to be marketed in the East.

Project (25)

Improved hardwood log processing operation. A Southern wood-processing firm, facing dwindling supplies of timber, requested an analysis of their hardwood log processing operation. Information was needed on improved processing methods and data were required to aid in a rational decision as to future plans of the firm. A team of two Forest Service wood utilization specialists conducted the analysis. As a result, the company changed product lines, improving the utilization of available timber, and reducing the raw material requirements. At the same time they increased employment opportunities for local workers.

Regional Land Use Plan and Voyaguers National Park Perimeter Policies Plan, Minnesota. The Arrowhead Regional Planning Commission in Northeastern Minnesota, the Minnesota Department of Natural Resources and the Forest Service have an arrangement whereby a full-time person is providing specialized planning assistance to the Arrowhead Regional Commission. Through Forest Service funding, a Regional Land Use Plan and Voyaguers National Park Perimeter Policies Plan are being prepared. In addition, program design and work statements are being updated. A new element concerning timber resources for the region was completed for inclusion in the revised program design.

COOPERATION IN FOREST FIRE CONTROL

Mrs. HANSEN. You are requesting an increase of $98,000 for cooperation in forest fire control, which is precisely the rent and the pay costs. This will provide a total program of $20,177,000.

What is your total authorization for the Clark-McNary program?

Mr. THORNTON. Madam Chairman, if I may, for the record, this marks the 50th anniversary of this particular piece of legislation that authorized the cooperative forestry programs. Our authorization is $40 million now.

Mrs. HANSEN. Your authorization was raised in order to provide better fire cooperation between the States and the Federal Government.

Mr. THORNTON. That is correct.

Mrs. HANSEN. Will you please insert in the record the appropriations for this activity from 1965 through 1974? Also include the estimated inflationary costs during this period.

[The information follows:]

COOPERATION IN FOREST FIRE CONTROL

[In thousands of dollars]

	Appropriation	Inflationary costs [1]
Fiscal year:		
1974	[2] 20,079	(3)
1973	[4] 20,025	8,627
1972	20,000	7,048
1971	16,530	5,081
1970	16,440	4,008
1969	14,396	2,496
1968	14,357	1,642
1967	12,834	864
1966	12,803	394
1965	12,783	

[1] 1958 base GNP adjustment rate.
[2] Includes $79 proposed supplemental for increased pay costs.
[3] Not available.
[4] Excludes $5,000,000 transferred to forest land management for fighting forest fires.

Mrs. HANSEN. So what you have literally done is said to the States, "You must pay more of this cost."

Isn't this true?

Mr. THORNTON. The State contribution has been increasing over that period of time; that is correct.

Mrs. HANSEN. Were part of the revenue sharing funds supposed to be used for this purpose?

Mr. THORNTON. No, ma'am. Maybe I didn't understand your question. There are no revenue sharing dollars going into this program.

Mrs. HANSEN. You can't be sure what the States are using their funds for.

Mr. THORNTON. You are right.

Mrs. HANSEN. You know exactly who is paying for these costs—the owners of land.

Mr. THORNTON. Yes, ma'am.

Mrs. HANSEN. An interesting part of my tax statement is that the largest percentage increase has been in what they call the fire patrol. The fire patrol costs are going up, and up, and this affects not only the

large owners but the many small woodland owners who look to you for assistance.

People who are paying this escalating fire patrol cost are going to cut those trees.

Yet most of the fires are not caused by the landowners. Isn't this correct?

Mr. THORNTON. That is correct.

Mrs. HANSEN. Fires are caused by weather, but in the majority of cases if you own land near any public highway or anything like that it is a cigarette in the brush, or some picnicker that doesn't put his fire out. So the landowner is not the cause of the fire.

Mr. THORNTON. That is correct.

Mrs. HANSEN. Yet they are paying this additional cost.

CAUSES OF FIRE ON STATE AND PRIVATE LANDS

Mr. VEYSEY. Madam Chairman, would you yield?

Mrs. HANSEN. Yes.

Mr. VEYSEY. On that point, could we have for the record a breakout of the causes of fires in the national forests?

Do they have that?

Mr. THORNTON. These are not national forest lands, Mr. Veysey. We will be glad to provide that for the record.

[The information follows:]

CAUSES OF FIRES ON STATE AND PRIVATE LANDS

	Number of fires[1]	Percent
Lightning	4,217	5
Campfires	1,815	2
Smoking	9,186	11
Debris burning	20,394	25
Incendiary	23,750	29
Equipment use	3,327	4
Railroad	6,330	7
Children	6,795	8
Miscellaneous	7,196	9
Total	83,010	100

[1] Table 2, "Wildfire statistics, 1972."

Mr. VEYSEY. That shows a classification by natural causes, by recreation-related, and so forth?

Mr. THORNTON. Yes, sir.

Mrs. HANSEN. I thought you would be moving in the direction of recognizing each year the inflationary costs that go into this item, and this has not been recognized.

Isn't that correct, Mr. Thornton?

Mr. THORNTON. The figures don't reflect that; that is correct.

Mrs. HANSEN. Then all of a sudden the situation is going to become critical and there is going to be an effort to escalate this appropriation so that instead of an ever-reflecting increase in the base which would properly reflect the cost, you are going to have a large increase in one year.

CURRENT STATE DISTRIBUTION FORMULA

Do you plan any changes in the current formula for distribution of funds to the States?

Mr. THORNTON. We have a study with the State foresters under way that we do periodically to revise the way we allocate money to the States, continuing fire protection analysis.

Mrs. HANSEN. That is between States?

Mr. THORNTON. Yes; among the States.

Mrs. HANSEN. Do you want to insert in the record the formula for the allocations?

Mr. THORNTON. Yes, ma'am.

[The information follows:]

COOPERATION IN FOREST FIRE CONTROL—FORMULA FOR FUND DISTRIBUTION

Funds are distributed to States by use of a complex formula. The formula was devised so it could be applied uniformly to all States. It recognizes the two factors most directly related to fire control—(1) extent of the protection job, and (2) State and local performance as represented by expenditures. At the present time, each of these factors is given equal weight. The half based upon need is termed the "regular allotment" and is determined by a periodic fire protection analysis. The most recent analysis was made in 1965. The half based upon expenditures uses the average of the most current 3-year State and private expenditures and is termed the "extra allotment." These two parts added together become the Federal allotment to each State. A sliding scale reduction is also used. The first $300,000 is recognized at 100 percent, the 2d $300,000 unit at 90 percent and so on until all expenditures over $3 million are valued at 5 percent. The sliding scale reduction is necessary because both need and expenditures exceed the amount of Federal funds available. Also, the sliding scale reduction levels the costs and expenditures to broaden the distribution of Federal funds between States. An additional factor used to prevent undue fluctuations is that no State allotment will be reduced more than 3½ percent from the previous year's allotment, provided there is no reduction in Federal funds.

In fiscal year 1972 a slight variation was used to distribute the C–M 2 Federal funds. A total of $13,266,500 was distributed by formula with $5,225,000 being distributed by the percentage each State received of the fiscal year 1971 Federal allotment. This change was agreed to by the executive committee of the National Association of State Foresters. It was necessary because if all Federal funds had been distributed by formula, seven States would not have received any increase in allotment. The seven States are: Arizona, Delaware, Hawaii, Iowa, Massachusetts, North Dakota, and Vermont. The Forest Service position was that all States should share in the increase.

Mrs. HANSEN. I think you know this has been one of the items that the Congress has heard about from every State in this Nation.

Mr. VEYSEY. Madam Chairman, I am puzzled by the fact that in the 1973 Federal allotment, $5 million of that was——

Mrs. HANSEN. That was a congressional addition.

Mr. VEYSEY. What was the final disposition of that?

On the table on page 93 it shows the reserve.

Mr. THORNTON. The final disposition was we were not allowed to distribute that $5 million to the States.

Mr. VEYSEY. Is it still impounded?

Mr. MCGUIRE. The appropriation has lapsed so those funds are no longer available.

ALLOCATION OF CFFC FUNDS TO CALIFORNIA

Mr. VEYSEY. On that point, the table on page 93 puzzles me and I believe I asked a number of questions with respect to it last year. I think that they were going to be looked into and we wanted to find out some real reasons why it is that way. I am struck by the strange disparity with respect to the California distribution which shows about $1.25 million going to California out of a total of something over $20 million. This is about one-sixteenth of the entire amount, somewhat less I am sure than the portion California represents of the Nation, or of the hazard, or anything else, and yet the State and private funds expended are very high for California, $21.5 million, which is one-fifth of the total.

Now, why does California get this exceptional treatment?

Mr. THORNTON. Mr. Veysey, the formula is developed with the State foresters that reflects both the need for forest fire protection and the contributions of the States.

Mr. VEYSEY. Now, both on need and on contribution I suppose California would stand almost in a class alone.

Mr. THORNTON. It does stand in a class alone.

Mr. VEYSEY. But in the distribution it is not fairly treated.

Mr. THORNTON. That is correct. This has been worked out over the years with the State foresters.

Mr. VEYSEY. Why don't we work out something new now that more appropriately represents the factual situation?

Mrs. HANSEN. Where do you spend most of those California funds? Is it in northern California?

Mr. MCGUIRE. This money goes to the State. Most of the State's fire expenditures are in southern California where the big problem lies, but there are substantial fire problems all around the central valley.

When you get into the northwestern part of the State it is a much wetter area and you don't get as much fire.

Mrs. HANSEN. Does part of California's participation come from the owners of this timber?

Mr. MCGUIRE. California is somewhat different. A good part of this non-Federal expenditure is State funded and there the principal source I believe is the State income tax.

However, the counties in southern California do contribute substantial amounts. There the principal source of funding is undoubtedly the property tax.

Mrs. HANSEN. Does California have any fire patrol tax as such?

Mr. MCGUIRE. I think there is no such arrangement any more in California.

Mrs. HANSEN. Is this the case only in my State.

Mr. THORNTON. Oregon, also.

Mr. VEYSEY. Coming back around on this again after our conversation a year ago, I am just not really prepared to accept the concept that because this has traditionally been the way it has been done for so many years it is right. I would like to have you demonstrate to me the equity in those figures. I just don't see it offhand. I don't see that there is anything resembling equity in that division.

I grant you it is traditional but that is not good enough, I would like to see some better argument as to why the division is that way.

Mr. THORNTON. We will be glad to supply that for the record.

[The information follows:]

DISTRIBUTION OF COOPERATIVE FOREST FIRE CONTROL TO CALIFORNIA

The Forest Service distributes funds appropriated for cooperative forest fire protection by a formula procedure developed with and approved by the State foresters. The program operates in all 50 States. The problem of achieving both equity and effective use of these funds is complicated by the fact that the Federal share in aggregate is only about 15 percent of the total of funds expended in this cooperative effort. The remaining 85 percent comes from State and private sources. There is a wide variety in needs and expenditures among the States. California predominates in both categories. A "sliding scale" of discounting is applied to State expenditures so that the weight of that factor in the formula decreases as expenditures arise. This approach is necessary in order to most equitably and effectively distribute the 15 percent of the total funding that comes from Federal appropriations. Many States do not have nearly the fire protection capability that has been established in California. The program is intended to encourage stronger State organizations and to improve protection of forest resources throughout the Nation. The California allotment of Federal dollars under this program is almost twice as much as any other State receives and is more than three times as large as the average amount received. Thus, although the formula approach used nationwide does not fully meet the needs of California, it does reflect to some degree the unique situation in that State.

STATE FIRE PATROL TAX

Mrs. HANSEN. How many States use the basic fire patrol tax on property?

Mr. THORNTON. I will have to give that for the record.

Mrs. HANSEN. Insert the information in the record.

[The information follows:]

Thirty-six States have a tax based on forest or range use which is available for fire protection on the taxed lands.

COOPERATION IN FOREST TREE PLANTING

Mrs. HANSEN. You are requesting an increase of $1,000 for your cooperation in forest tree planting. What does this involve?

Mr. THORNTON. This is a part of the Clark-McNary law that authorizes us to work with the States in production and distribution of tree seedlings.

Mrs. HANSEN. Again the States must be providing a major part of this effort.

Mr. THORNTON. That is correct.

Mrs. HANSEN. What is the total State participation?

Mr. THORNTON. I don't have that figure with me.

Mrs. HANSEN. Please insert the information in the record.

[The information follows:]

In fiscal year 1973, the State expenditures under the cooperation in forest tree planting program amounted to about $6 million and approximately 581.1 million trees were distributed.

Mrs. HANSEN. Do they do their own seed gathering and nursery stock?

Mr. THORNTON. Yes, they do.

Some States have tree orchards or seed orchards that produce better than average seed characteristics. One of our other programs is directed toward assisting in that.

Mrs. HANSEN. This is an area in which your genetics research efforts should have an input.

Mr. THORNTON. In our assistance to States for tree planting activity we can talk about that. It is a different program.

Mrs. HANSEN. How does it happen the States of Oregon and Washington don't have any regular allotments?

Mr. THORNTON. Presumably they didn't ask for one.

COOPERATION IN FOREST MANAGEMENT AND PROCESSING

Mrs. HANSEN. An increase of $522,000 is requested for cooperation in forest management and processing for a total program of $5,574,000. Please explain your program of assistance to sawmill operators.

Mr. THORNTON. This increase is to continue the effort in 1974 where we have a sawmill improvement program underway with the States. This is directed toward applying some of that research we talked about in forest products utilization.

The idea here is to take a log that goes to the mill and get more board feet out of it per cubic foot than would otherwise take place. Studies show that there is a great potential for increasing the timber supply by reducing the waste at the sawmill.

We found from these studies that we can anticipate a 15-percent increase in the yield of lumber from these logs that would otherwise be wasted. We can do this at about the cost of $1.25 per 1,000 board feet.

In 1975 we anticipate analyzing 200 mills and reevaluating 70 additional mills for a net increase in board feet of about 450 million feet.

Mrs. HANSEN. How many States are participating?

Mr. THORNTON. Again I will have to supply that for the record, Madam Chairman.

[The information follows:]

Presently there are 32 States participating in the Sawmill Improvement Program.

MINIMUM/MAXIMUM ALLOTMENTS TO STATES

Mrs. HANSEN. The minimum allotment to any participating State is $30,000. What is your maximum?

Mr. THORNTON. This is based on the total formula in the distribution of the cooperative forest management program.

There is no maximum as such.

GENERAL FORESTRY ASSISTANCE

Mrs. HANSEN. A $944,000 increase is requested for general forestry assistance for a total program of $3,662,000.

Please explain your project to provide assistance to loggers to improve harvesting methods.

Mr. THORNTON. This is a parallel effort to the sawmill improvement program. We are using general forestry assistance funds to initiate a program to reduce the waste in the woods as we are in the sawmills.

Mrs. HANSEN. This is part of the reason, I would think, why you would need the fullest participation in your forest engineering research.

Mr. THORNTON. Again this applies to all the available research.

Cooperative Range Improvements

Mrs. Hansen. Please insert justification page 107 in the record at this point.

[The page follows:]

Cooperative range improvements

Appropriation, 1973	$700,000
Appropriation, 1974	700,000
Budget estimate, 1975	700,000

Part of the grazing fees from the national forests, when appropriated, are used for revegetation of depleted rangelands, construction and maintenance of range improvements, rodent control, and eradication of poisonous plants and noxious weeds. These funds are advanced to and merged with the appropriation, forest protection and utilization, subappropriation, forest land management.

Section 12 of the act of April 25, 1950 (Granger-Thye Act) provides that of the money received from grazing fees by the Treasury from each national forest during each fiscal year there shall be available at the end thereof when appropriated by Congress an amount equivalent to 2 cents per animal month for sheep and goats and 10 cents per animal month for other kinds of livestock under permit on such national forest during the calendar year in which the fiscal year begins.

Since figures for animal months permitted are not available until after more than one-half of the fiscal year for which funds are appropriated has elapsed, the 1975 appropriation request of $700,000 necessarily represents the best current approximation of the amount which will become available in the calendar year 1974 under the animal-months-permitted formula.

For calendar year 1972, the latest available figures, animal months permitted were 6,550,486 for cattle and horses, and 4,539,617 for sheep and goats. This calculates to $745,840 available under the formula.

Construction and Land Acquisition

Mrs. Hansen. Also insert justification pages 108 through 122 in the record at this point.

[The pages follow:]

CONSTRUCTION AND LAND ACQUISITION

Appropriation Act, 1974	$26,443,000
Budget estimate, 1975	24,147,000
Change in appropriation	-2,296,000

SUMMARY OF INCREASES AND DECREASES
(On basis of adjusted appropriation)

	1974 Estimate	1975 Estimate	Increase or Decrease: Pay Costs	Space Rental	Program
Forest land management construction:					
Development of recreation-public use areas--The amount of $1,902,000 is proposed as follows: $728,000 for development of Sawtooth National Recreation Area in Utah; $460,000 for facilities complementary to EO 11507 pollution abatement effort; $48,000 for General Services Administration space costs; and $666,000 for the development of facilities in critical areas of need defined in land-use plans. ...	$1,075,000	$1,902,000	$63,000	$48,000	$716,000
Water resource development construction--It is proposed to apply $2,153,000 to the construction of nondeferrable recreation facilities at reservoir projects of other agencies and to construct facilities required to protect the natural resource as result of recreation use; $52,000 will be used to pay General Services Administration for space costs.	169,000	2,205,000	35,000	52,000	1,949,000
Construction for fire, administration, and other purposes--The amount of $1,688,000 is programed to construct projects necessary to support forest land management activities; $41,000 will be used to pay General Services Administration for space costs. The program excludes minor construction costing less than $25,000 and radio replacement.	1,103,000	1,729,000	45,000	41,000	540,000

SUMMARY OF INCREASES AND DECREASES--continued
(On basis of adjusted appropriation)

	1974 Estimate	1975 Estimate	Increase or Decrease		
			Pay Costs	Space Rental	Program
Forest land management construction--continued					
Land acquisition, Weeks Act--It is proposed to use $688,720 to acquire an estimated 13,000 acres in the Redbird Purchase Unit in Eastern Kentucky; $887,280 for approximately 7,556 acres in the Eastern United States; and $2,000 for General Services Administration space costs.	$1,300,000	$1,578,000	$16,000	$2,000	$260,000
Research construction--Decrease is due to non-recurring construction projects.	5,058,000	- -	- -	- -	-5,058,000
Pollution abatement--It is proposed to use $6,671,000 for five water pollution abatement projects approved by the Office of Management and Budget for funding in 1975 under EO 11507; $9,746,000 for surveillance, monitoring and corrective action on both point and non-point discharges (PL 92-500) to meet pollution abatement standards set by States or by Federal regulatory agencies; and $316,000 for General Services Administration space costs.	17,738,000	16,733,000	713,000	316,000	-2,034,000
Total	26,443,000	24,147,000	872,000	459,000	-3,627,000

PROJECT STATEMENT
(On basis of adjusted appropriation)

Project	1973	1974 Estimate	1975 Estimate	Increase or decrease: Pay Costs	GSA Space	Program
(1) Forest land management construction:						
(a) Development of recreation-public use areas	$7,191,400	$1,075,000	$1,902,000	$63,000	$48,000	$716,000
(b) Water resource development construction	3,190,000	169,000	2,205,000	35,000	52,000	1,949,000
(c) Construction for fire, administration, and other purposes	2,328,500	1,103,000	1,729,000	45,000	41,000	540,000
(2) Research construction	5,145,000	5,058,000	- -	- -	- -	-5,058,000
(3) Pollution abatement	29,636,000	17,738,000	16,733,000	713,000	316,000	-2,034,000
(4) Land acquisition, Weeks Act	1,304,000	1,300,000	1,578,000	16,000	2,000	260,000
Total appropriation	48,794,900	26,443,000	24,147,000	872,000	459,000	-3,627,000

PROJECT STATEMENT
(On obligation basis)

Project	1973	1974 Estimate	1975 Estimate	Increase or decrease: Pay Costs	GSA Space	Program
(1) Forest land management construction:						
(a) Development of recreation-public use areas	$2,819,362	$4,771,322	$1,902,000	$63,000	$48,000	-$2,980,322
(b) Water resource development construction	1,735,250	2,123,750	2,205,000	35,000	52,000	-5,750
(c) Construction for fire, administration, and other purposes	1,685,404	2,246,596	1,729,000	45,000	41,000	-603,596
(2) Research construction	1,189,999	6,457,924	- -	- -	- -	-6,457,924
(3) Pollution abatement	20,268,614	36,358,723	16,733,000	713,000	316,000	-20,654,723
(4) Land acquisition, Weeks Act	1,543,060	1,302,956	1,578,000	16,000	2,000	257,044
Total obligations or estimate	29,241,689	53,261,271	24,147,000	872,000	459,000	-30,445,271
Unobligated balance brought forward	-7,265,060	-26,818,271	- -	- -	- -	26,818,271
Unobligated balance carried forward	26,818,271	- -	- -	- -	- -	- -
Appropriation or estimate	48,794,900	26,443,000	24,147,000	872,000	459,000	-3,627,000

CONSTRUCTION AND LAND ACQUISITION

Appropriation Act, 1973	$48,794,900
Appropriation Act, 1974	26,443,000
Budget estimate, 1975	24,147,000
Decrease	-2,296,000

A net decrease of $2,296,000 in budget authority is proposed as follows:

(1) An increase of $872,000 to provide for the pay increase effective in fiscal year 1974.

(2) An increase of $459,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(3) A decrease of $3,627,000 due to non-recurring construction projects.

The program provides for the construction and improvement of buildings, utilities, other physical facilities estimated to cost more than $25,000, and land acquisition throughout the National Forests and National Grasslands. The financing for the numerous relatively minor construction projects is provided by the operating and research programs of which such minor construction items are an integral part.

(1a) Development of recreation-public use areas (An appropriation increase of $827,000 is requested. On the basis of program level there will be a decrease of $2,869,322 from the 1974 level of $4,771,322.)

The proposed program level of $1,902,000 will provide for new construction in 3 areas, completion of construction started in previous years at 2 sites, reconstruction at 31 sites, and completion of visitor information facilities previously started in 3 sites.

Projected recreation use in 1975 will reach 202.5 million visitor-days, an increase of 11 percent over 1971. The following table illustrates this increase in use and the capacity of National Forest campgrounds and picnic grounds.

Comparison of Capacity and Use Increases at Campgrounds and Picnic Grounds

	Fiscal Year				
	1971	1972	1973	1974*	1975*
Campgrounds					
Capacity (thousands of people-at-one-time)	420.0	423.0	424.4	425.7	427.5
Increase in capacity over previous year (percent)	2.2	0.7	0.3	0.3	0.4
Measured and projected increase in use over previous year (percent)	6.0	3.0	3.0	2.0	2.2
Picnic Grounds					
Capacity (thousands of people-at-one-time)	111.4	113.1	103.7	105.2	105.9
Change in capacity over previous year (percent)	-1.8	1.5	-8.3	1.4	0.7
Measured and projected increase in use over previous year (percent)	6.0	3.0	3.0	2.0	2.2

* Projected

The program includes:

Reconstruction or quality improvement which consists of replacing or upgrading worn-out, vandalized, or inadequate facilities, including water and sanitation systems, tables, stoves, traffic control structures, bathhouses, and refuse handling facilities. Increases in capacity do not normally result from this

kind of work. Benefits are derived from extending the service life of facilities, maintaining and improving the opportunity for a recreation experience, and preventing unnecessary site deterioration and degradation of the surrounding environment through pollution.

New construction results in increased capacity which will relieve some overcrowding and use at existing sites and provide facilities to accommodate increased use. It will alleviate sanitation and cleanup problems and soil and vegetation deterioration in some general forest areas.

Emphasis is being placed on completion of projects started in previous fiscal years and on rehabilitation of worn-out facilities at heavily used recreation sites. A list of proposed projects is included in Exhibit I.

Visitor Information Service facilities will be developed to meet visitor needs for orientation and environmental education dealing with natural resource management of the National Forests. Construction consists of visitor center exhibits, interpretive trails, amphitheaters, wayside exhibits and scenic overlook interpretive signs. Emphasis will continue to be placed on the development of low cost, high quality facilities and services. A list of proposed facilities is included in Exhibit I.

(1b) Water resource development construction ($2,205,000, an appropriation increase of $2,036,000. On the basis of program level there will be an increase of $81,250 from the fiscal year 1974 level of $2,123,750.)

This program level will allow construction of non-deferrable projects (facilities that should be constructed prior to impoundment of water) at 5 reservoirs constructed by other agencies and essential facilities at 8 other reservoirs. A list of proposed fiscal year 1975 projects is included in Exhibit II.

The Forest Service is responsible for designing and developing public use facilities on National Forest System lands at, and adjacent to, project reservoirs built by other agencies. Impact survey findings, recommendations, and environmental statements provide for the protection of water quality and fulfillment of other project purposes by pointing the way to carefully designed public use development tailored to individual project needs. Facilities include sanitation improvements, camping and picnic sites, swimming beaches, boat ramps, and other public use and information facilities. To serve their intended purpose, these facilities should be installed in time to meet the initial impact of visitor use when a reservoir fills. Installation during the construction period is generally less expensive than after completion of the project.

Examples of Recent Accomplishments

In National Forest developed sites, there was an increase in persons-at-one time capacity of 5,508 in fiscal year 1973. Capacity of sites developed under concession and recreation use permits also increased during fiscal year 1973 by 20,865 persons-at-one-time.

One of the more spectacular construction projects in fiscal year 1973 included Blanchard Springs Caverns in the Ozark-St. Francis National Forests in Arkansas. Facilities in the first phase of development were completed and the caverns opened for safe use by the public on July 7, 1973. From opening day to Labor Day, 2,300 persons per day viewed the visitor center and applied for a tour of the caverns. Existing tour facilities accommodated 1,800 persons per day.

Fiscal year 1974 projects include continuing construction previously started at 3 public use sites resulting in increased capacity of over 890 persons-at-one-time; construction at 16 reservoirs resulting in additional capacity for more than 3,000 persons-at-one-time; reconstruction of worn-out facilities at 8 sites--mostly water and sewer systems; and new construction at 3 sites was commenced which will eventually result in additional increased capacity for over 460 persons-at-one-time.

(1c) Construction for fire, administration, and other purposes ($1,729,000, an appropriation increase of $626,000. On the basis of program level, however, there will be a decrease of $517,596 below the fiscal year 1974 program of $2,246,596.)

Water and sanitation systems--to replace worn out, improve existing or construct 8 new systems that will comply with Federal and State water quality standards at a total cost of $309,000.

Specific project locations are as follows:

State	Location	Amount
Idaho	Coeur d'Alene NF	$40,800
Montana	Kootenai NF	26,500
California	Cleveland NF (2 projects)	81,600
California	Plumas NF	64,300
Oregon	Fremont NF	37,700
Oregon	Wallowa-Whitman NF	25,500
Oregon	Mt. Baker NF	32,600

Service and storage buildings--Two to be constructed at a cost of $160,100 at:

State	Location	Amount
Wyoming	Bridger-Teton NF	$61,200
California	Humboldt Tree Nursery	98,900

Ranger district offices--Three to be constructed at a cost of $259,300. These are new facilities needed to protect, develop and manage National Forest lands for minerals and recreation use, forage, timber and water production and for enhancement of fish and wildlife habitat at these locations:

State	Location	Amount
Montana	Clearwater NF	$61,200
New Mexico	Carson NF	91,000
California	Sequoia NF	107,100

Dwellings--Six to be constructed at a total cost of $211,600 in rural and isolated locations where rental housing is not available. They will be located as follows:

State	Location	Amount
Montana	Flathead NF (2 units)	$73,400
Montana	Beaverhead NF	31,600
Montana	Clearwater NF (2 units)	70,900
Wyoming	Bridger-Teton NF	35,700

Communications systems (radios and telephones). Five systems will be improved through new construction or upgrading existing systems at a total cost of $585,000 at the following locations:

State	Location	Amount
Arizona	Sitgreaves NF	$31,400
Wyoming	Bridger-Teton NF	108,100
California	Fire Service New System	82,600
California	Stanislaus NF (Admin. Net)	92,800
Alaska	Statewide (Second Phase)	270,100

Special project. Reconstruct the Prairie Portage Dam on Sucker Lake within the Boundary Waters Canoe Area and on the border between Minnesota (near Ely) and Ontario, Canada, at a cost of $204,000. The Office of Canadian Affairs, the State Department, Corps of Engineers and the International Joint Committee all are adamant in their desire to see the Forest Service reconstruct this badly deteriorated dam. Over the years it has become a very serious threat to downstream residents.

Examples of Recent Accomplishments

The following units were constructed or construction contracts awarded in fiscal year 1973:

Units	No.
Dwellings and barracks	3
Fire lookouts	1
Offices	1
Service and storage building	1
Purchase administrative site	1
Water and sanitation systems	14
Communication systems upgraded and modernized	6

(2) Research construction (No funds are requested, an appropriation decrease of $5,058,000.)

Decrease is due to non-recurring construction projects.

(3) Pollution abatement ($16,733,000, an appropriation decrease of $1,005,000. On the basis of program level, there will be a decrease of $19,625,723 from the 1974 level of $36,358,723.)

The decrease is due to the systematic funding and/or completion of those projects in both water and air pollution abatement which have been identified as being required for compliance with Executive Order 11507.

The funds will be used to finalize compliance with the Executive Order and to initiate action on compliance with the Federal Water Pollution Control Act Amendments of 1972 (PL 92-500).

These programs are vitally needed to protect and maintain the resources and environment of the National Forests. They will:

(a) Help prevent a general degradation of the National Forests.

(b) Insure a continued flow of high quality water for domestic and irrigation use.

(c) Help realize the 1985 National goal of elimination of the discharge of pollutants into navigable waters of the United States.

Water pollution abatement ($16,733,000, a program level decrease of $8,830,723 from the 1974 level of $25,563,723.)

An amount of $6,834,000 will be used for the construction of the following five water pollution abatement projects identified under EO 11507 and previously deferred until fiscal year 1975 in order to cooperate with local communities:

State	Project Name	Project No.	Estimated Cost
Montana	Seeley Lake	1759	$293,000
Arizona	Oak Creek Canyon	56	1,537,000
California	Bass Lake	51	2,340,000
California	Pinecrest Summit	1021	665,000
California	Mammoth Lake	1619, 1621	1,118,100
California	Engineering, related costs of contract administration, and additional costs of installing projects started in prior fiscal years		880,900
	Total		6,834,000

An amount of $9,899,000 will be used to initiate action on compliance with PL 92-500, and related State and Federal standards promulgated by that Act. Such action will include investigation of both point and non-point discharges, including establishment of monitoring and surveillance systems and corrective action on 53 identified deficient National Forest administrative sites and approximately 17 recreation sites. Where corrective action on previously unidentified sites is found to be necessary, funds will be used for thorough analysis and preliminary design.

Proposed PL 92-500 Program

(a) Point discharge monitoring, evaluation, and design	$3,161,000
(b) Non-point monitoring, evaluation, and design	3,047,000
(c) Correct deficient administrative site	2,585,000
(d) Correct deficient recreation sites	1,106,000
Total	9,899,000

Pollution abatement and prevention requirements previously aimed largely at point source discharges have been broadened by law to include non-point or dispersed sources. The proposed program would provide for the surveillance of development and use activities on National Forest System lands. Activities or uses which have the potential for environmental pollution include such things as construction, mining, recreation, grazing, and those activities associated with timber management.

The information obtained through surveillance is used to:

(a) Help identify pollution sources.
(b) Provide the facts needed for determining:

(1) Uses for which the water is suited.
(2) When quality of water has dropped below standards for particular uses.
(3) Practical water quality goals.
(4) The effectiveness of current management practices in meeting water quality goals.
(5) Design criteria for future management action to meet established water quality goals.

Air pollution abatement (No funds are requested, a program level decrease of $10,795,000.)

The zero budget request is due to the previous systematic funding and estimated completion in fiscal year 1974 of those 120 solid waste disposal systems which were identified as being required for compliance with EO 11507.

Under the program, the Forest Service has coordinated solid waste management systems nationwide with local authorities, special use permittees, private citizens, States and other Federal agencies. Sanitary landfills have been or are being developed, equipment purchased and efficient collection routes established. Over 5,000 open, sometimes burning, dumps are in various stages of being closed. As a result, better land management and more efficient fund utilization has been and is being realized.

(4) Land acquisition, Weeks Act ($1,578,000, an appropriation increase of $278,000. On the basis of program level, an increase of $275,044 is proposed over the 1974 level of $1,302,956.)

The $1,578,000 included in the fiscal year 1975 estimate will be used to acquire an estimated 13,000 acres in the Redbird Purchase Unit in eastern Kentucky at a cost of $688,720. The remaining $881,280 will be used to continue the acquisition programs in purchase units in the eastern United States, plus a minor program in Nebraska. These funds are considered adequate to acquire properties of high priority that are expected to be available in fiscal year 1975. Emphasis is given in this part of the program to the National Forests in Arkansas, Illinois, Michigan, Missouri, and Ohio.

The acquisition of key inholdings within the National Forests and the National Forest purchase units become increasingly urgent as the demands upon wildlands and farm lands for highway construction, industrialization, and summer home development increase. The development program for the National Forests recognizes the need to acquire additional private inholdings in need of land rehabilitation. Included are lands depleted by repeated fires, poor logging practices, clearing and cultivation of steep and erodible mountain lands, disturbed mineral exploitation areas, and submarginal or marginal farms that should be removed from farming operations and managed for timber production and/or grazing. These are lands located primarily in economically depressed areas. Sound management of acquired areas will contribute to:

(a) Stabilization of the local economy.
(b) Environmental enhancement.
(c) Prevention of stream pollution in rural America.
(d) Improved timber production.

Lands primarily valuable for recreation are not included in this program, since acquisition of such lands is financed under the Land and Water Conservation Fund Act program.

See the tabulation at the end of this section for more detailed information on the actual and planned accomplishments in fiscal years 1973-1975 (Exhibit III).

Examples of Recent Accomplishments

In 1973 a total of 116 tracts were contracted for purchase under authority of the Weeks Act using regular appropriated Weeks Act funds. These cases involved the acquisition of 19,895 acres at a total cost of $1,294,672. These transactions involve lands suited to timber production and watershed protection in areas where National Forest ownership needs to be consolidated or extended to facilitate these programs. Many of the smaller parcels, 20-40-80 acres in size, are purchases made at a price equal to, or nearly equal to, the cost that would otherwise have been incurred to survey, post, and mark the National Forest boundary surrounding the property.

EXHIBIT I -- RECREATION-PUBLIC USE -- FY 1975
Capital Investments -- Distribution by National Forests

State	Forest and Project	Type of Construction	Persons-at-one-time Capacity	Water and Sewage Systems (No.)	Other Developments (No.)	Total Cost (in thousands)
Arizona	Coronado (Rucker and Riggs Flat Campgrounds)	Reconstruction of existing site	95			$31
Idaho	Sawtooth (Sawtooth NRA including Red Fish Lake facility and Glacier Campground)	"	400			218
Oregon and Washington	Mt. Hood and Wenatchee (Replace pit toilets at 11 sites)	"	1,940	11		225
Texas	NF's Texas (Double Lake Campground)	"	530	1		136
North Carolina	NF's North Carolina (Sycamore Flat Campground)	"	220	1		68
Tennessee	Cherokee (Indian Boundary Amphitheater)	"	1,725	1		5
Pennsylvania	Allegheny (Twin Lakes Dam repair)	"	1,400		1	58
Michigan	Huron-Manistee (Walkways, improvements for soil-vegetative rehabilitation at 4 sites)	"	400		4	65
New Hampshire	White Mountain (Betterment at 10 sites)	"	300			60
Subtotal, reconstruction of existing facilities			7,010	14	5	866
Idaho	Sawtooth (Sawtooth NRA--Recreation Headquarters and Warehouse)	New (completion)		1	1	510
Wyoming	Teton (Jackson Hole visitor information center -- cooperative project)	"	200			35
California	Sequoia (Princess Campground)	" (continuation of project previously started)	495			134
Georgia	Chattahoochee (Brasstown Bald visitor information center exhibits)	New (completion)	800		1	173
West Virginia	Monongahela (Spruce Knob-Seneca Rocks NRA--visitor information center exhibits)	"	85			128
Michigan	Ottawa (Black River Harbor)	New - complete removal of reef in harbor which results in extensive drainage to government facilities			1	32

EXHIBIT I -- RECREATION-PUBLIC USE -- FY 1975
Capital Investments -- Distribution by National Forests--continued

State	Forest and Project	Type of Construction	Persons-at-one-time Capacity	Water and Sewage Systems (No.)	Other Developments (No.)	Total Cost (in thousands)
Wisconsin	Chequamegon (Day Lake picnic ground)	New (completion)	60			14
Alaska	Region-wide (Interpretive facilities)	New	100			10
Subtotal, new construction			1,740	1	3	1,036
Grand total			8,750	15	8	1,902

EXHIBIT II -- WATER RESOURCE DEVELOPMENT CONSTRUCTION -- FY 1975
Capital Investments -- Distribution by National Forests

State	Forest and Project	Construction	Persons-at-one-time Capacity	Water and Sewage Systems (No.)	Other Developments (No.)	Total Cost (in thousands)
Montana	Kootenai (Libby Reservoir, McGilliorary recreation area, beach and boat ramp)	New - continuation	(200)*			$77
Colorado	Pike (Rampart Reservoir boat ramp and overlook)	New	135		1	106
Colorado	San Isabel (Turquoise Reservoir Campground)	New - continuation	(395)*			130
Utah-Wyoming	Ashley (Flaming Gorge NRA - Firehole complex, Cedar Springs Campground)	New and reconstruction	(500)*	1	1	153
California	Tahoe (Stampede Reservoir, Tomson and Loggers Campgrounds)	New	900	1		603
Washington	Olympic (Wynoochee Reservoir, Coho Campground)	New - continuation	(345)*	1	1	196
Kentucky	Daniel Boone (Cave Run Reservoir, Twin Knobs Recreation Site and Campground and sanistation)	"	(200)*		1	269
Kentucky	Daniel Boone (Laurel River Reservoir boat ramps)	"	(395)*		3	184
Tennessee	Cherokee (Boat ramp, power to Little Oak Campground)	"	570		2	84
Texas	NF's Texas (Toledo Bend Reservoir, Ragtown Campground)	"	(800)*	1		100
Texas	NF's Texas (Lake Conroe, boat ramp and toilets)	"	(100)*	1	1	75
Indiana	Wayne-Hoosier (Lake Celine boat ramp and campground)	New	300			56
Pennsylvania	Allegheny (Allegheny Reservoir, Tracy Ridge picnic ground - water and sewage lagoon, power	New - continuation and completion	(600)*	1	1	172
Total			1,905	6	11	2,205

* Reported in previous years (3,535).

EXHIBIT III -- WEEKS ACT PURCHASES 1973-1975

	FY 1973 Actual			FY 1974 Estimated			FY 1975 Estimated		
	Options accepted	Acres	Obligation	Options to be accepted	Acres	Obligation	Options to be accepted	Acres	Obligation
Alabama - Talladega	1	200	$22,020						
Arkansas - Ozark	11	1,018	83,183	11	844	$99,000	9	700	$70,000
St. Francis	1	105	23,100						
Illinois - Shawnee	6	485	68,939	10	525	75,000	15	770	100,000
Indiana - Hoosier	15	1,408	162,355	5	550	63,000	15	1,200	138,000
Kentucky - Redbird Purchase Unit	41	13,527	685,540	40	10,304	525,500	45	13,000	688,720
Michigan - Hiawatha	3	280	19,800	2	210	10,000	2	210	10,000
Huron-Manistee	8	203	30,775	10	500	40,000	10	500	40,000
Ottawa	1	40	1,000	5	200	10,000	2	200	10,000
Minnesota - Chippewa	1	37	1,000	5	200	10,000	5	200	10,000
Missouri - Clark	3	360	25,000	12	986	69,000	12	986	69,000
Mark Twain	5	765	41,346	5	325	30,000	5	325	30,000
Nebraska - Nebraska	2	440	35,200	1	220	19,000	1	220	19,000
Ohio - Wayne	10	593	38,912	10	720	54,000	10	720	54,000
Tennessee - Cherokee	3	34	3,564						
Vermont - Green Mountain	1	75	18,075						
Virginia - George Washington				1	45	6,700			
Jefferson				1	56	2,800			
West Virginia - Monongahela	1	205	26,663	1	325	37,500			

32-043 O - 74 - 22

EXHIBIT III -- WEEKS ACT PURCHASES 1973-1975--continued

	FY 1973 Actual			FY 1974 Estimated			FY 1975 Estimated		
	Options accepted	Acres	Obligation	Options to be accepted	Acres	Obligation	Options to be accepted	Acres	Obligation
Wisconsin - Chequamegon							2	325	$37,500
Nicolet	3	120	$8,200	8	1,200	$48,500	8	1,200	48,500
Subtotal	116	19,895	1,294,672	127	17,210	1,100,000	141	20,556	1,324,720
Surveys and related acquisition costs			248,388			202,956			253,280
Unobligated balance carried forward			2,956						
Unobligated balance brought forward			-242,016			-2,956			
Total appropriation			1,304,000			1,300,000			1,578,000

CONSTRUCTION AND LAND ACQUISITION

Proposed Change in Language

Change in language is proposed as follows. New language is underscored.

> For construction ..... and utilization of national forest resources; point discharge monitoring and evaluation; and non-point discharge surveillance monitoring and evaluation; and the acquisition .....

The Forest Service is authorized and directed to develop and administer the renewal resources of the National Forests (Organic Administration Act of 1897, 16 USC 475, and the Multiple Use-Sustained Yield Act of 1960, 16 USC 528-531).

Public Law 92-500 of October 18, 1972 (86 Stat. 816) amended the Federal Water Pollution Control Act. This law makes pollution abatement a continuing program of surveillance, monitoring and corrective action on both point and non-point discharges. The standards set by the States in response to the various legislation, or by the Federal regulatory agencies where States have not set standards, must be met or facilities closed.

The Forest Service has over 15,000 public use and administrative areas in 40 States. Sixteen hundred of the sites were inventoried and about 300 construction projects will be completed under E.O. 11507. Under PL 92-500 the areas must be managed in a manner to insure that the point discharged pollutants, after treatment, will not contribute to tne degradation of the receiving water below the standards established for that water.

Also, Forest Service activities relating to resource development use, and protection involves many sources of pollution potentials from non-point source such as timber activities, construction activities, range, and wildlife activities which involve runoff over disturbed areas, silt movement, pesticide use, etc. The administration of the provisions of Public Law 92-500 will be enhanced if funds for the monitoring, surveillance, and related operating activities are provided in the same appropriation as the required construction.

The above addition to the language will permit the Forest Service to accomplish all the activity necessary to comply with PL 92-500 under a single appropriation activity.

Mrs. HANSEN. The committee will adjourn until 1 p.m.

AFTERNOON SESSION

CONSTRUCTION COST ESTIMATES

Mrs. HANSEN. The committee will come to order.

Last year the committee expressed its displeasure at the fact that cost estimates for many of your projects were substantially different from actual bids. What have you done to improve your cost estimating procedures?

Mr. MCROREY. Madam Chairman, I regretfully agree that our past estimates were deficient. We have centralized our estimating procedures and have installed accounting measures which we are confident will improve our estimates in years to come.

REPROGRAMING OF CONSTRUCTION PROJECTS

Mrs. HANSEN. Your budget last year proposed vast reprograming of funds appropriated for construction projects. Are you proposing the same kind of changes this year?

Mr. MCROREY. Madam Chairman, all of the projects which fall under Executive Order 11507 are funded. The bulk of them, there are six projects which are cooperative arrangements with public utilities districts, and those will, of a necessity, be delayed, but they will be activated this year.

Mrs. HANSEN. We ran into the problem in other agencies of having to delay construction of sewage facilities, because of the necessity to change design due to a community not having developed its own project. How many projects in this category do you have?

Mr. MCGUIRE. We have six instances of that kind of problem.

Mrs. HANSEN. Are they in the budget?

Mr. MCGUIRE. They are in the budget.

Mrs. HANSEN. What do they total?

Mr. MCGUIRE. They total $6,834,000. The list is on page 115.

Mrs. HANSEN. What do you propose to reprogram?

Mr. MCGUIRE. We thought we could complete these projects earlier. However, because of the problem you referred to, of working with the local community, it was necessary to hold off until fiscal year 1975 so that what we did and what the local community did would tie together.

Mrs. HANSEN. You haven't answered my question about reprograming.

Mr. W. CAMPBELL. There is no reprograming from funds that were appropriated this fiscal year. As you recall, we are having this difficulty in the Mammoth Lakes, Calif., area where previously the Congress had appropriated what we thought were the necessary funds to complete that project. Because of poor estimating and other things coming in, we have deferred that project and have requested an additional $1 million so that we can complete it. That is the only reprograming that comes to mind at this moment.

Mrs. HANSEN. Do you expect to be able to spend that $6,834,000 this year?

Mr. McGuire. We expect to be able to obligate it in fiscal year 1975.

Mr. W. Campbell. It's in fiscal 1975.

Mrs. Hansen. When, June 30?

Mr. McGuire. We should be ready to go after July 1.

Mr. W. Campbell. Specifically in the Mammoth Lakes area, we are rethinking and reviewing the A. & E. contract and related cooperation concerning the project. That should be ready to go long before the end of the fiscal year.

LABORATORY AT CORVALLIS

Mrs. Hansen. Please review for the committee the status of those projects which the committee added funds for in fiscal year 1974; $1.5 million for the laboratory construction at Corvallis, Ore. Has that been released for contract?

Mr. Dickerman. That was released for contract.

Mrs. Hansen. Will the funds be adequate to cover the contract?

Mr. Dickerman. Our estimate at the present time is that it will not cover the laboratory fixtures and specialized equipment which are needed.

Mrs. Hansen. The committee understands.

Mr. Dickerman. In order to cover the laboratory fixtures and specialized equipment, approximately $500,000 will remain to be appropriated.

Mrs. Hansen. Will that $500,000 be needed in fiscal year 1975? When will the construction begin?

Mr. Dickerman. Construction should start in May or June. Bids will be out this month.

Mrs. Hansen. When do you expect the laboratory to be completed?

Mr. Dickerman. The estimate is about 1 year for construction of the east wing.

Mrs. Hansen. Would you get us some precise figures on when it will be mandatory to include the equipment items?

[The information follows:]

The building should be ready for use by April of 1975. The laboratory facilities and specialized equipment would be needed at that time.

WEST WING—CORVALLIS LABORATORY

Mrs. Hansen. What is the estimated cost of that last wing?

Mr. Dickerman. $2.8 million for the west wing.

Mrs. Hansen. Does that include the fixtures?

Mr. Dickerman. Yes.

Mrs. Hansen. The total cost of the facility will be over $3 million. Is that correct?

Mr. Dickerman. That is right.

LABORATORY AT ARCATA

Mrs. Hansen. Have you released the $800,000 for construction of the Redwoods Laboratory at Arcata?

Mr. Dickerman. That money is released and opening of bids for construction is scheduled for April.

Mrs. Hansen. What is your estimate of the cost of the equipment? How long is the construction going to take?

Mr. DICKERMAN. This is in reference to the Arcata Laboratory?
Mrs. HANSEN. Yes.
Mr. DICKERMAN. The principal specialized equipment is included in our estimate at the present time.
Mrs. HANSEN. Good.

LABORATORY AT PROVO, UTAH

The $760,000 for the construction of the shrub improvement laboratory at Provo, Utah—is this the full cost of construction? Have you released this money?
Mr. DICKERMAN. The money was released to us the first of this month. Bids for construction are scheduled for May.
Mrs. HANSEN. Does this include the cost of equipment?
Mr. DICKERMAN. This includes equipment.

HEADHOUSE-GREENHOUSE AT RHINELANDER

Mrs. HANSEN. Has the $335,000 been released for construction of Headhouse/Greenhouse at Rhinelander?
Mr. DICKERMAN. Yes, ma'am.
Mrs. HANSEN. When will you let the contract?
Mr. DICKERMAN. This is scheduled for April.
Mrs. HANSEN. As I understand this will not complete the project. I handed you a letter yesterday from the Rhinelander group for an additional request.
Mr. DICKERMAN. Madam Chairman, I believe the item that was referred to yesterday was a research project.
Mrs. HANSEN. That is not construction?
Mr. DICKERMAN. It is not construction.
Mrs. HANSEN. It is not acquisition?
Mr. DICKERMAN. No, ma'am.
Mrs. HANSEN. But it relates to the laboratory work?
Mr. DICKERMAN. Yes, ma'am.
Mrs. HANSEN. Can they continue the laboratory work without the completion of this Headhouse-Greenhouse?
Mr. DICKERMAN. Yes, ma'am.

LABORATORY AT AUBURN

Mrs. HANSEN. When were the funds released for the laboratory construction at Auburn?
Mr. DICKERMAN. That money was released March 1 and opening of bids for construction is scheduled for April.
Mrs. HANSEN. The $700,000 is what part of the total cost?
Mr. DICKERMAN. That is the first phase of a two-phase project.
Mrs. HANSEN. What does the next phase cost?
Mr. DICKERMAN. The second phase, we are estimating at current costs between $700,000 and $800,000.
Mrs. HANSEN. Will this $700,000 be used in sufficient time so that you could go from phase 1 to phase 2 in fiscal year 1975?
Mr. DICKERMAN. Yes, ma'am.
Mrs. HANSEN. Is any part of the equipment included in the $700,000?

Mr. DICKERMAN. The specialized equipment for both phases is included in the estimate for the individual phase.

Mrs. HANSEN. So this is the total cost of phase 1?

Mr. DICKERMAN. That is right.

Mrs. HANSEN. It wouldn't be very practical, would it, to build half a laboratory?

Mr. DICKERMAN. The two phases are scheduled so that each one can be used independently.

Mrs. HANSEN. Is it desirable and economical to contract each phase separately?

Mr. DICKERMAN. The phase 1 will give us an operating unit, as will the phase 2. Phase 2 is part of the long-range program requirements at the Auburn Laboratory. I think it would be desirable for the efficient operation of the program to have phase 2 follow.

Mrs. HANSEN. That is what I am trying to determine. I have a feeling the orderly construction of laboratories is much more desirable and economical. You have been constructing the Corvallis Laboratory for how many years?

Mr. WYATT. It has been 4 years.

Mrs. HANSEN. We have also had a design phase.

Mr. WYATT. It has been 5 years counting the design. We have one more stage to go.

COUNCIL BLUFFS

Mrs. HANSEN. Do you anticipate the release of the funds added last year for Council Bluffs?

Mr. MCGUIRE. We have not yet been able to satisfy those who might be making the decision that there was an adequate cost/benefit justification. We have hopes of satisfying that requirement and seeing this money released. We have no way of knowing whether that is actually going to happen.

Mrs. HANSEN. What are the details of that project?

Mr. HOUSLEY. The money was appropriated for preliminary stages of construction of the reservoir. The first year's appropriation was intended for site studies and geological work in advance of actual construction of the dam. This would ultimately lead to the development of a recreation complex surrounding the reservoir once it is built.

Mrs. HANSEN. Is it necessary to have a reservoir at this location?

Mr. HOUSLEY. This is what we have to show with our cost/benefit justification, that it is a desirable site for water-oriented recreation.

Mrs. HANSEN. I believe you testified yesterday that this project is in close proximity to urban centers, such as St. Louis and Memphis.

Mr. HOUSLEY. They are within easy reach of the site.

Mrs. HANSEN. Since the gas curtailment, this is the kind of project that would be expected to receive a lot of visitors rather than have them travel a few hundred miles. Isn't this correct?

Mr. HOUSLEY. Yes, ma'am.

Mrs. HANSEN. What is going to be the total cost of that reservoir?

Mr. HOUSLEY. I don't have that figure at hand, Madam Chairman.

Mrs. HANSEN. Do you have any idea?

Mr. HOUSLEY. No, ma'am, I don't have it.

Mr. MCGUIRE. We can supply the figure.

[The information follows:]

At Council Bluffs we expect the total cost for dam construction to be $2,211,000. Design and development of recreation facilities would cost an additional $3,015,000.

Mr. McGUIRE. We have not been told that this money is not going to be available. We still have hopes that it will be available. We have to improve our justifications.

Mrs. HANSEN. That is the purpose of your hearings before Congress. You understand. I think, that there was a more concentrated use for this recreation area at Council Bluffs than there was almost anyplace in the Nation, with the exception of the Gateway Park in New York and in San Francisco and the Delaware Water Gap. This is one of those high concentration areas.

There isn't any national park in this area that is a recreation-oriented park. The members of the Missouri delegation are very anxious about moving ahead on this recreation project.

At this late stage, if the money is released you would not need any 1975 funding? Is that correct?

Mr. McGUIRE. That is correct. This would only again provide a phase of the needed work. But there would be no point in appropriating more funds until we complete that phase.

VISITOR-DAYS AT MOUNT ROGERS NATIONAL RECREATION AREA

Mrs. HANSEN. $200,000 was added last year for recreation facilities at Mount Rogers National Recreation Area in Virginia. What was your visitor-days in that recreation area last year?

Mr. McGUIRE. We will be glad to provide that.

Mrs. HANSEN. It's rather sizable, isn't it?

Mr. McGUIRE. Yes, ma'am.

[The information follows:]

Last year 284,500 visitor-days use was reported at Mount Rogers Recreation Area.

Mrs. HANSEN. Has that money been released?

Mr. McGUIRE. The only other money that has not been released is at Eagle Lake.

Mrs. HANSEN. What did the $200,000 enable you to do? How much remains to be done in this recreation area at Mount Rogers?

Mr. HOUSLEY. There is an extensive amount of work there, but we will have to supply the total figure for the record.

Mrs. HANSEN. What remains to be done?

Mr. HOUSLEY. There is extensive opportunity for campground development, hiking trails, picnic areas, and a rather complete complex of recreation facilities.

Mrs. HANSEN. What portion of the total need is the $200,000?

Mr. HOUSLEY. If we may, we will supply that for the record. I don't have the total cost at hand.

[The information follows:]

Construction is underway on only one of five recreation complexes planned for development in the Mount Rogers National Recreation Area. Construction to date amounts to about 10 percent of the needed facilities. The total remaining cost for the one complex underway—Bear Tree Recreation Area—is $2,300,000 for development of facilities plus another $800,000 for roads. The total cost to develop the other four complexes is currently estimated at $16,700,000 for development of facilities and $20 million for roads.

Mrs. HANSEN. You should be prepared to respond to the question.

Mr. MCGUIRE. We appreciate what you are saying to us, Madam Chairman. We are happy that this is the way it has been going for so many years, because you have been looking at this aspect. The reason we didn't bring the Mount Rogers material with us this time is because we didn't have an item in the current budget. We limited material that we brought along to the items that were in the budget.

LAVA LANDS

Mrs. HANSEN. $200,000 was added last year for the visitor center and campgrounds at Lava Lands. As I understand, this was for planning and design.

Mr. MCGUIRE. That is right. It was for planning and design.

Mrs. HANSEN. When were these funds released?

Mr. MCGUIRE. On March 1.

Mrs. HANSEN. Therefore, it would not be feasible to provide any additional money in the 1975 budget?

Mr. MCGUIRE. That is our opinion.

CAVE RUN RESERVOIR

Mrs. HANSEN. When was the $122,000 provided last year for Cave Run Reservoir in Kentucky released?

Mr. MCGUIRE. March 1.

Mrs. HANSEN. Isn't this a three or four phase project?

Mr. HOUSLEY. Yes, ma'am. We are attempting to stay ahead of the rising water.

Mrs. HANSEN. Therefore, you are under a rather short time frame.

Mr. HOUSLEY. Yes, ma'am.

Mrs. HANSEN. What will the $122,000 accomplish?

Mr. HOUSLEY. This will go toward construction of such underwater facilities as boat launching ramps and sanitation facilities. Those are the basic first steps.

Mrs. HANSEN. Will that be done in time to proceed with the next phase in fiscal year 1975? What would be the next phase and what is its cost?

Mr. HOUSLEY. Yes, ma'am. We do have a request for 1975. A portion of the item shown on page 119 for Kentucky is for that. There is a breakdown of how much is for Cave Run and how much is for Laurel.

LAUREL RIVER RESERVOIR

The amount is $269,000.

Mrs. HANSEN. What will that provide?

Mr. HOUSLEY. That will provide for additional sanitation facilities construction and for the Twin Knobs recreation site and campground.

Mrs. HANSEN. You have another item for $184,000 at the Laurel River Reservoir.

Mr. HOUSLEY. This is for boat ramps.

Mrs. HANSEN. And you are trying to stay ahead of the water, is that correct?

Mr. HOUSLEY. Yes, ma'am.

Mrs. HANSEN. So this actually has to be kept to a very fine time schedule?

Mr. HOUSLEY. Yes, ma'am.

Mrs. HANSEN. What is the next phase after these two projects are finished?

Mr. HOUSLEY. There are additional possibilities for development on both these sites.

Mrs. HANSEN. What are the necessities?

Mr. HOUSLEY. I don't have the figure with me.

Mrs. HANSEN. Would you send up for the committee files what your necessities and your possibilities are on this particular project so I have some sense of the total realities? I want the realities so that when we appropriate we do it competently and orderly.

NORTH CASCADES

Last year $175,000 was added for recreation area facilities at the Okanogan National Forest in the North Cascades.

Mr. HOUSLEY. That is correct.

Mrs. HANSEN. When was this money released?

Mr. MCGUIRE. March 1.

Mrs. HANSEN. What will this provide?

Mr. HOUSLEY. As I recall, that was basically for facilities in connection with the North Cascades State Highway.

Mrs. HANSEN. You understand that that area is within the reach of about 3 million people. A lot of the visitation is from Canadian visitors who have no gasoline problems, I may add. As I understand, the campgrounds are very inadequate.

Would you send to me a statement on what your next phase might be realistically.

Mr. MCGUIRE. We will do that.

CONSTRUCTION AND LAND ACQUISITION

Mrs. HANSEN. Your total request for construction and land acquisition for 1975 is $24,147,000. This is a net decrease of $2,296,000, which is I would gather the total amount of congressional add-ons.

Mr. MCGUIRE. Actually, the program level is decreased $3,627,000.

Mrs. HANSEN. The reduction includes those nonrecurring items we have just reviewed. Is this correct?

Mr. MCGUIRE. That is right; that is after allowing for rent and pay increases. There are decreases in research construction and in pollution abatement, and there are increases in land acquisition, in water resource development construction and in development of recreation and public use areas.

Mrs. HANSEN. What does your water resource development construction program entail?

Mr. MCGUIRE. This is primarily the development of public use facilities on national forest system lands and adjacent to these project reservoirs which are built usually by other agencies.

BLANCHARD SPRINGS

Mrs. HANSEN. Please insert in the record a statement on the next phase of construction at Blanchard Springs.

Mr. McGUIRE. We will send you our estimates for the next phase of the Blanchard Springs construction.

[The information follows:]

To accommodate increasing use, additional tour and overnight facilities are needed at Blanchard Springs Caverns. As these facilities are developed, the work center should be expanded to allow for adequate operation and maintenance. The items are summarized as follows:

Item	Recreation public use construction	Forest roads and trails
Construct 2d cave tour	$862,000	$11,000
Expand sewer system from 40,000 to 80,000 gal per day	80,000	
Construct interpretive trails, level parkways, and design campground	160,000	136,000
Expand work center	122,000	
Construct new entrance station and road	48,000	112,000
Total costs	1,272,000	259,000

USE OF RECREATION AREAS

Mrs. HANSEN. You have had an increase in visitor use days but your construction budget does not reflect this increase. I believe it was your Department that testified before us for several years that when you do not have the campsites that you run a greater risk of fires and fire destruction. You certainly have more litter problems in undesignated campgrounds than in places with firewood available and trash cans. Isn't this correct?

Mr. McGUIRE. That is very true. The level of new construction has been down for at least the last 2 years. At the same time, the use of the national forests for recreation has been increasing rapidly.

Mrs. HANSEN. So your backlog of unbuilt areas or unimproved areas for designated use is increasing.

Mr. McGUIRE. That is the problem. It adds to the difficulties of protecting these forests from fire because people tend to spread out over many other areas. It makes the problem of cleanup after public use more difficult.

Mrs. HANSEN. I would think the maintenance of an overused facility would also be more difficult.

Mr. McGUIRE. That is exactly right.

Mrs. HANSEN. When will you begin to reduce this backlog or are you going to have to limit visitations as you are at Mt. Whitney?

Mr. McGUIRE. I think this is going to be a continuing problem. Last year we didn't have the facilities or the funds to maintain them. We had to start shortening the seasons during which the facilities are kept open. In some places we actually had to shut down because we didn't have the means of taking care of the facility properly.

Mrs. HANSEN. The Committee is going to watch very carefully the use in the areas adjacent to urban areas. My guess is, according to the driving patterns now, that you are going to have to spend more money in maintenance and development of those sites near urban areas, such as Mount Rogers and your Okanogan National Forest.

Mr. McGUIRE. We fully agree with you, Madam Chairman. I am sure there are many areas that are close in. The southern California forests are close to population centers. The New England forests are going to receive more visitations.

Mrs. HANSEN. The Olympic National Forest is receiving a heavy visitation.

Mr. MCGUIRE. A very good example.

UNOBLIGATED BALANCES

Mrs. HANSEN. Please insert in the record a project-by-project list of unobligated balances as of January 1, 1974, and expected unobligated balances as of the end of fiscal year 1974. The list should indicate the year the funds were appropriated.

Mr. MCGUIRE. We will provide that.

[The information follows:]

CONSTRUCTION AND LAND ACQUISITION
(In thousands of dollars)

		Unobligated 12/31/73	Estimated Unobligated 6/30/74	FY Funds Appropriated
Development of Recreation-Public Use Areas:				
R-1	Red Cliff Campground	69.1	0	1974
R-2	Poudre River Campground	27.2	0	1974
R-3	Hospital Flat and Wet Canyon	24.2	0	1974
R-4	Angel Lake Campground	149.0	0	1974
	Flaming Gorge NRA	400.0	0	1974
	Boulder Lake Campground	3.5	0	1974
	Sawtooth NRA	709.4	0	1974
	Mt. Charleston	520.0	0	1974
R-5	Princess Campground	11.9	0	1974
	Pinecrest Beach Extension	44.0	0	1974
R-6	Multnomah Falls Lodge	18.0	0	1974
	Nason Creek Campground	3.0	0	1974
	North Cascades Highway	173.0	60.0	1974
	Timberline Lodge	28.0	0	1972
R-8	Mt. Rogers NRA	198.0	16.5	1974
R-9	Hapgood Pond	16.8	0	1974
	Spruce Knob-Seneca Rocks	27.4	0	1974
	Burr Oak Campground	1.2	0	1974
	Mainstream Project	8.5	0	1974
	Black Brook	19.7	0	1974
	Roby Lake	.5	0	1973
	Council Bluffs Add-on	495.0	495.0	1974
	Eagle Lake Dam Add-on	807.0	807.0	1974
	Lake of the Clouds Add-on	25.0	0	1974
R-10	Mendenhall Visitor Information Center	7.4	0	1974
	Juneau Visitor Information Center	4.3	0	1973
Total, Development of Recreation-Public Use Areas		3,791.1	1,378.5	
Visitor Information Services:				
R-2	VIS Construction	4.1	1.5	1973
R-4	Wood River Nature Trail	26.0	0	1974
	North Fork VIS Planning	11.0	0	1974
R-6	Lava Butte Tower	19.0	0	1974
	Lava Lands Visitor Information Center	198.0	14.0	1974
R-8	Kerr Arboretum	29.6	0	1974
R-9	George House Repairs	23.6	0	1974
	Audio Tape Equipment	6.0	0	1974
	Seneca Rocks Visitor Information Service	2.0	0	1973
Total, Visitor Information Services		319.3	15.5	
Water Resource Development Construction:				
R-1	Libby	217.8	0	1974
R-2	Rampart	23.9	0	1974
	Turquoise	44.6	0	1972
R-4	Firehole Flaming Gorge	30.0	0	1974
R-5	Stampede Reservoir	12.0	0	1974
	Hirz Bay Campground	9.4	0	1973

		Unobligated 12/31/73	Estimated Unobligated 6/30/74	FY Funds Appropriated
Water Resource Development Construction--continued				
R-6	Wynoochee	22.0	0	1974
	Wynoochee	6.0	0	1973
R-8	Lake Hinkle	40.0	0	1974
	Lauren Shoals	12.8	0	1974
	Laurel Reservoir	78.1	0	1974
	Cave Run	32.9	0	1974
	Cave Run	26.2	0	1973
	Cave Run Add-on	121.0	0	1974
	Toledo Bend	311.3	0	1974
	Lake Conroe	38.0	0	1974
R-9	Allegheny Reservoir Campground	9.2	0	1974
	Kinsua Beach Paving	10.6	0	1973
	Cedar Lake	26.3	0	1973
	Dutchman Lake	3.4	0	1973
	Willow Island	26.7	0	1973
	Middle Fork of Anderson	32.5	0	1973
Total, Water Resource Development Construction		1,134.7	0	
Construction for Fire, Administration, and Other Purposes:				
R-1	Clearwater Water and Sewer	34.1	0	1974
	Custer Water and Sewer	46.6	0	1974
	Kootenai Water and Sewer	49.8	0	1974
	Lolo Communications	181.2	0	1974
	Smokejumper Loft Water and Sewer	18.0	0	1973
	Clark Fork Water and Sewer	3.0	0	1973
	Flathead Water and Sewer	10.0	0	1973
	Coeur d' Alene Water and Sewer	8.4	0	1973
R-2	Woodland Park W.C., Water and Sewer	6.2	0	1974
	Big Goose Ranger Station Water and Sewer	24.4	0	1974
	Sandstone C.S., Water and Sewer	9.4	0	1974
	Communications	45.4	0	1974
	Centennial Water and Sewer	9.1	0	1973
	Dolores Equipment Yard	29.0	0	1974
	Crede Administrative Site (Land Exch.)	5.0	5.0	1971
R-3	Wier Dam	2.5	0	1974
	Mimbres Water and Sewer	6.3	0	1974
	Chevelon Ranger Station Water and Sewer	128.1	0	1973/1974
R-4	Sawtooth Communications	105.1	0	1974
	Boise Water and Sanitation System	1.0	0	1974
	Salmon Water and Sanitation System	7.4	0	1974
	Teton Water and Sanitation System	25.0	0	1974
	Toiyabe Water and Sanitation System	14.8	0	1974
	Wasatch Water and Sanitation System	8.1	0	1974
R-5	Pine Hill Water System	13.5	0	1974
	White Mountain Ranger Station Office	31.9	0	1974
	North Fork Water System	115.6	0	1974
	Mad River Duplexes	55.5	0	1973/1974
	Communications	164.6	0	1974
R-6	Unity Water System	31.0	0	1974
	Bly Water System	29.0	2.0	1974
	Steamboat Water System	93.0	6.0	1974
	Natchez Water System	44.0	4.0	1974
	Waldport Sanitation Collection System	18.0	0	1974

	Unobligated 12/31/73	Estimated Unobligated 6/30/74	FY Funds Appropriated
Construction for Fire, Administration, and Other Purposes--continued			
R-6--continued			
Rigdon Sanitation Collection System	7.0	0	1974
Ochoco Communications	23.0	0	1974
Rogue River Communications	23.0	0	1974
Siuslaw Communications	62.0	0	1974
Winema Communications	48.0	0	1974
R-8 Bankhead Water and Sanitation System	5.3	0	1974
Bankhead Water and Sanitation System	6.0	0	1974
Communications	22.2	0	1974
R-9 Remodel Rolla Supervisor's Office	5.8	0	1973/1974
Bartow Water and Sanitation System	36.7	0	1974
Communications	83.7	0	1974
R-10 Radio Network for Region	126.0	0	1974
Yakutat Warehouse-Crewhouse	38.2	0	1973
Total, Construction for Fire, Administration, and Other Purposes	1,860.9	17.0	
Research Construction:			
R-2 Sierra Ancha Water System	79.1	0	1974
Lincoln Shelterbelt Laboratory	2.0	0	1972
R-4 Shrub Improvement Laboratory, Provo, Utah	760.0	740.0	1974
R-5 Arcata, California	800.0	0	1974
San Joaquin Water System	42.8	0	1974
R-6 Forestry Sciences Laboratory, Corvallis, Oregon	1,500.0	0	1974
Forestry Sciences Laboratory, Corvallis, Oregon	1.0	0	1973
R-8 Forestry Sciences Laboratory, Auburn, Alabama	700.0	0	1974
Forestry Sciences Laboratory, Charleston, South Carolina	125.0	50.0	1974
Forestry Sciences Laboratory, Macon, Georgia	19.4	0	1973
Forestry Sciences Laboratory, Macon, Georgia	254.7	0	1974
R-9 Laboratory Equipment, Burlington, Vermont	5.6	0	1973/1974
Princeton, West Virginia	660.0	0	1973
Rhinelander, Wisconsin	335.0	320.0	1974
Laboratory, Durham, New Hampshire	31.9	25.0	1974
Land Purchase, Onieda City, Wisconsin	0	1.2	1973
FPL Land Exchange/Purchase, Madison, Wisconsin	963.0	0	1974
Total, Research Construction	6,279.5	1,136.2	
Pollution Abatement--Air:			
R-1 Beaverhead	3.6	0	1974
Bitterroot	3.6	0	1974
Clearwater	26.0	0	1974
Coeur d' Alene	10.4	0	1974
Colville	46.3	0	1974
Custer	17.7	0	1974

		Unobligated 12/31/73	Estimated Unobligated 6/30/74	FY Funds Appropriated
Pollution Abatement--Air--continued				
R-1--continued				
	Deer Lodge	11.0	0	1974
	Flathead	5.6	0	1973
	Gallatin	43.4	0	1974
	Helena	6.8	0	1974
	Kaniksu	35.7	0	1974
	Kootenai	5.3	0	1974
	Lewis and Clark	3.5	0	1974
	Lolo	68.8	0	1974
	Nezperce	24.6	0	1974
	St. Joe	25.8	0	1974
R-2	Big Horn	47.7	0	1974
	Black Hills	203.5	160.0	1974
	Grand Mesa	71.3	0	1974
	Gunnison	72.3	0	1974
	Medicine Bow	29.1	0	1974
	Nebraska	145.6	0	1974
	Pike	118.8	0	1974
	Rio Grande	49.3	0	1974
	Roosevelt	34.2	0	1974
	San Juan	6.0	0	1974
	Shoshone	48.0	0	1974
	White River	30.8	0	1974
R-3	Apache	104.9	0	1974
	Carson	360.4	138.8	1974
	Cibola	151.5	0	1974
	Coconino	74.3	0	1974
	Coronado	219.6	0	1974
	Gila	109.7	0	1974
	Kaibab	145.8	0	1974
	Lincoln	.3	0	1974
	Prescott	255.6	0	1974
	Santa Fe	211.8	138.8	1974
	Sitgreaves	107.8	0	1974
	Tonto	309.7	0	1974
R-4	Ashley (pilot)	23.0	0	1972
	Ashley	130.9	8.3	1973
	Boise	37.1	0	1973
	Bridger-Teton	48.3	0	1973
	Cache	30.7	0	1973
	Caribou	65.2	0	1973
	Challis	22.1	0	1973
	Dixie	86.3	4.6	1973
	Fishlake	93.4	5.5	1973
	Humboldt	52.4	0	1973
	Manti-LaSal	96.1	17.6	1973
	Payette	21.0	0	1973
	Salmon	24.7	0	1973
	Sawtooth	9.6	0	1973
	Targhee	172.5	0	1973
	Toiyabe	57.6	0	1973
	Wasatch	24.6	0	1973
R-5	Angeles	5.5	0	1974
	Cleveland	7.3	0	1974
	Inyo	34.1	0	1974
	Klamath	19.1	0	1974
	Lassen	52.2	0	1974
	Los Padres	246.1	0	1974
	Mendocino	8.6	0	1974

Pollution Abatement--Air--continued	Unobligated 12/31/73	Estimated Unobligated 6/30/74	FY Funds Appropriated
R-5--continued			
Modoc	44.8	4.0	1974
Plumas	107.6	30.0	1974
San Bernardino	1.5	0	1974
Sequoia	147.7	0	1974
Shasta-Trinity	59.8	9.1	1974
Sierra	82.3	0	1974
Six Rivers	97.0	10.0	1974
Stanislaus	188.3	0	1974
Tahoe	2.8	0	1974
R-6 Deschutes	136.0	16.0	1974
Fremont	38.0	0	1974
Malheur	18.0	0	1974
Mt. Baker	24.0	0	1974
Mt. Hood	128.0	15.0	1974
Ochoco	37.0	0	1974
Okanogan	17.0	12.0	1974
Olympic	23.0	3.0	1974
Siskiyou	89.0	9.0	1974
Siuslaw	34.0	4.0	1974
Umatilla	125.0	13.0	1974
Umpqua	29.0	4.0	1974
Wallowa-Whitman	13.0	0	1974
Wenatchee	37.0	8.0	1974
Willamette	69.0	8.0	1974
Winema	31.0	0	1974
Rogue River	2.0	0	1974
Snoqualmie	6.0	0	1974
Gifford Pinchot	12.0	0	1974
R-8 Alabama	21.0	0	1974
Kentucky	17.0	0	1974
Tennessee	104.0	0	1974
Florida	140.0	0	1974
Louisiana	111.0	0	1974
Mississippi	10.0	0	1974
Virginia	167.0	0	1974
Arkansas	321.0	0	1974
North Carolina	96.0	0	1974
South Carolina	41.0	0	1974
Texas	26.0	0	1974
R-9 Allegheny	38.0	7.0	1974
Chequamegon	29.4	3.0	1974
Chippewa	23.4	0	1974
Green Mountain	6.8	0	1974
Hiawatha	82.0	3.0	1974
Monongahela	89.6	3.0	1974
Clark	63.1	4.0	1974
Mark Twain	36.1	2.0	1974
Nicolet	93.2	3.0	1974
Ottawa	84.8	2.0	1974
Shawnee	60.6	1.0	1974
Superior	31.6	4.0	1974
Wayne-Hoosier	33.2	1.0	1974
White Mountain	94.9	7.0	1974
R-10 Kenai Peninsula	36.0	0	1974
North Tongass	20.8	0	1974
Chugach	7.3	0	1974
Ketchikan	16.1	0	1974
Total, Pollution Abatement--Air	8,115.2	658.7	

		Unobligated 12/31/73	Estimated Unobligated 6/30/74	FY Funds Appropriated
Pollution Abatement--Water:				
R-1	Holland Lake Campground	15.1	0	1973
	Clarkia Ranger Station	11.8	0	1973
	Powell Ranger Station	4.0	0	1973
	Luby Bay Campground	5.7	46.7	1974
	Samowen Campground	25.5	0	1973
	Seeley Lake Recreation Area	26.0	0	1974
	P.L. 92-500	22.3	0	
R-2	Dillon Recreation Area	207.2	41.9	1974
	Leigh Creek Central Disposal	36.5	17.0	1973
	Burgess Central Disposal	19.1	17.0	1973
	Snowy Range Central Disposal	6.3	0	1972
	Bessey Complex	20.1	0	1973
	Poudre River	6.0	0	1972
	North Fork Shoshone	17.2	0	1972
	Upper Poudre Central Disposal	6.0	0	1972
	Pactola Central Disposal	1.6	0	1973
	Calumet Campground	1.8	0	1973
	Taylor Park Campground	13.0	0	1973
	Aspen Glade	16.0	0	1973
	Sitting Bull Campground	5.5	0	1973
	Manitou Picnic Ground	2.0	0	1973
	Bob Marshall	4.7	0	1973
	Grand Mesa Central Disposal	138.1	57.3	1974
R-3	Sabino Canyon	327.1	57.5	1972/1973
	Oak Creek Canyon	134.0	0	1972/1973
	Gila Center	27.5	2.5	1972
	Canjilon (Administrative Site)	86.0	0	1972
	Heber Rim	42.7	5.0	1973
	Rucker Canyon	31.8	0	1973
	White Horse Lake and Kaibab Reservoir	46.9	5.0	1972
	Alamitos Central Disposal	60.3	5.0	1973
	Central Disposal "A"	156.1	12.6	1973
	Jacob Lake Central Disposal	41.4	2.5	1973
	Central Disposal "F"	20.0	0	1973
	Battleship Rock	186.3	28.5	1974
	Central Disposal "B" and "C"	103.4	8.8	1974
	Tortilla Flat	20.9	0	1973
	Ghost Ranch	8.2	5.0	1972
	Alpine W. C.	242.1	29.0	1974
R-4	Altonah Central Disposal	7.7	0	1973
	Moon Lake Campground	12.1	1.5	1973
	Fremont Lake Recreation Area	35.8	23.7	1973
	Panguitch Lake Central Disposal	56.7	27.6	1973
	Duck Creek Central Disposal	607.2	100.0	1974
	Pine Valley Central Disposal	12.2	7.0	1973
	Fish Lake Recreation Area	81.4	58.0	1973
	West Side Central Disposal	27.0	0	1974
	Lehman Creek Central Disposal	90.7	32.6	1974
	Redfish Lake Recreation Area	224.2	103.0	1973
	Wood River Recreation Area	7.9	5.2	1973
	Big Smoky G. S.	16.0	0	1973
	Bridgeport Ranger Station	2.1	0	1972
	Flat Rock Campground	269.9	263.2	1974
	Blackhawk Central Disposal	59.3	40.1	1974
	Lodgepole Central Disposal	86.2	39.4	1974
	Bear River Central Disposal	4.9	0	1972
	Mirror Lake Central Disposal	3.8	0	1972
	Provo River Central Disposal	71.9	13.7	1974

32-043 O - 74 - 23

		Unobligated 12/31/73	Estimated Unobligated 6/30/74	FY Funds Appropriated
Pollution Abatement--Water--continued				
R-5	Pope Baldwin	157.9	146.0	1973
	June Lake Loop	74.1	0	1973/1974
	Mammoth Lake Basin and Mammoth Communities	88.4	62.3	1973/1974
	Bishop Creek	1,604.2	0	1974
	Rock Creek	2,093.1	0	1973/1974
	Convict Lake	810.3	0	1973/1974
	Agnew Meadows, Reds Meadows, and Pumice Flat	835.3	0	1974
	Grays Meadows, Union Valley, and Whitney Portal	50.0	0	1974
	Tioga Junction and Big Bend	13.6	0	1974
	Oak Knoll Ranger Station	6.8	0	1974
	Ukonom Ranger Station	25.0	0	1974
	Eagle Lake Recreation Area	248.3	51.8	1973/1974
	Medicine Lake	40.2	0	1974
	Round Valley	10.8	10.8	1973
	Dogwood Campground	21.5	0	1974
	Lake Hemet Picnic Ground	2.6	0	1974
	Grout Bay Campground	33.4	0	1974
	Applewhite Picnic Ground	11.0	0	1974
	Green Valley Campground	28.5	24.5	1974
	Corral Creek	212.3	212.3	1974
	Harrison Gulch Ranger Station	1.4	0	1972
	Dinkey Creek	17.8	0	1974
	Pineridge General	21.7	18.1	1973
	Deer Creek	3.2	0	1974
	Bass Lake (design)	326.9	142.3	1974
	Aikens Central Disposal	8.8	6.6	1974
	Clark Fork Group and Brightman Flat	6.6	0	1974
	Lake Alpine Silver	534.2	47.4	1974
	Pinecrest Summit (design)	10.0	0	1973
	William Kent and Kaspian	30.6	0	1973
	Clair Engle	4.8	0	1974
	Design	213.9	13.5	1973/1974
	P.L. 92-500	14.5	0	1974
R-6	Natchez Ranger Station	539.0	60.0	1974
	Tieton Ranger Station	33.0	15.0	1974
	Bly Ranger Station	113.0	5.0	1974
	North Umpqua	20.0	0	1974
	Deschutes Disposal	33.0	5.0	1974
	Salmon LaSac	83.0	8.0	1974
	Mt. Baker Disposal #4	27.0	2.0	1974
	Tumwater	85.0	0	1974
	Diamond Lake	1.0	0	1974
	Nason Creek	32.0	4.0	1974
	Lost Lake	2.0	0	1974
	South Shore Lake Quinault	550.0	60.0	1973
	Lake Wenatchee	42.0	0	1973
	Tieton	286.0	0	1973
	Heather Meadows	33.0	0	1974
	Steamboat	1.0	0	1974
	Unity	1.0	0	1974
	Multnomah Falls	8.0	0	1974
	Timberline Lodge	16.0	0	1974
	Redmond	1.0	0	1974
R-8	Lake Winfield Scott	7.1	0	1974
	Raybun Beach	4.9	0	1974
	Pine Knot	6.0	0	1973
	Paint Creek	1.0	0	1974

	Unobligated 12/31/73	Estimated Unobligated 6/30/74	FY Funds Appropriated
Pollution Abatement--Water--continued			
R-8--continued			
Alexander Springs	5.7	0	1974
Juniper Springs	4.3	0	1974
Valentine Lake	196.7	0	1974
Caney Lake	3.9	0	1974
Choctaw Lake	5.7	0	1973
Cedar Lake	257.3	0	1974
Lake Wedington	218.2	0	1974
Lake Powhatan	9.8	0	1974
Schenck	.2	0	1974
Jack Rabbit	7.9	0	1974
Neuse River	18.1	0	1974
North Mills River	15.7	0	1974
Sliding Rock	3.3	0	1974
Lake Fannin	11.1	0	1974
Ratcliff Lake	2.1	0	1973
P.L. 92-500	13.0	0	1974
R-9 Loleta	.5	0	1973
Two Lakes Central Disposal	3.0	0	1973
Norway Beach	5.8	1.0	1973
Cut Foot Sioux	31.0	6.0	1973
Breevort Lake	.8	0	1973
Lake Michigan	2.0	0	1973
Monocle	2.7	0	1973
Lake Sherwood	17.1	0	1973
Stuart Recreation Area	4.1	0	1973
Boulder Lake	2.7	0	1973
Black River	3.0	0	1973
Lake Ottawa	1.0	0	1973
Forest Wide Vault	13.0	0	1973
Gunflint Central Disposal	4.2	.5	1973
Fernberg Central Disposal	4.7	1.0	1973
Hoyt Lakes Central Disposal	1.6	0	1973
East Central Disposal	1.1	0	1973
R-10 Portage Glacier	5.5	0	1974
Total, Pollution Abatement--Water	14,186.7	1,959.4	

Mr. W. CAMPBELL. As an example, as of June 30 at this time the only balance we expect to have are the two projects being held in reserve. All of the rest will be obligated. If we get those released, they will be obligated, too.

GENERAL REMARKS OF SECRETARY LONG

Mr. LONG. I wanted to say to both you and Congressman Wyatt I have enjoyed my brief session with both of you. I regret the fact that I will not be able to continue this in the years ahead.

Mrs. HANSEN. Mr. Secretary, we have appreciated having you here this morning.

Mr. LONG. It has been a very informative session for me.

Mrs. HANSEN. We have very much appreciated your taking the time to be with us today.

Mr. WYATT. We also appreciate your cooperation and your digging into the problems and helping the Forest Service help themselves, Mr. Secretary. It has been a refreshing bit of support for the Forest Service.

Mrs. HANSEN. You are not on the committee with Mr. Malek, are you?

Mr. LONG. No, ma'am.

Mrs. HANSEN. Mr. Malek has a committee made up of Under Secretaries. At the time the Interior Department wanted more regional input, they needed to discuss their problems with Mr. Malek. I suggested that their fiscal problem might very well be a proper subject of discussion at almost any of their meetings.

Mr. LONG. Yes, it would. I could say one thing further, if I may. Not only does the Forest Service have my support and it has earned it many times over, I will do everything I can. I have listened as you have listened too, both of us, on the number of times they have had to repeat, "No, it's not enough," "No, it won't do the job," and so on. This is true.

I can add this much, that I know the Secretary has probably come quite a way in the time he has been here in thinking about the natural resources area. He gives a lot more attention to it today than I suspect he did in the earlier years.

Mrs. HANSEN. I suspect he is as deeply disturbed about the natural resources budget as the committee is.

Mr. LONG. Yes, I think he is.

Mrs. HANSEN. Thank you again.

Mr. LONG. Thank you.

POLLUTION ABATEMENT

Mrs. HANSEN. Your 1975 construction program is again highly concentrated in the pollution abatement area. When will your work in this area be completed so that available funds can be used in other high priority categories?

Mr. NELSON. Madam Chairman, in fiscal year 1975 we plan to complete the work under Executive Order No. 11507. All of the pollution abatement activities that were involved in sites where there are over 200 visitor days will be completed during fiscal year 1975.

However, there have been amendments to the Clean Water Act

and Executive Order No. 11752 which will require us to do a great deal more pollution abatement work within our national forest installations.

In addition, a number of the States have instituted stronger standards than we have in the Federal Establishment.

Mrs. HANSEN. Which States are these?

Mr. NELSON. For example, right now, we are troubled quite deeply in pollution abatement in the States of Virginia and California. These two have strict pollution abatement laws and where we stand the possibility of being closed down at some future date unless we can show them we are making an effort.

Mrs. HANSEN. Which facilities in Virginia are involved?

Mr. NELSON. These are primarily some of the smaller campgrounds we have in southwestern Virginia.

Mr. WYATT. What is the total amount, Dr. Nelson, that has been spent pursuant to this one Executive order which you will have complied with by the end of fiscal year 1975?

Mr. NELSON. I can get the total amount for the record, Congressman Wyatt, but it's sizable.

Mr. WYATT. Roughly how much?

Mr. NELSON. Roughly, we will expend $85 million under Executive Order No. 11507.

Mr. WYATT. Which is really just putting the total brakes on almost all other construction of the Forest Service, except what we have added.

Mr. NELSON. It has had a very large impact.

RECREATION—PUBLIC USE AREAS

Mrs. HANSEN. You are requesting $1,902,000 for development of recreation—public use areas. You have listed in the justification the projects this amount involves. What is the priority for these projects?

SAWTOOTH NATIONAL RECREATION AREA, IDAHO

Mr. NELSON. These are high priority projects during 1975. They are for reconstruction of existing facilities and campgrounds.

Mrs. HANSEN. What is the project in Idaho?

Mr. NELSON. That is a reconstruction item. If you will note down the list past the two lines there is a budget item for Sawtooth recreation headquarters and warehouse of $510,000, also in fiscal year 1975.

Mrs. HANSEN. How many visitors do they have per year at this facility?

Mr. MCGUIRE. This is one of the new national recreation areas. It was just dedicated in the past couple of years.

Mr. MCKAY. Last year, wasn't it?

Mr. MCGUIRE. That is right. The use has been growing very rapidly. However, I doubt the history of use up to now really indicates what it's likely to attain.

Mrs. HANSEN. Could this wait another year?

Mr. NELSON. This is a high priority construction item.

Mrs. HANSEN. What is your visitation?

Mr. NELSON. We will provide that for the record.

[The information follows:]

Last year over 900,000 visitor-days use was reported in the Sawtooth National Recreation Area.

COST OF WAREHOUSE

Mrs. HANSEN. Is it a year-round visitation area?

Mr. NELSON. No, ma'am. The recreation headquarters and warehouse probably would be used year round.

Mrs. HANSEN. What is the cost of the warehouse alone?

Mr. NELSON. It's a combination, as I understand it, of headquarters and warehouse in a complex. I will get the breakout for you.

[The information follows:]

The $510,000 includes the construction of the North Fork headquarters office and the related water and sewer system for the office and warehouse. Construction of the warehouse at the North Fork complex, estimated to cost $100,000, is not included in this budget request.

MOUNT HOOD, ORE. AND WENATCHEE, WASH.

Mrs. HANSEN. $225,000 is requested for Wenatchee and Mount Hood. What is the visitation at Wenatchee?

Mr. NELSON. We will send that up.

[The information follows:]

Use last year at the Wenatchee was 276,200 visitor-days.

DOUBLE LAKE CAMPGROUND, TEXAS

Mrs. HANSEN. $136,000 is requested for the Double Lake Campground in Texas. What is the priority for this project?

Mr. NELSON. Madam Chairman, the items that we had in exhibit I are all high priority items.

Mrs. HANSEN. I know.

Mr. NELSON. There were many others that were not included in the budget for fiscal 1975.

Mrs. HANSEN. In which area of Texas is this located?

Mr. NELSON. This is in the eastern part of the State.

Mrs. Hansen. Insert the number of visitations in the record.

[The information follows:]

Use last year was 32,100 visitor-days at the Double Lake campground.

SYCAMORE FLAT CAMPGROUND, NORTH CAROLINA

Mrs. HANSEN. $68,000 is requested for the North Carolina Sycamore Flat Campground. What does this involve?

Mr. NELSON. That is reconstruction of a campground. It is located just north of Brevard. It is a very heavily used campground.

Mrs. HANSEN. What were the numbers of visitations at this facility last year?

Mr. NELSON. I will provide that for the record.

[The information follows:]

There were 3,200 visitor-days use reported last year at Sycamore Flat Campground.

INDIAN BOUNDARY AMPHITHEATER, TENNESSEE

Mrs. HANSEN. $5,000 is requested for the Cherokee Boundary Amphitheater. Is this an Indian project?

Mr. NELSON. No, ma'am. This is within the national forest. I would have to get more detail to get its relation to the reservation.

[The information follows:]

The name Indian Boundary Amphitheater, is derived from its proximity to a nearby landmark called "Indian Boundary." The landmark is actually the boundary established in a 1819 treaty with the Cherokee Indian Nation. All lands northwest of the boundary were reserved to the United States and all lands southeast were reserved to the Indian Nation. Another treaty in 1835 gave all the lands to the United States.

HURON-MANISTEE, MICH.

Mrs. HANSEN. $65,000 is requested for the Huron-Manistee project for walkways, improvements for soil-vegetative rehabilitation of four sites.

Is this relatively close to Detroit?

Mr. NELSON. Some of these are within about 150 miles of Detroit.

Mrs. HANSEN. Is it a heavy use area?

Mr. NELSON. These are heavy use areas. All of these are in the lower peninsula of Michigan. I will insert the visitations in the record.

[The information follows:]

The four sites planned for soil-vegetative rehabilitation and walkways are very heavily used; 16,400 visitor-days use is reported for last year.

WHITE MOUNTAIN NATIONAL FOREST, N.H.

Mrs. HANSEN. $60,000 is requested for the White Mountain area.

Which area of the White Mountain does this include?

Mr. NELSON. This covers pretty much the whole breadth of our holdings in the State. We have need for improvement.

Mrs. HANSEN. What do you mean by "betterment"? What are you going to do?

Mr. MCGUIRE. Many of these campgrounds were built back in the days of the Civilian Conservation Corps in the 1930's. They are just getting to the point where you almost have to start over. We have to put in new guardrails, resurface the roads and paths, repipe the water, this sort of thing.

Mrs. HANSEN. Isn't this a winter area?

Mr. MCGUIRE. That is right. Also this is an area that is very close to Boston and other Northeastern cities.

Mrs. HANSEN. I know, my grandmother came from the White Mountains.

JACKSON HOLE, WYO.

For the Jackson Hole visitor information center, $35,000 is requested.

Mr. NELSON. Yes; this is with the Park Service.

Mrs. HANSEN. Do you wish to make a comment on the airport at Jackson Hole?

Mr. NELSON. That belongs to the National Park Service. There is a fair sized airport there.

Mrs. HANSEN. I know, but they proposed a jetport.

Mr. MCGUIRE. We have enough controversy now without taking a position on that.

Mrs. HANSEN. They cannot proceed with construction until they prepare an environmental impact statement on the grouses' strutting ground.

PRINCESS CAMPGROUND, CALIF.

There is $134,000 requested for the Princess campground in California. Isn't that one of your heavy use facilities?

Mr. NELSON. Yes, ma'am.

Mrs. HANSEN. Please supply for the record the visitations at this facility.

Mr. NELSON. We will be happy to.

[The information follows:]

Use is projected to be 25,000 visitor-days in 1975 at the Princess campground.

Mrs. HANSEN. You have already begun work at this facility.

Mr. NELSON. That is correct.

Mrs. HANSEN. Is this the completion of that project or the next phase?

Mr. NELSON. This is a continuation of a project that was previously started.

BRASSTOWN BALD, GA.

Mrs. HANSEN. $173,000 is requested for the Brasstown Bald visitor information center exhibits in Georgia.

Mr. NELSON. Yes, ma'am.

The visitor center at Brasstown Bald has been in operation for a number of years. It is necessary to replace and refurbish the exhibits within that center.

SPRUCE KNOB-SENECA ROCKS NRA, W. VA.

Mrs. HANSEN. $128,000 is requested for the Spruce Knob-Seneca Rocks NRA visitor information center exhibits.

What does this involve?

Mr. HOUSLEY. The building is complete and it needs the exhibits, electric power and other facilities. It needs these facilities now to make it usable by the public.

BLACK RIVER HARBOR, MICH.

Mrs. HANSEN. $32,000 is requested for the Black River Harbor. This is to complete removal of reef in the harbor which results in extensive drainage to Government facilities.

Don't you have to prepare an environmental impact statement on this project?

Mr. NELSON. We will have to make a decision as to whether an environmental statement is necessary to this when we have the information at hand.

DAY LAKE, WIS.

Mrs. HANSEN. $14,000 is requested for the Chequamegon Day Lake picnic ground.

What are the visitations at this facility?

Mr. NELSON. We will furnish the use on this.

[The information follows:]

Use last year was reported at 3,200 visitor-days at the Chequamegon Day Lake picnic ground.

INTERPRETIVE FACILITIES, ALASKA

Mrs. HANSEN. Justify your request of $10,000 for interpretive facilities, Alaska.

Mr. NELSON. This is to interpret some of the natural phenomena to the public that are visiting Alaska.

Mrs. HANSEN. What areas?

Mr. NELSON. Some of this covers ice field interpretation and some of the other natural wonders that are within the Tongass and Chugach National Forests.

Mr. MCGUIRE. We put interpreters on the ferries, as I recall, to explain to the tourists who are traveling by boat what they are seeing and tell them something about the natural features of the area.

LIBBY RESERVOIR, MONT.

Mrs. HANSEN. A total of $2,205,000 is requested for water resource development construction. Included in this amount is $77,000 for the Libby Reservoir. What are your visitation at this facility?

[The information follows:]

The construction at Libby Reservoir is a continuation of projects previously started. Use is expected to reach 8,000 visitor-days the first year of operation.

RAMPART RESERVOIR, COLO.

Mrs. HANSEN. $106,000 is requested for the Rampart Reservoir. Insert the information on visitations at this facility in the record.

Mr. NELSON. Yes, ma'am.

[The information follows:]

We project about 20,000 visitor-days use at the Rampart Reservior in 1975.

Mrs. HANSEN. Is this one of those areas where you have a rising water level?

Mr. NELSON. Essentially what we have in our water resource development construction program are the types of projects that are necessary to get in ahead of the water or get them in before the water is up to the high water mark.

TURQUOISE RESERVOIR, COLO.

Mrs. HANSEN. Justify your request of $130,000 for the Turquoise Reservoir, Colo.

Mr. NELSON. This is a continuation of campground construction on one of the reservoirs that was constructed, I believe, by the Bureau of Reclamation.

FLAMING GORGE NRA, UTAH/WYO.

Mrs. HANSEN. $153,000 is requested for Flaming Gorge.

Mr. MCKAY. Campground on Flaming Gorge?

Mr. NELSON. Yes, sir.

Mrs. HANSEN. How many people does this campground accommodate?

Mr. NELSON. This accommodates 500 persons at one time.

Mr. MCKAY. Does any of this have to do with sanitary facilities and so on at the Utah-Wyoming Flaming Gorge?

Mr. HOUSLEY. Sanitary facilities would be included as part of the campground complex.

Mr. MCKAY. Is it mostly reconstruction, or is this all new?

Mr. HOUSLEY. Some of each, actually some new construction and some reconstruction.

Mr. MCKAY. Give us some of the details on that for the record, will you?

Mr. NELSON. We will be glad to.

Mr. MCKAY. And visitors. That is growing in visitation but I would be interested to know what their visitation is.

Mr. NELSON. We will furnish that for the record.

[The information follows:]

Use is projected at 20,000 visitor-days at the Firehole and Cedar Springs projects in the Flaming Gorge National Recreation Area. The requested funding will be used to complete development of the Firehole complex including construction of a trailer dump station, traffic control barriers, septic tank for the entrance station, and general landscaping. At the Cedar Springs site a new sanitation and water system will be provided.

STAMPEDE RESERVOIR, CALIF.

Mrs. HANSEN. $603,000 is requested for the Stampede Reservoir, Calif. What does this involve?

Mr. MCGUIRE. This is a new reservoir. The problem is the same of getting in there before the water is put in.

Mrs. HANSEN. How does it happen to cost so much more than the other projects?

Mr. MCGUIRE. The capacity is greater for one thing. We just have more people in this area, the west slope of the Sierra.

Mrs. HANSEN. Insert the number of visitations in the record.

Mr. MCGUIRE. We will do that.

[The information follows:]

About 40,000 visitor-days use is projected for 1975 at the Stampede Reservoir, Tomson and Loggers Campgrounds on the Tahoe.

Mr. NELSON. Of course, you realize that some of these are new and there is no previous visitation record, Madam Chairman.

Mrs. HANSEN. I understand.

WYNOOCHEE RESERVOIR, WASH.

One hundred and ninety-six thousand dollars is requested for the Wynoochee Reservoir.

You have some facilities in connection with the dam.

Mr. McGUIRE. That is right. I think we have picnicking day-use facilities now. This will provide for overnight facilities.

Mrs. HANSEN. Overnight camping?

Mr. McGUIRE. Overnight camping.

TOLEDO BEND RESERVOIR

Mrs. HANSEN. $100,000 is requested for the Toledo Bend Reservoir, Tex. What does this entail?

Mr. NELSON. As I recall, the Toledo Bend is on the line between Texas and Louisiana. It is one of those power and recreation structures on the Sabine River.

Mrs. HANSEN. What is this going to provide?

Mr. NELSON. This is going to provide campground space.

Mrs. HANSEN. $75,000 is requested for Lake Conroe, Tex., boat ramp and toilets. Where is this facility located?

Mr. NELSON. That is about 75 or 80 miles north of Houston and near a heavy population center on the national forest.

LAKE CELINE, IND.

Mrs. HANSEN. $56,000 is requested for Lake Celine, Ind. What are your visitations at this facility?

Mr. NELSON. We will provide that, Madam Chairman.

[The information follows:]

We estimate 5,000 visitor-days use will occur the first year at the Lake Celine area on the Wayne-Hoosier.

ALLEGHENY RESERVOIR, PA.

Mrs. HANSEN. $172,000 is requested for the Allegheny Reservoir. Insert in the record the visitations at this facility.

Mr. NELSON. Yes, ma'am.

[The information follows:]

Twenty four thousand visitor-days' use is projected in 1975 at the Allegheny Reservoir area.

Mrs. HANSEN. Is that a new facility?

Mr. NELSON. We have some construction underway at this time, so this is a continuation and completion of that Allegheny Tracy Ridge project.

CONSTRUCTION FOR FIRE, ADMINISTRATION, AND OTHER PURPOSES

Mrs. HANSEN. You are requesting $1,729,000 for construction for fire, administration, and other purposes. You have listed in the justifications the various projects involved.

What is the priority for these projects?

Mr. DEINEMA. All are high priority where adequate facilities are not available.

Mrs. HANSEN. These are employee facilities?

Mr. MCGUIRE. These are all administrative facilities, including employee housing, ranger offices, and service buildings that go with our headquarters sites on the forests.

COMMUNICATIONS SYSTEMS

Mrs. HANSEN. You are requesting funds for communications systems in Arizona, Wyoming, California, and Alaska. One of the systems is a "fire service new system."

What does this involve?

Mr. DEINEMA. It is a new communication system that is needed for the region—a statewide facility.

Mrs. HANSEN. Where is that going to be located?

Mr. DEINEMA. Probably at one of the zone centers. I don't know the exact location.

ALASKA COMMUNICATIONS SYSTEM

Mrs. HANSEN. $270,100 is requested for Alaska communications system.

What was your first phase cost?

Mr. DEINEMA. I do not have that, Madam Chairman. I will have to supply that for the record.

[The information follows:]

The first phase cost of the communication system in Alaska was $194,000.

Mrs. HANSEN. What is your current request for the last phase?

Mr. DEINEMA. I will supply that, too.

[The information follows:]

The third and last phase of this project will be proposed in fiscal year 1976. It will cost about $75,000 to finish this last phase.

BOUNDARY WATERS CANOE AREA

Mrs. HANSEN. $204,000 is requested for a special project to reconstruct the Prairie Portage Dam on Sucker Lake within the Boundary Waters Canoe Area and on the border between Minnesota (near Ely) and Ontario, Canada.

What is your visitation in this area?

Mr. MCGUIRE. The Boundary Waters Canoe Area is one of our most popular areas. It is part of the National Wilderness Preservation System. It is the only canoe area in the system.

We will provide the figures for a recent year but I am sure it is very high.

[The information follows:]

There were 1,045,800 visitor-days use in the Boundary Waters Canoe Area in 1973.

Mr. MCGUIRE. The problem here, Madam Chairman, is the waters are regulated by dams. They are international waters and we have an obligation to uphold the United States part of this regulatory scheme along with what the Canadians are doing on their side of the border.

FUND NEEDS

Mrs. HANSEN. Your total is $1,729,000 for your construction for fire, administration, and other purposes. What proportion of the total need does this meet, according to your own facility standards?

Mr. MCGUIRE. We feel that this is meeting about 10 percent of our needs at this level of funding.

In our long-range planning, we indicate that we would need to be spending about 10 times as much to bring these facilities up to par.

As I mentioned in connection with recreation, many of our administrative facilities also were built in the 1930's by the Civilian Conservation Corps and they are just suffering from old age.

Mrs. HANSEN. Aren't some of them fire hazards?

Mr. MCGUIRE. Yes, ma'am. We have tried to make use of accelerated public works programs, and Job Corps programs, and things of that sort to take up the slack, but we are falling further behind.

CONTRIBUTIONS BY JOB CORPS

Mrs. HANSEN. Your Job Corps program was reduced a few years ago. Hasn't this had an adverse affect on the amount of trail work and repair work you have been able to perform?

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. What do you suppose the yearly value of their participation was?

Mr. MCGUIRE. It was quite high. In fact, the 20 conservation centers that are still operating also contribute substantially not only to recreation facility construction but also to the construction of administrative facilities. We probably have a figure on this.

Mr. DEINEMA. In fiscal year 1973 the contribution value was $1,886,000 for recreation construction.

Mrs. HANSEN. This was literally work that would not have been done out of appropriated funds because of the shortfall in your funding.

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. Please insert in the record the amount of work that was done year-by-year from the beginning of the Job Corps program.

[The information follows:]

Job corps civilian conservation centers—Forest Service value of work accomplished

Fiscal year	*Amount*
1965–66	$4, 890, 000
1967	7, 871, 000
1968	10, 358, 000
1969	5, 081, 000
1970	4, 840, 000
1971	5, 518, 000
1972	5, 425, 000
1973	6, 353, 000
Total	50, 336, 000

NOTE.— 1967–68: 47 conservation centers; 1969–73: 20 conservation centers.

Mrs. HANSEN. I think the implication that the Job Corps program was ineffective was one of the saddest misrepresentations that was made to Congress. It was not. The forests that I visited where there was a Job Corps program were benefiting enormously in a lot of ways.

Mr. McGUIRE. That is exactly right.

Furthermore, the labor unions have been extremely cooperative in utilizing these programs to train apprentices or train the Job Corps men to where they can enter an apprentice program when they graduate from the Job Corps. It has worked out very well from the labor point of view as well.

RESEARCH LABORATORY AT CORVALLIS

Mr. WYATT. I wonder if you can furnish for the record the estimated present cost of the fourth stage and final stage of construction of the Forest Science Laboratory at Corvallis. That would be the west wing,

Mr. McGUIRE. We will do that.

Mr. WYATT. And my understanding is that to complete the east wing, another $500,000 is neccessary. I would appreciate your confirmation of that, if in fact that is true.

[The information folows:]

The cost of constructing the fourth and final stage of the Forestry Sciences Laboratory at Corvallis, Ore. is now estimated at $2,800,000. This wing will house primarily the work on: Seeding, planting, and nursery practices; silviculture of mixed conifers; genetics of Douglas-fir and other Pacific Northwest conifers; brushfield reclamation, and watershed management, including anadromous fish habitat.

An additional $500,000 is required for completion of the east wing of the Corvallis Laboratory. The $1,500,000 appropriated in fiscal year 1974 permitted completion of service facilities, offices, mechanical plant, and insect research laboratories in the east wing. The additional funds are needed to furnish the insect laboratories with laboratory benches, casework and specialized equipment such as fume hoods and insect rearing areas.

TIMBERLINE LODGE

Mr. WYATT. And also my understanding is that you need $130,000 for construction and operation. This is in connection with Timberline. I will save that for another session.

Mrs. HANSEN. Timberline is going to need a general overhaul if there is any more snow.

Mr. WYATT. That is right.

Maybe I will just ask the Timberline questions now and get them in the record.

Mrs. HANSEN. Fine.

Mr. WYATT. Chief, my understanding is that there was severe damage at Timberline this past season and that there is a need for approximately $130,000 to be reprogramed to take care of this damage.

Mr. McGUIRE. That is correct.

Mr. WYATT. And also that there is a need for approximately $222,000 to cover the overruns in connection with the construction of the Day Lodge.

Mr. McGUIRE. That is correct.

Mr. WYATT. I would appreciate your elaborating on that for the record also.

Mr. McGUIRE. We will do so.

[The information follows:]

Construction on an addition to Timberline Lodge is in process and record snowfalls this winter have hindered and contributed to construction cost overruns. Damage to the lodge has occurred. In addition, we found it necessary to make some design changes in recognition of the unusual snow conditions.

Some of the design changes and damage should be constructed concurrently with construction now underway on an existing contract. The cost for these items is $130,000 as follows:

Reconstruct gallery corridor crushed by snows	$25,000
Modify fire protection system	10,000
Modification of heating system	95,000
Total	130,000

We plan to ask the Congress to allow reprograming the $130,000 from fiscal year 1974 appropriations in order to proceed with the items as soon as possible.

Other anticipated overruns resulting from the extreme weather conditions are:

Design changes and additional construction materials	90,000
Repair loading dock roof	30,000
Replace boiler	60,000
Electrical work	11,000
Miscellaneous items	31,000
Total	222,000

DAY LODGE, TIMBERLINE

Mr. WYATT. My understanding is in addition that $150,000 could be used for the plans and specifications for the new day lodge.

Mr. MCGUIRE. That is correct.

Mr. WYATT. Will you elaborate on that?

Mr. MCGUIRE. Yes, we will.

[The information follows:]

A new day lodge is being considered to accommodate increasing use. A new day lodge would help preserve the existing unique Timberline Lodge by reducing current visitation by persons using the adjoining winter sports facilities. Prior to construction, detailed day lodge designs and plans will be necessary at a cost of $150,000. A prerequisite to this need is for operation funds (forest land management-recreation use) of $40,000 to complete revision of the master plan. This is necessary in order to make a final determination regarding overall management and area design.

Mr. WYATT. Thank you very much.

Madam Chairman, that is all.

LAND ACQUISITION

Mrs. HANSEN. $1,578,000 is requested for land acquisition under the Weeks Act. Do you have any particular comments to make in this regard?

Mr. MCGUIRE. The purposes of this appropriation are described in the notes which you have already placed in the record. We think that here again it is essential that we move ahead, particularly in these purchase units in the East, to acquire enough land to provide an efficient administrative unit and to provide the local citizens with sufficient public land on which they can find recreation and employment opportunities.

FOREST ROADS AND TRAILS

Mrs. HANSEN. Please insert justification pages 123 through 127 in the record at this point.

[The pages follow:]

FOREST ROADS AND TRAILS

Appropriation Act, 1973	$158,840,000
Appropriation Act, 1974	98,200,000
Budget estimate, 1975	121,000,000
Increase	+22,800,000

PROJECT STATEMENT

The following tabulation reflects the total program for the construction and maintenance of roads and trails on the National Forests and Grasslands by combining the funds available under the appropriation "Forest roads and trails" with the permanent appropriation of 10 percent of National Forest receipts.

Project	1973	1974 estimate	1975 estimate	Increase or decrease
1. Construction of roads and trails	$112,688,147	$92,546,000	$107,802,000	$15,256,000
2. Maintenance of roads and trails	44,804,355	37,669,000	39,145,000	1,476,000
Total obligations	157,492,502	130,215,000	146,947,000	16,732,000
Transfer from Roads and Trails for States a/	-33,871,106	-45,468,547	-40,500,000	4,968,547
Program under Forest Roads and Trails contract authority	123,621,396	84,746,453	106,447,000	21,700,547
Obligations incurred under unfunded contract authority	35,218,604	13,453,547	14,553,000	1,099,453
Appropriation or estimate	158,840,000	98,200,000	121,000,000	22,800,000

a/ The annual appropriation language and the Department presentation combine the appropriation for Forest roads and trails made pursuant to 23 USC 205 and the appropriation of 10 percent of forest receipts for construction and maintenance of roads and trails pursuant to 16 USC 501. This merger of funds is made in order to simplify the programing, allotment, and accounting of funds at the field level.

An increase of $22,800,000 is proposed to meet cash requirements for liquidation of contract authority. This appropriation provides for the liquidation of obligations incurred for the construction and maintenance of forest roads and trails pursuant to the authority contained in the Federal-Aid Highway Act. An appropriation of $121 million for 1975 is required to:

(1) Pay for obligations of the prior years which will be due for payment in fiscal year 1975.

(2) Pay the portion of the 1975 obligations of $106.4 million contract authority which will require cash payment in that year.

32-043 O - 74 - 24

Following is a summary of three years of road and trail construction and maintenance. A comparison is shown of the work to be undertaken in fiscal year 1975 as compared to fiscal year 1974 (dollars are in thousands).

	FY 1973		FY 1974		FY 1975		FY 1974-1975 Change			
	Miles	Amount	Miles	Amount	Miles	Amount	Miles	Pay Costs	Space Costs	Program
Recurrent road maintenance	96,598	$38,050	91,818	$32,417	82,422	$33,686	-9,396	$269	$1,000	
Recurrent trail maintenance	51,802	6,755	29,656	5,252	39,403	5,459	9,747	42	165	
Road construction	527	59,799		8,115		8,378		58	205	
Trail construction	858	3,105	250	3,040	330	3,135	80	15	80	
Location, surveys, plans and supervision (timber purchaser roads)	3,678	39,629	7,080	70,953	8,000	81,631	920	671	1,996	$8,011
Supplementing timber purchaser construction ..	660	9,955	300	8,438	350	8,684	50	41	205	
Bridge construction and reconstruction for timber access			20	2,000	153	5,974	133	155	154	3,665
Road purchase		200								
Totals		157,493		130,215		146,947		1,251	3,805	11,676

The $16,732,000 program increase will provide for the Forest Service to handle the engineering road survey work on at least 75 percent of the total volume of timber scheduled for sale in fiscal year 1975 and to retain control of the location and design work on permanent roads. The increase will also fund access bridge construction to support the timber program. The mileage of timber purchaser road construction and reconstruction will be increased by 920 miles in fiscal year 1975.

Emphasis on support activities for the timber purchaser road program, rather than direct Federal construction, will continue in fiscal year 1975. This will help to meet the challenge of increasing timber needs and will assist in maintaining Federal outlays at a reduced level.

The proposed program provides for maintenance and environmental protection of essential roads and trails on the existing transportation system. Some lightly used roads will be closed to traffic between entries for management purposes, and to minimize outlays and to prevent resource damage.

Requested road supplemental funds will be used to construct environmentally sound timber roads for access to new timber sale opportunities in areas of steep slopes, critical soils, sensitive watersheds and timber stands needing immediate thinning or salvage.

National Trail System development authorized by PL 90-543 will be implemented under the proposed funding. This will assist in providing for the present heavy public travel over inadequate and unsafe, heavy use trails in some areas of the National Forests. Top priority will be given to construction of the Pacific Crest and Appalachian National Scenic Trails, next priority will be given to National Recreation trail candidates, and then priority to construction of heavy use trails not part of the National Trail System. This program will provide for safe use of many identified heavy used trails while protecting soil and watershed and esthetic values in scenic and recreation areas.

The planned maintenance, construction, and engineering services will be in accord with the National Environmental Policy Act (NEPA). This Act requires full consideration of the services to, and the effect upon, all resources by development of roads, trails, and other facilities. All alternate means of access must be investigated and their desirability, feasibility, and impacts carefully weighed before a decision to construct is made. This continues to increase costs due to extending the time between project conception and completion and it requires extensive analysis and review during the planning process with full utilization of technical expertise.

The work will be designed, and facilities constructed and administered, under provisions of the Highway Safety Act that made all Highway Safety Standards effective February 15, 1973 (23 CFR II). This requires implementation of traffic engineering services and techniques, including traffic control devices, seasonal closure, and other management techniques for roads to insure public safety.

The proposed program provides for continuing implementation of the bridge standards under the Federal-Aid Highway Act of 1968. Implementation of the Act involves aggressively continuing corrective actions on those fatigued and otherwise defective bridges. This results in added costs for maintenance, reconstruction, or in closure and rerouting over longer routes of access to assure public safety.

The following tabulation shows the current status of the forest roads and trails system and projected needs:

	Existing Mileage	Estimated Mileage Needing Reconstruction	Estimated Additional Mileage Needed
Forest development roads ..	201,317	141,827	135,840
Forest development trails .	96,393	47,577	23,895

Construction

	By the Government			By Timber Purchaser		
	FY 1973	FY 1974	FY 1975	FY 1973	FY 1974	FY 1975
Roads (miles)	527	- -	- -	6,727	7,080	8,000
Trails (miles)	858	250	250	- -	- -	- -

Status of Unfunded Authorizations

Unfunded contract authority beginning of 1974	$327,256,000
Federal-Aid Highway Act of 1973 (1974 and 1975 authority available in 1974)	280,000,000
Appropriation, 1974	-98,200,000
Unfunded contract authority lapsing	-24,637,000
Total unfunded beginning of 1975	484,419,000
Federal-Aid Highway Act of 1973 (1976 authority available in 1975)	140,000,000
1975 Budget estimate (cash requirements)	-121,000,000
Balance to remain unfunded as of June 30, 1975	503,419,000

Analysis of Cash Requirements

1.	Unliquidated obligations, June 30, 1973		$76,301,267
2.	Estimated cash requirements to finance 1974 program		50,326,905
3.	Total cash requirements by June 30, 1974		126,628,172
4.	Less cash on hand 1973: Balance from 1973	28,428,172	
	Appropriation, 1974 ..	98,200,000	126,628,172
5.	Obligations in 1974 and prior years for which cash was not provided in items 1 and 2		33,000,000
6.	Estimated cash required to finance 1975 program		a/ 83,000,000
7.	Reserve		5,000,000
8.	Total cash required in 1975		121,000,000

a/ An estimated 78 percent of the $106,447,000 new obligations will require cash payments during the fiscal year.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS

Forest Roads and Trails

	FY 1973	FY 1974	FY 1975
Alabama	$730,990	$700,000	$789,800
Alaska	3,413,429	4,992,700	5,634,200
Arizona	3,681,107	3,502,300	3,952,200
Arkansas	1,806,171	1,602,900	1,808,800
California	30,335,779	29,132,900	32,876,900
Colorado	6,771,024	5,312,700	5,995,300
District of Columbia	3,142,434	3,099,200	3,497,500
Florida	768,218	619,300	698,700
Georgia	932,914	781,800	882,200
Idaho	15,172,299	12,956,400	14,621,300
Illinois	258,180	180,300	203,400
Indiana	179,856	41,100	46,400
Kansas	1,247	5,200	5,800
Kentucky	761,257	467,800	527,900
Louisiana	1,001,030	976,500	1,102,100
Maine	92,759	32,400	36,600
Michigan	2,530,474	1,250,000	1,410,300
Minnesota	2,095,369	1,202,200	1,356,600
Mississippi	911,964	1,307,100	1,475,000
Missouri	680,673	423,500	478,000
Montana	12,803,967	9,920,400	11,195,200
Nebraska	104,032	47,200	53,300
Nevada	745,790	737,000	831,800
New Hampshire	774,153	374,800	423,000
New Mexico	4,579,872	2,601,200	2,935,600
New York	3,297	4,300	4,800
North Carolina	954,271	989,400	1,116,600
North Dakota	12,692	15,700	17,800
Ohio	92,652	28,900	32,600
Oklahoma	144,451	85,400	96,400
Oregon	32,534,267	22,694,200	25,610,200
Pennsylvania	927,880	595,700	672,200
Puerto Rico	139,971	26,500	29,900
South Carolina	793,893	713,800	805,500
South Dakota	1,484,605	1,933,100	2,181,400
Tennessee	803,310	661,100	746,100
Texas	960,579	854,100	963,800
Utah	2,832,966	2,430,000	2,742,200
Vermont	467,841	336,200	379,500
Virginia	1,179,608	958,600	1,081,700
Washington	13,743,118	10,242,200	11,558,300
West Virginia	1,050,895	1,338,500	1,510,400
Wisconsin	1,443,613	744,600	840,300
Wyoming	3,647,605	3,295,800	3,719,200
Total	157,492,502	130,215,000	146,947,000

ROAD ENGINEERING REQUIREMENTS

Mrs. HANSEN. Is the amount you are requesting sufficient to fully implement the agreement between the Forest Service, Office of Management and Budget, and the Committee on Road Construction engineering requirements.

Mr. MCGUIRE. Yes; it is.

Mrs. HANSEN. You are requesting an increase of $22,800,000 for forest roads and trails. Do you want to discuss this with the committee?

Mr. NELSON. This increase of $22,800,000 will meet the cash requirements for liquidation of obligations that were incurred in the construction and maintenance of forest roads and trails. We will pay for the obligations of prior years that will be due for payment in fiscal 1975.

We will also pay the portion of the 1975 obligations that will require cash payment during 1975. This includes a program of recurrent road and trail maintenance, trail construction, road survey location, design of timber purchaser roads. We do plan to have some supplementing of timber purchaser construction along with bridge construction.

Mrs. HANSEN. What portion of the amount you are requesting for roads and trails is for bridge construction?

Mr. NELSON. For bridge construction it is $5,974,000. About 153 bridges will be covered with that.

TRAIL CONSTRUCTION

Mrs. HANSEN. You plan to construct 330 miles of trails in fiscal year 1975. Is that correct?

Mr. NELSON. That is correct, $3,135,000.

Mrs. HANSEN. Where are these trails located?

Mr. NELSON. These will be primarily within the National Scenic Trails System.

BICENTENNIAL TRAIL PROGRAM

Mrs. HANSEN. Are you participating in the Bicentennial trails program?

Mr. MCGUIRE. Madam Chairman, we made a number of proposals like other agencies when we were requested to do so as to what we might do in connection with the Bicentennial. The only one of our proposals that was accepted was the $20,000 for republishing and distributing a booklet.

Mrs. HANSEN. Why weren't they interested?

Mr. MCGUIRE. I don't know.

Mrs. HANSEN. Part of your trail system goes back to pre-Revoluary times.

Mr. MCGUIRE. That is true.

There are many possibilities if you wanted to go into the details.

Mrs. HANSEN. Provide for the record some of the proposals you made on your trails.

Mr. MCGUIRE. I will be glad to do that.

[The information follows:]

In response to a request from the Office of the Secretary, we submitted a list of projects which would be appropriate for Bicentennial recognition. Two of

these special projects incorporated proposals for developing and signing historically significant trails.

Youth Conservation Corps.—By 1976 it is projected the Forest Service will be operating 350 Youth Conservation Corps (YCC) camps on the national forests enrolling 15,000 youth. Each camp could undertake an environmental project special to the Bicentennial. Such projects could include building campgrounds, building trails, signing interpretative trails, restoring or rebuilding historic artifacts or structures, signing local historical landmarks, et cetera. Each project would be signed as being a special Bicentennial project. Local dedication ceremonies could be held for each project late in 1975 or early in 1976.

Cooperative outdoor environmental programs.—The Forest Service does not solicit COEP projects. However, prospective cooperators could be encouraged to participate in environmental projects with Bicentennial significance and related to our American heritage. Examples of such projects would include protecting and preserving local landmarks, artifacts or historical areas; erecting signs to identify and describe significant local landmarks, historical events, et cetera; developing trails or interpretive centers to see and learn about historical objects, places, or events related to American heritage; planting trees, improving wildlife, habitat, or performing other cultural practices on national forests.

In addition to these proposals, there is in the budget $3,135,000 for trail construction. Much of this planned construction is for trails within the National Scenic Trails System, and will receive historical recognition in connection with the Nation's Bicentennial.

Mrs. HANSEN. The Bicentennial is supposed to be designed to develop a wide area of interest and I am amazed that they didn't accept some of your proposals.

For example, the Appalachian Trail has significant importance to the Bicentennial

Mr. MCGUIRE. We have not seen the other agency proposals so I have no idea on what basis their selections were made, but there are many that we could offer.

Mrs. HANSEN. Your trail program is a program that is singularly appealing to outdoor people and young people.

Mr. MCGUIRE. There is the Lewis and Clark Trail.

Mrs. HANSEN. That is correct.

Mr. MCGUIRE. There are many trails in Alaska that cross national forest lands. I am sure we could suggest a number of things that might be of interest.

ENGINEERING CAPACITY

Mrs. HANSEN. Mr. McKay.

Mr. MCKAY. Yesterday you indicated that there was no money for construction of forest roads and so on and a reduction in a lot of these other areas.

What is that doing to your engineering capacity in the Department?

Mr. MCGUIRE. It has had the effect along with personnel ceilings of reducing the number of engineers that we can employ. We have not had to lay any off but we have had to be slow in employing new ones.

As a result, we are losing a whole age class of the younger engineers because we haven't been able to bring them in. We have a very big engineering program even without appropriated funds for roads because we must provide engineering services on the total road program, including the roads that are built by the timber purchasers.

We also have the trails, the bridges, and other engineering jobs to be done. The chief concern of mine is our inability to bring in the recent engineering school graduates and bring them up through the organization; our age class distribution is getting out of whack.

Mrs. HANSEN. The thing that concerns the committee, Mr. McGuire, is that the private industry isn't going to provide a road system that will meet multiuse purposes. Also, when your receipts to your schools and counties decline there is going to be an immediate response from across the United States. If non-multiple-purpose roads are constructed you are going to be confronted with increasing problems because recreation needs are increasing, particularly now as the 4-day workweek becomes more prevalent.

Either they are going to tear something up in a city or they are going to enjoy themselves and spend it in recreation. The trend in this country has been toward more outdoor recreation, which is healthy, but you have to have adequate places for people to stay.

Why was the Federal-Aid Highway Act passed in the first place, Mr. McGuire? Because States found themselves with astronomical needs as far as moving people.

You found yourself after World War II with roads that were undermaintained. There had been no reconstruction. You were faced with a whole collection of two-lane highways across the United States that could not move the traffic, so there had to come this necessary road construction program.

I know from my experience in the West where every State found itself with millions of dollars of road construction requirements because of the heavy use of them by the military in moving people and equipment.

You had to rebuild roads and bridges. The same thing could happen again because you never miss the water in a well until it goes dry.

Mr. MCGUIRE. As you pointed out many times, you can't run a start-and-stop operation to solve that kind of a problem.

Mrs. HANSEN. No.

Mr. MCGUIRE. You have to build up to a level of staffing and capability and then continue to attack the problem year after year. It is not a matter of waiting until the crisis is in our midst and then attempting to do something. We have to begin now.

Mrs. HANSEN. As you get into more and more difficult terrain for your allowable cuts, you are probably going to have increasingly difficult problems of road construction.

I think it an improvident look at the future and I just can't understand the decision of the Office of Management and Budget.

Mr. MCKAY. Madam Chairman, what have they done with the 9,000 miles of road that they are minus in this year? Are they giving them away?

Mrs. HANSEN. They must have closed them.

Mr. MCGUIRE. We have closed down some roads because we didn't have the money to maintain them or because they really needed reconstruction.

Mrs. HANSEN. Are they multiple-purpose use roads?

Mr. MCGUIRE. Most of our roads are multiple-purpose no matter what you start out to call them. Once you put in a road the public uses it for all kinds of reasons, fishermen, hunters, loggers.

TIMBER PURCHASER ROADS

Mrs. HANSEN. Supposing a timber company builds a road and they undermaintain it and you have problems of erosion. Aren't you the possessor of the road when they are finished?

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. But you also possess the liability for any difficulties, any accidents, et cetera. Isn't this correct?

Mr. MCGUIRE. That is correct. We can require the timber purchasers, however, to perform according to the contract specifications.

Mrs. HANSEN. That is correct.

Mr. MCGUIRE. But the problem arises as you indicate, after the contract is ended.

Mr. MCKAY. When a company builds a road and you require them to build to certain specifications to begin with, do they turn that road back to you in that specified condition at the end, or is that only a beginning qualification?

After they have used it and got their timber out then do they have to turn it back to you in the original qualified position, or can they turn it back used up, burned up, or whatever?

Mr. RESLER. In the original condition less just normal wear and tear on the road.

In other words, if the road system has suffered serious slides or some physical disturbance of that type, the operator is required to restore it. If a major avalanche or something completely beyond his control occurs, then the Government could provide emergency financial assistance to restore the road.

Mr. MCKAY. Otherwise if he puts in a false base in the period of time that he has used it, theoretically at least it would show up and he has to reinstate that to the level that you prescribe to begin with.

Mr. RESLER. Theoretically. The problem is proving the cause of the failure.

ROAD STANDARDS

Mrs. HANSEN. I was going to say you have another problem. You will have disagreement on what the standard of the road should be. Your engineering standards are going to be too high for the essential purpose of the timber companies. They are going to argue that primary purpose is reflected in the sale because that cost of the road goes into the sale.

Mr. MCGUIRE. That is right.

Mrs. HANSEN. My guess is that you are going to have more than one lawsuit.

Mr. MCGUIRE. We could well face more litigation there but this is one of the reasons we need an engineering staff. Even though there are no appropriated funds for road construction we are nevertheless building 8,000 miles of roads next year and we are paying for them with timber.

We want to be sure that the base is put in properly, that the contractor follows the alinement and the grades. We have to have our engineers out there at all stages of construction to make sure it is done right. We can't simply wait until the contract is over and then go take a look.

Mr. McKay. It appears as a result of your program here that you are going to have to reduce your personnel in that area, which would insure the very thing you are talking about.

[Discussion off the record.]

ROADS CLOSED

Mr. McKay. Could you give us a list of where these 9,396 miles of road are that you are closing or shutting down or whatever you are doing to them?

Mrs. Hansen. Please.

Mr. McGuire. It will be difficult. We will do the best we can. It is all over the country. It is in bits and pieces, a spur here and a spur there, but we may have some figures that will illustrate locations.

Mr. McKay. If you don't have exact spots we would like at least a definition of what kind of roads these are, if they are just a spur of one of your mains or what, whether they are recreational areas, multiple-purpose areas, strictly forest, removal, or what?

Mr. Nelson. This would be a much better item to provide, Congressman McKay, because otherwise we would have to aggregate right from the district level up to the supervisor's level on the exact locations.

Mr. McGuire. We will give you an idea.

Mr. McKay. If you go through all the bureaucracy you won't get it this year or next.

Mr. McGuire. We will give you the best figures we can find and we will also give you some reasons as to why we close and what kind of roads we close.

[The information follows:]

The decrease of 9,396 miles in road maintenance is not linked solely to road closure, nor can we break out the specifics from our current reporting. In our management of roads we are continually adjusting our system in a number of ways.

Some roads received increased use by general public traffic and were transferred to public road authorities. Others have served the immediate needs of management and are "closed" to travel as the most economic preservation measure. These will be reopened as needed for public use or management purposes. Such closures are done with public involvement and preplanning and generally occur throughout the entire national forest system for resource and investment protection.

Closures may be seasonal, corresponding to periods of the year when public, operator, or administrative traffic is normally light. Temporary closures may extend for several years where there is a benefit to the achievement of management objectives such as wildlife habitat protection or economic efficiency.

SUPPLEMENTING TIMBER PURCHASER CONSTRUCTION

Mrs. Hansen. You propose to build 350 miles of roads which will be supplementing timber purchaser construction. Are these largely in your small business set-asides?

Mr. McGuire. No; they are not limited to the size of business. The law permits us only to require the timber purchaser to build the kind of a road that a prudent operator would build for logging purposes. This could be under either a contract held by big business or by small business. It might happen anywhere.

We ordinarily would supplement what the purchaser does if we want the road to serve other purposes or if we want to keep it as part of

our permanent system and we would like to have more permanent drainage facilities. A prudent operator might only build what you would call a temporary road. If we want to keep it as a part of the permanent system, we would want permanent drainage, a more lasting base, and this sort of thing.

Mrs. HANSEN. You always have the problem of watershed protection and erosion, particularly where you have logging very close to creeks, which is almost the standard kind of logging in the Northwest, west of the mountains. Isn't this correct?

Mr. MCGUIRE. This is true and this is why we particularly appreciate the committee's efforts to make sure that we control the design and the location of where the road is put. Under the terms that you laid out for us last year we will determine where the road is located and how it will be designed. We do not leave that to the timber purchaser.

MULTIPURPOSE ROADS

Mr. MCKAY. A further question, Madam Chairman.

What percentage of your roads and trails would be classified as recreational roads, for recreational purposes primarily?

Mr. MCGUIRE. For many years we have been trying to classify roads as timber roads and recreation roads and it is impossible. Almost all of our roads are general purpose roads. There is a small percentage of roads within campground and picnic areas and recreation areas that could be called strictly recreation, but even there, we use those roads for fire protection, maybe for wildlife management.

Mr. MCKAY. In my area of the country we don't have the forests like the chairman has in that regard although we have some and we have timber sales and roads there, but there are a lot of other areas which you have, which you develop, and recreation is the primary use of that, and deer hunters, and so on, and there is a greater demand in our area in some cases for that than there are for forest roads per se.

Mrs. HANSEN. The areas that have been logged are primarily for the hunters, the fishermen, the blackberry pickers, the huckleberry pickers, and all the rest of your assorted visitors.

Mr. MCGUIRE. This is why we find it so hard to classify a road. In your country, Mr. McKay, we may build a road to get to some water development we want to maintain. Once we build that road all kinds of people will use it, hunters particularly, prospectors. You really can't say a road is just for one purpose in most instances.

Mr. MCKAY. Do you require in your roads that they have to be forest-oriented before they can fall into the multiple class or recreation?

Mr. MCGUIRE. We have a transportation plan on each of our forests and we show in our plans where we would like to have roads and where the existing roads are. We recognize there will be some spurs off of these system roads for particular purposes like running a spur to get some timber cut and closing that spur.

However, ordinarily all of our roads are multiple purpose roads from the beginning.

Mr. MCKAY. They become multiple purpose but is the original intent on any road for timber source or resource purposes only or other such as recreation or——

Mr. McGuire. The original intent in almost all the roads that we build with timber purchaser construction is of course for timber. They become multiple purpose later as you recognize.

Mr. McKay. Do you have a percentage of your roads which you authorize which are strictly recreation roads?

Mr. McGuire. We don't have any in this budget but in years past we have been able to show those that were strictly recreation. These were, as I say, roads within campgrounds or recreation areas.

Mrs. Hansen. In view of the energy crisis and also the very possible mineral shortages in this country, you will probably have an influx of prospectors.

Mr. McGuire. Some of the prospectors of course travel on foot or by horseback or they use vehicles on existing roads. Others will travel with off-road vehicles.

We regulate the use of off-road vehicles. There are some places where we allow them and other places they are not allowed. You may have a lot of area, Mr. McKay, where it is permissible to travel with a four-wheel drive vehicle. There are some new regulations concerned with mining under the 1872 mining laws which we have proposed and which are now approaching the final implementation.

Under these regulations the miner if he wishes to build a road must tell us where he plans to put it, what standards he will use, and so on.

Mr. McKay. Does this relate to the prospector?

Mr. McGuire. This could be for prospecting if he needs a road to move in, say, a drill or a bulldozer.

RECREATION AND ALL-PURPOSE ROADS

Mr. McKay. What percent of your proposed fiscal year 1975 roads and trails construction appropriation will go to recreation and all-purpose roads?

Mr. McGuire. The construction funds requested are primarily for support of the timber program and supplementation of the timber sale credit construction.

Road construction projects to develop recreation sites, and to support administrative purposes, have been deferred.

Mr. McKay. Would you support language in the fiscal year 1975 bill requiring that not less than 25 percent of the roads and trails construction go to recreation and all-purpose roads?

Mr. McGuire. I would be reluctant to support such a recommendation even though I recognize the good intentions of your proposal. It removes the flexibility of management to respond to changing needs. If, for example, catastrophic insect or fire losses required us to salvage timber, we would have to first obtain a release from the language you propose. It would be much better, when economic conditions permit, to fund a road and trial program consistent with balanced program needs.

Mr. Evans. You have a substantial request for what we call "roads and trails." In fact, we all know that trails get almost none of this money, and roads get almost all of it. My question to you is, then, why do we keep on calling it roads and trails? Let's just call it roads—that's what it is.

Can you give me a more specific breakdown of just how much money will physically be spent for trails in this section?

Mr. McGuire. The Forest Roads and Trails activity is involved with the construction, reconstruction, and maintenance of the National Forest System managed transportation system of roads and trails. This transportation system includes about 96,500 miles of trails. To eliminate trails from the title would ignore a major feature of the total transportation system.

The fiscal year 1975 budget proposes $5,459,000 for trail maintenance and $3,135,000 for trail construction. This represents approximately 6 percent of the total Forest Roads and Trails budget proposal.

Acquisition of Lands for National Forests—Special Acts, and To Complete Land Exchanges

Mrs. Hansen. We will insert justification pages 128 through 130 in the record at this point.

[The pages follow:]

ACQUISITION OF LANDS FOR NATIONAL FORESTS, SPECIAL ACTS

Appropriation Act, 1973	$80,000
Appropriation Act, 1974	94,000
Budget estimate, 1975	161,000
Increase	+67,000

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
1. Cache National Forest, Utah, Act of 5/11/38, as amended	$50	$20,000	$20,000	- -
2. Uinta-Wasatch National Forests, Utah, Act of 8/26/35, as amended	20,000	20,000	30,000	$10,000
3. Toiyabe National Forest, Nevada, Act of 6/25/38, as amended	8,000	8,000	10,000	2,000
4. Angeles National Forest, California, Act of 6/11/40	30,000	14,000	20,000	6,000
5. San Bernardino and Cleveland National Forests, California, Act of 6/15/38	- -	32,000	81,000	49,000
Unobligated balance reverted to National Forests Fund	21,950	- -	- -	- -
Appropriation or estimate	80,000	94,000	161,000	67,000

The Congress has enacted several special laws which authorize appropriation from the receipts of specified National Forests for the purchase of lands to minimize erosion and flood damage. Amounts appropriated and laws under which authorized are shown above.

These are critical watershed lands needing soil stabilization and vegetative cover restoration to prevent serious erosion and damaging floods within these National Forests. Land treatment measures must be applied and subsequently maintained on all lands in these areas to make corrective action fully effective. To assure full program effectiveness, the intermingled private lands must be acquired by the Federal Government. The results will be reflected in improved watershed conditions, social benefits, and development of economic strength in local communities.

Cache National Forest. In fiscal year 1973, funds were available from two sources for the purchase of lands within the Cache National Forest in Utah.

1. The Receipts Act of May 11, 1938, as amended -- $20,000. This is an annual appropriation.

2. The Act of July 24, 1956 -- $200,000 was appropriated under this authority in fiscal years 1957 through 1960. These funds remain available until expended. Through fiscal year 1973, $189,351 has been obligated from this appropriation.

These funds are used to acquire key tracts of land in the steep, rough, and highly important watershed areas lying north of the Ogden River along the Wasatch front and on Wellesville Mountain of the Cache National Forest. These are rugged mountain lands above the river valley which have been damaged and their watershed functions impaired through forest fires or overgrazing. This contributes to excessive rainfall runoff causing severe erosion. The damaged watershed lands are potential sources of floods and mudrock flows. Many tracts of land are located in

the north fork of Ogden River and on the drainage of Pineview Reservoir, a Federal reclamation project. Others are within the watersheds of the city of Ogden and the other small towns along the Wasatch front. Public ownership of these lands and subsequent restoration and protection of their vegetative cover is a highly important part of a vigorous cooperative program with the local community and agencies.

The appropriation of $20,000 under the Act of May 11, 1938, is from receipts of the Cache National Forest. In the absence of this appropriation, the State of Utah would receive 25 percent of these receipts for roads and school purposes in the local counties involved. Therefore, the local counties, in effect, are contributing one-fourth of the amount of this appropriation. These appropriations are extremely important to the continuation of a vital and worthwhile program extending almost thirty years and shared in by both the local agencies and the Federal Government through the National Forests.

The 1956 Act requires that expenditures of Federal funds be matched by contributions by local agencies or people. This requirement has been met through donations of money and lands valued at $200,000.

Through fiscal year 1973, 29,352 acres have been approved for purchase pursuant to the Receipts Act of 1938, and 15,957 acres under the Special Act of 1956. The 1974 objective is to acquire 840 additional acres of these critical watershed lands. A similar acreage is expected to be acquired in 1975.

Uinta-Wasatch. In fiscal years 1963 through 1973, an appropriation of $220,000 was made under the Uinta-Wasatch Receipts Act of August 26, 1935, for acquiring critical watershed lands in the American Fork Canyon watershed. A total of 2,881 acres has been approved for purchase through fiscal year 1973, and an estimated 100 acres will be acquired each year during 1974 and 1975.

Toiyabe National Forest. $8,000 was appropriated under this Act in each of fiscal years 1973 and 1974. The 1974 and 1975 objective is to acquire 40 acres each year.

Angeles National Forest. $32,000 was appropriated in fiscal year 1973, $14,000 in 1974, and $20,000 is proposed in 1975 to purchase important watershed lands. Acquisition is needed to minimize erosion and flood damage. The 1974 objective is to acquire 30 acres. The 1975 objective is to acquire 80 acres.

San Bernardino and Cleveland National Forests. The $81,000 proposed for fiscal year 1975 is to acquire 90 acres of important watershed lands. Acquisition is needed to minimize erosion and flood damage.

ACQUISITION OF LANDS TO COMPLETE LAND EXCHANGES

Appropriation, 1973	- -
Appropriation, 1974	$55,300
Budget estimate, 1975	39,310
Decrease	-15,990

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Purchase of land, State of:				
California	- -	$54,585	$18,560	-$36,025
Montana	- -	750	- -	-750
Georgia	- -	- -	16,250	16,250
Oklahoma	- -	- -	4,500	4,500
Unobligated balance brought forward	-35	-35	- -	35
Unobligated balance carried forward	35	- -	- -	- -
Appropriation or estimate	- -	55,300	39,310	-15,990

It is estimated that 153 acres of land will be acquired in fiscal year 1974 and 130 acres in fiscal year 1975.

LAND ACQUISITION, SPECIAL ACTS

Mrs. HANSEN. You are requesting an increase of $67,000 for "Acquisition of Lands for National Forests." Will you please explain this?

Mr. NELSON. These are laws that the Congress has enacted. There are special laws that authorize the appropriation from receipts from the national forests for the purchase of the lands for erosion control and to control flood damage. Over a number of years we have purchased land that, without development, would have caused grave damage to communities.

A number of these are along the Wasatch front or in other areas where erosion and flood damage are indeed rampant.

LAND ACQUISITION TO COMPLETE LAND EXCHANGES

Mrs. HANSEN. You are requesting a decrease of $15,990 for "Acquisition of Lands to Complete Land Exchanges." Please give us the details.

Mr. NELSON. It is estimated that, during 1975, we will have lesser need in this particular area, less space where we will need acquisition of lands to complete exchanges.

Mrs. HANSEN. Why? Is it a slowdown on the program?

Mr. NELSON. No; I think this is just the way that the planned program works out for the year, Madam Chairman.

ASSISTANCE TO STATES FOR TREE PLANTING

Mrs. HANSEN. Please insert justification pages 131 through 133 in the record at this point.

[The pages follow:]

ASSISTANCE TO STATES FOR TREE PLANTING

Appropriation Act, 1973	$1,020,000
Appropriation Act, 1974	1,013,000
Budget estimate, 1975	1,346,000
Increase	+333,000

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Assistance to States for tree planting	$1,024,213	$1,122,618	$1,346,000	$223,382
Unobligated balance brought forward	-113,831	-109,618	- -	109,618
Unobligated balance carried forward	109,618	- -	- -	- -
Appropriation or estimate	1,020,000	1,013,000	1,346,000	333,000

An increase of $333,000 is proposed as follows:

(1) $292,000 to establish superior tree seed orchards; to accelerate progeny testing to determine which parents produce progeny with superior traits such as fast growth and disease resistance; and to improve orchard management. Selected trees will be cultured to produce genetically superior seed and to provide material for development of second generation orchards.

(2) $18,000 to provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313.

(3) $23,000 to provide for increased pay costs effective in fiscal year 1974.

The program authorized under Section 401 of the Agricultural Act of 1956 (16 USC 568e) provides assistance to States in their forestation and tree improvement projects. Needed rehabilitation on State and county forest lands has resulted from this program.

New and expanded tree improvement projects which are partially or totally funded under this program are underway in 41 States. Nationally, the States expend three times more than they receive under this program for tree improvement.

Assistance will emphasize seed orchard establishment aimed at the production of improved genetic quality tree seed. Reforestation work will be carried out to restore low-yielding or non-productive forest lands to fuller production of commercial wood. In addition, attending benefits include:

(1) Erosion control.
(2) Wildlife habitat improvement.
(3) Expanded recreational land use potentials.
(4) Environmental enhancement.

Examples of Recent Accomplishments

Seedlings from genetically improved seed planted. In the State of Georgia in fiscal year 1973, 17.5 million improved slash pine seedlings and 16 million improved loblolly pine seedlings were sold to private landowners. Based on early results of progeny tests, a minimum of 15 percent increase in yield can be expected due to the genetically improved seedlings. The improved seedlings were planted on approximately 45,000 acres. Within 20 years about 200,000 more cords on these acres can be expected than if regular run of the woods seedlings had been planted.

Genetically superior cottonwood ready for commercial planting. Cuttings of genetically superior cottonwood trees have been made available to nurseries for production of cutting for commercial planting on private forest lands. Enough superior cuttings will be produced during the 1973-74 planting season to plant about 14,000 acres in the lower Mississippi Valley.

Propagation of superior trees advanced. A significant new development with far-reaching implications has resulted from a Kansas project. In a search for improved means to produce genetic duplicates of selected superior black walnut specimens, a system for rooting cuttings was perfected. This technique, now available to tree improvement specialists throughout the country, is being used to establish new superior selections in walnut seed orchards and appears promising for other species. Kansas State is in the process of constructing a greenhouse complex for producing tree seedlings. Utilization of the newly developed techniques will enable mass production of genetically superior seedlings for planting.

Improved Japanese larch seed harvested. The New Jersey Bureau of Forestry has grown their first crop of improved Japanese larch seedlings. Seed for these seedlings came from New Jersey's 9-year-old genetically improved Japanese larch seed orchard which contains clones representing 25 different superior trees. New Jersey landowners can expect to market piling from these plantations for coastal houses by 1990. By the turn of the century, these trees should be large enough for sawtimber.

32-043 O - 74 - 25

GEOGRAPHIC BREAKDOWN OF APPROPRIATION

Assistance to States for Tree Planting

	1973 (actual)	1974 (estimate)	1975 (estimate)
Alabama	$22,000	$24,000	$65,000
Arkansas	10,000	10,000	15,000
California	18,000	18,000	23,000
Colorado	5,000	5,000	10,000
Connecticut	4,000	4,000	8,000
Florida	30,000	30,000	39,000
Georgia	20,000	20,000	53,000
Hawaii	35,000	35,000	38,000
Idaho	10,000	10,000	16,000
Illinois	8,000	8,000	10,000
Indiana	12,500	12,500	12,000
Iowa	7,000	7,000	6,000
Kansas	10,000	12,000	19,000
Kentucky	12,000	12,000	17,000
Louisiana	16,500	16,500	42,000
Maine	15,000	15,000	5,000
Maryland	5,000	5,000	20,000
Michigan	30,000	30,000	12,000
Minnesota	73,000	50,000	18,000
Mississippi	12,000	14,500	41,000
Missouri	28,000	28,000	35,000
Montana	14,000	14,000	15,000
Nebraska		5,000	5,000
New Hampshire	10,000	10,000	5,000
New Jersey	12,000	12,000	6,000
New York	30,000	30,000	15,000
North Carolina	13,000	14,000	54,000
Ohio	14,000	14,000	10,000
Oklahoma	10,000	10,000	16,000
Oregon	78,000	60,000	46,000
Pennsylvania	29,000	29,000	38,000
South Carolina	22,000	22,000	28,000
Tennessee	11,500	14,000	33,000
Texas	15,000	15,000	56,000
Vermont	5,500	5,500	6,000
Virginia	23,000	23,000	57,000
Washington	76,000	60,000	50,000
West Virginia	10,000	10,000	5,000
Wisconsin	20,000	20,000	12,000
Wyoming	10,000	10,000	10,000
Special projects		2,000	41,900
Total to States	786,000	746,000	1,012,900
Forest Service administration and technical assistance	234,000	267,000	333,100
Total	1,020,000	1,013,000	1,346,000

Mrs. HANSEN. Please insert justification page 134 in the record.
[The page follows:]

CONSTRUCTION AND OPERATION OF RECREATION FACILITIES

Appropriation, 1973	- -
Appropriation, 1974	$3,277,837
Budget estimate, 1975	1,260,000
Decrease	-2,017,837

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Construction and operation of recreation facilities ..	- -	$3,277,837	$1,260,000	-$2,017,837

These are funds proposed for appropriation from admission and user fees collected under the Land and Water Conservation Fund Act of 1965, as amended (78 Stat. 897; 16 USC 4601-5; PL 93-81, 8/1/73).

They will be used:

(1) To bring facilities on National Forest lands to an acceptable standard of repair for visitor use, safety, and resource protection.

(2) For increased efforts in law and regulation enforcement to assure visitor safety and to reduce the vandalism which causes more than $2 million damage annually.

Public Law 92-347, approved July 11, 1972, amended the Land and Water Conservation Fund Act of 1965 to provide that the Forest Service (and other bureaus) may collect recreation admission fees at designated National Recreation Areas and "special recreation use fees for the use of sites, facilities, equipment, or services furnished at Federal expense." After distribution to the States and Counties and Roads and Trails for States appropriation as required under the Acts of 5/23/08, 7/22/37, and 3/14/13, the remaining fees (65 percent of total collected) are to be deposited into a "special account in the Treasury of the United States to be administered in conjunction with, but separate from, the revenues in the Land and Water Conservation Fund. Revenues in the special account shall be available for appropriation without prejudice to appropriations from other sources for the same purposes, for any authorized outdoor recreation function of the agency by which the fees were collected."

Public Law 93-81 further amended the Land and Water Conservation Fund Act of 1965 by limiting the charging of special user fees to sites containing specified facilities. As a result, the number of charge sites on National Forest lands was reduced from 2,235 to 37. A corresponding decrease in receipts followed.

The 1975 estimate includes receipts from July 1 to July 31, 1973, under the provisions of Public Law 92-347, as well as estimated receipts to be collected during the remainder of fiscal year 1974 under Public Law 93-81.

COLLECTION OF FEES

Mrs. HANSEN. Please summarize for the committee the impact of Public Law 93–81 on your fee collection program and your receipts in this program.

Mr. MCGUIRE. Public Law 93–81 changed the basis on which we would collect fees. As we described yesterday, we now can collect fees only at a small number of facilities. The result is that in 1975 we estimate that our collections will drop to about $1.26 million from the $3 million level last year.

Mr. NELSON. As we indicated yesterday, Madam Chairman, there are only 37 areas now that fall under the collection system as compared with over 2,200 prior to the passage of that law that the Chief referred to.

Mrs. HANSEN. This result is reflected I presume in construction and operation of recreation facilities.

Mr. NELSON. That is correct.

Mrs. HANSEN. Which is decreased in the 1975 budget by $2,017,837. Is that correct?

Mr. MCGUIRE. That is correct.

Mrs. HANSEN. That money was badly needed.

Mr. NELSON. Most of this was used for operation of recreation facilities rather than construction.

YOUTH CONSERVATION CORPS

Mrs. HANSEN. We will insert justification pages 135 and 136 in the record at this point.

[The pages follow:]

YOUTH CONSERVATION CORPS

NOTE: For budgetary purposes, the entire appropriation is shown under the Forest Service. However, one-half of the appropriation each year is transferred to the Department of the Interior.

Appropriation Act, 1973	$3,500,000
Appropriation Act, 1974	10,000,000
Budget estimate, 1975	10,240,000
Increase	+240,000

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Youth Conservation Corps	$3,490,998	$8,999,000	$10,180,000	$1,181,000
Unobligated balance brought forward	-2,097,381	-2,106,383	-3,107,383	-1,001,000
Unobligated balance carried forward	2,106,383	3,107,383	3,167,383	60,000
Appropriation or estimate 1/	3,500,000	10,000,000	10,240,000 2/	240,000

1/ Includes allocation to Department of the Interior: 1973, $1,750,000; 1974, $5,000,000; and 1974, $5,120,000.

2/ Additional authorizing legislation proposed.

An increase of $240,000 is proposed as follows:

(1) To provide for increased pay costs effective in fiscal year 1974, $220,000.

(2) To provide for payment to General Services Administration the cost of space rental in accordance with PL 92-313, $20,000.

The Act of August 13, 1970 (84 Stat. 794), as amended by Public Law 92-597, authorizes continuation of the Youth Conservation Corps Program on Federal lands, and establishes a pilot grant program to assist States in establishing YCC projects on non-Federal public lands. In awarding grants to States, preference will be given to States with fewer Federal lands assuming competing applications are otherwise comparable. Preference will also be given to State applications where no more than 50 percent of the cost of a pilot project is to be financed by Federal grant. The Department of the Interior and Agriculture share the program equally.

The primary purposes of the program are to:

(1) Provide gainful employment to 15 through 18 year old youths representing all segments of society.

(2) Further development and maintenance of the natural resources of the United States by the youth, upon whom will fall the ultimate responsibility for maintaining and managing these resources for the American people.

(3) Develop an understanding and appreciation in Corps participants of the Nation's natural environment and heritage.

This integrated conservation work, learn, and employment program is designed to accomplish needed conservation work, provide employment and income to youth, teach proper work habits, encourage greater appreciation of the management of natural resources, and increase individual pride and dignity. Conservation work-learn projects on public lands include recreation facilities maintenance and construction, range and wildlife habitat improvement, timber stand improvement, trail improvement

and construction, and visitor information services. Recruiting guidelines have been established to meet the mandate of the Congress that there be a representative mix of youth from all economic, social, and racial backgrounds.

Evaluation of the Federal pilot YCC programs in 1971, 1972, and 1973 by Department personnel and the University of Michigan's Institute for Social Research indicates that the purposes of the Act were achieved. With $3.5 million provided for the 1973 summer program, the 3,513 young men and women employed accomplished conservation work appraised at a value of over $2 million. Only two percent of the youth were unable to complete the summer program. Environmental education showed significant gains.

LEGISLATION

Mrs. HANSEN. What is the status of authorizing legislation for this program?

Mr. DEINEMA. It expires at the end of this fiscal year. Additional legislation has been introduced that has passed the Senate. Hearings have been held in the House.

[Discussion off the record.]

YCC PROGRAM

Mrs. HANSEN. You provide for how many youngsters?

Mr. DEINEMA. We provided for 8,510 last season.

Mrs. HANSEN. I understand applications are being turned away all over the country.

Mr. DEINEMA. Yes, ma'am. The program has had a very good reception.

Mrs. HANSEN. I have been in some of the places where they have been doing work. What is your estimated value of their contribution in trail work, maintenance, et cetera? I saw at Mount Rainer where they had rebuilt trails and cleaned up the area.

Mr. DEINEMA. The value of conservation work in the summer of 1973 was $3,608,000.

MISCELLANEOUS JUSTIFICATIONS

Mrs. HANSEN. Please insert justification pages 104 through 106 and pages 137 through 158 in the record at this point.

[The pages follow:]

FOREST PROTECTION AND UTILIZATION

Proposed Change in Activity Structure

Present Structure	Proposed Structure
FOREST LAND MANAGEMENT:	FOREST LAND MANAGEMENT:
National Forest protection and management:	National Forest protection and management:
(1) Timber resource management:	(1) Timber resource management:
(a) Sales administration and management	(a) Sales administration and management
(b) Reforestation and stand improvement	(b) Reforestation and stand improvement
(2) Recreation-public use	(2) Recreation use a/
(3) Wildlife habitat management	(3) Wildlife and fish habitat management a/
(4) Rangeland management	(4) Rangeland management
(5) Soil and water management b/	(5) Soil and water management b/
(6) Mineral claims, leases, and special uses c/ d/	(6) Minerals management c/
(7) Land classification, adjustments and surveys d/	(7) Forest fire protection
(8) Forest fire protection	(8) General land management activities d/
(9) Maintenance of improvements for fire and general purposes (including communications) d/	(9) Fighting forest fires
(10) Payments to Employees' Compensation Fund d/	(10) Forest insect and disease control
(11) Forest advanced logging and conservation e/	(11) Cooperative law enforcement
(12) Water resource development related activities b/	FOREST RESEARCH:
(13) Fighting forest fires	Forest and range management research:
(14) Insect and disease control	(12) Trees and timber management research a/
(15) Cooperative law enforcement program	(13) Forest watershed management research a/
FOREST RESEARCH:	(14) Wildlife, range, and fish habitat research a/
Forest and range management research:	(15) Forest recreation research
(16) Timber management research	Forest protection research:
(17) Watershed management research	(16) Fire and atmospheric sciences research
(18) Wildlife habitat and range research	(17) Forest insects and disease research
(19) Forest recreation research	Forest products and engineering research:
Forest protection research:	(18) Forest products utilization research
(20) Fire and atmospheric sciences research	(19) Forest engineering research
(21) Forest insect and disease research	Forest resource economics research:
Forest products and engineering research:	(20) Forest resources evaluation a/
(22) Forest products utilization research	(21) Forest economics and marketing research f/
(23) Forest engineering research	STATE AND PRIVATE FORESTRY COOPERATION:
Forest resource economics research:	(22) Cooperation in forest fire control
(24) Forest survey	(23) Cooperation in forest tree planting
(25) Forest products marketing research f/	(24) Cooperation in forest management and processing
(26) Forest economics research f/	(25) General forestry assistance b/
STATE AND PRIVATE FORESTRY COOPERATION:	
(27) Cooperation in forest fire control	

Present Structure	Proposed Structure
STATE AND PRIVATE FORESTRY COOPERATION-continued:	
(28) Cooperation in forest tree planting	
(29) Cooperation in forest management and processing	
(30) General forestry assistance	

a/ Minor changes will be made for a more descriptive and/or appropriate title.

b/ The separate activity, water resource development related activities, will be combined with National Forest protection and management, soil and water management, since it is closely related and considered as part of National Forest protection and management for management purposes. This combination would not include funds for wild and scenic river studies on State and private lands which will be transferred to State and private forestry cooperation, general forestry assistance.

c/ Minerals management will be a separate activity since it presents unique problems and is managed as a separate activity. This is an item that warrants specific consideration.

d/ The following activities will be merged into the new activity, general land management activities, in order to simplify the budget presentation. Accountability and justifications will be maintained under the new structure.

Mineral claims, leases and special uses -- all except minerals management (see c/ above)
Land classification, adjustments, and surveys
Maintenance of improvements for fire and general purposes (including communications)
Payments to Employees' Compensation Fund

e/ The activity, forest advanced logging and conservation, will be deleted as this program is not funded.

f/ The activities, forest products marketing research and forest economics research, will be combined into the new activity, forest economics and marketing research, as they are closely related.

FOREST PROTECTION AND UTILIZATION

Proposed Change in Language

Change in language is proposed as follows. New language is underscored.

For expenses necessary for forest protection and utilization, as follows:

Forest land management: For necessary expenses of the Forest Service, not otherwise provided for, including the administration, improvement, development, and management of lands, waters, or interests therein, under Forest Service administration, fighting and preventing forest fires on or threatening such lands and for liquidation of obligations .....

.....

The Forest Service has authority in substantive law to expend its appropriations for specific purposes on land in which it has obtained an interest (but less than fee title), namely: 16 USC 580g, 16 USC 571c, 7 USC 2250a, 16 USC 527, 80 Stat. 199, 16 USC 1241-1249, 16 USC 1271-1287, and various acts which established National Recreation Areas. The implied intent in these Acts is that lands in which the Forest Service has acquired a partial interest, as under a scenic easement, will be administered along with National Forest or other Federal lands in carrying out the statutory program for that area.

The appropriation language for Forest land management does not clearly make funds available for administration of land in which the Forest Service has only a partial interest and accordingly the need for this additional language is to broaden the purpose of Forest land management appropriations to encompass use on lands in which the Forest Service has established an interest.

ACQUISITION OF LANDS FOR UINTA NATIONAL FOREST

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Acquisition of lands for Uinta National Forest	$1,570	$95,089	- -	-$95,089
Unobligated balance brought forward	-96,659	-95,089	- -	95,089
Unobligated balance carried forward	95,089	- -	- -	- -
Appropriation or estimate	- -	- -	- -	- -

Public Law 89-226 authorized the purchase of approximately 10,000 acres of non-Federally owned land within a described part of the Uinta National Forest in Utah for the purpose of promoting the control of floods and the reduction of soil erosion through restoration of adequate vegetative cover. $300,000 were appropriated in fiscal year 1967.

As of June 30, 1973, 8,847 acres have been acquired at a cost of $204,911.

ACQUISITION OF LANDS FOR WASATCH NATIONAL FOREST

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Acquisition of lands for Wasatch National Forest	$1,284	$236,259	- -	-$236,259
Unobligated balance brought forward	-52,593	236,259	- -	236,259
Unobligated balance carried forward	236,259	- -	- -	- -
Recovery of prior year obligations	-184,950	- -	- -	- -
Appropriation or estimate	- -	- -	- -	- -

The Act of September 14, 1962 (PL 87-661) provided authorization for the appropriation of $400,000 for purchase of privately owned lands within the Wasatch National Forest in Utah to aid in control of floods and to reduce soil erosion. The full amount of this authorization has been appropriated with the funds remaining available until expended.

As of June 30, 1973, approximately 12,741 acres had been approved for purchase under this authority.

ACQUISITION OF LANDS FOR SUPERIOR NATIONAL FOREST

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Acquisition of lands for Superior National Forest	$4,919	$271	- -	-$271
Unobligated balance brought forward	-5,190	-271	- -	271
Unobligated balance carried forward	271	- -	- -	- -
Appropriation or estimate	- -	- -	- -	- -

The Act of June 22, 1948 (PL 80-733) as amended, provided authorization for the appropriation of $4.5 million for the purchase of lands and improvements thereon in the Boundary Waters Canoe Area, Superior National Forest, Minnesota. The full amount of this authorization has been appropriated.

ACQUISITION OF LANDS FOR CACHE NATIONAL FOREST

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Acquisition of lands for Cache National Forest	$132	$10,649	- -	-$10,649
Unobligated balance brought forward	-10,781	-10,649	- -	10,649
Unobligated balance carried forward	10,649	- -	- -	- -
Appropriation or estimate	- -	- -	- -	- -

The 1956 Appropriation Act provided $200,000 for the acquisition of lands in the Cache National Forest pursuant to the Act of July 24, 1956 (70 Stat. 632). Obligations under this fund are in addition to the appropriation from National Forest receipts authorized by the Act of May 11, 1938, and provided in the appropriation, Acquisition of Lands for National Forests, Special Acts. Under the 1956 Act, funds appropriated must be matched by contribution of funds or land by local agencies or persons. Explanation of this program and the accomplishments thereunder are included under the appropriation, Acquisition of lands for national forests, special acts.

ADMINISTRATIVE PROVISIONS

Proposed Changes in Language

Changes in language are proposed as follows. New language is underscored and deleted matter is enclosed in brackets.

Appropriations to the Forest Service for the current fiscal year shall be available for: (a) purchase of not to exceed three hundred [eight] thirty-three passenger motor vehicles of which two hundred sixty-[two] seven shall be for replacement only, ... (g) expenses incident to acquisition by donation or exchange of land, waters, or interests in land or waters, pursuant to the Act of August 3, 1956 (7 U.S.C. 428a): Provided, That such appropriation shall not be available for expenses incident to donations and exchanges which can be made pursuant to authorities other than the Act of August 3, 1956 (7 U.S.C. 428a); and (h) not to exceed .....

.....

[None of the funds made available under this Act shall be obligated or expended to change the boundaries of any region, to abolish any region, to move or close any regional office for research, State and private forestry, and National Forest System administration of the Forest Service, Department of Agriculture, without the consent of the Committee on Appropriations and Committee on Agriculture and Forestry in the U. S. Senate and U. S. House of Representatives.]

Changes 1 and 2 would provide authority to purchase 333 passenger motor vehicles of which 267 will be replacements.

PASSENGER CARRYING VEHICLES

Replacements

During fiscal year 1975, it is proposed that the Forest Service replace 267 passenger carrying vehicles. Of these, 262 will meet replacement standards and five will require replacement because of accidents or excessive maintenance costs.

Dependability of passenger carrying vehicles is an important factor in keeping work programs on schedule and in meeting emergencies. Vehicle breakdowns while on field travel cause disruptions and delays in field work as well as loss of effective work time of employees. The continued use of over-aged equipment is undesirable from a safety standpoint since most of it is operated over rough, narrow, winding roads in mountainous country under adverse conditions. This use generally results in excessive operating and repair expenses when vehicles reach or exceed replacement standards.

In order to maintain passenger carrying vehicles in a safe and satisfactory operating condition, it is the policy of the Forest Service to schedule periodic preventive maintenance inspections, services, and tune-ups to reduce the necessity for costly repairs and major overhauls, and to minimize lost time resulting from field breakdowns.

It is desirable to maintain a reasonable balance in the age class of the passenger vehicle inventory. The age class distribution is based upon conforming with replacement standards which recognize that some units will be retired under the age standards and others under the use standard. Prescribed replacement standards, although applicable, are not always appropriate for all Forest Service vehicles because of the wide range of operating conditions and the comparatively short field season in many of the National Forests at higher elevations. Decision on replacement of passenger carrying vehicles which reach replacement age is based on an appraisal of each unit. This involves a review of the history record combined with a mechanical inspection of the vehicle's condition and repair liability. When such appraisal indicates that the vehicle is satisfactory for further service

without unreasonable repair expenditures, it is retained and assigned to lighter work, even though such action tends to upset the age standards for the fleet inventory.

The vehicles selected for replacement are those which cannot be operated another season without excessive repair expense. They are unsatisfactory for further use both as to safety and mechanical condition. The replacement authorization requested is within the normal annual replacement standards prescribed by the General Services Administration.

Essentially all passenger carrying vehicles are pooled for use by all activities with replacement of pooled units financed from a Working Capital Fund. All appropriations reimburse this fund in ratio to use of vehicles on activities financed by the respective appropriations.

None of the replacements requested will be assigned to areas served or scheduled to be served by Interagency pools.

Additions

It is proposed that the Forest Service purchase 66 additional passenger carrying vehicles to replace pickups, carryalls and sedan deliveries. Since sedans and station wagons are better suited to our needs and are less costly to operate, we prefer replacement with passenger carrying vehicles.

Sedans or station wagons cost less to operate and maintain than a truck. During fiscal year 1974, the Forest Service is replacing 46 light trucks, such as carryalls, pickups, panels, and sedan delivery trucks, with sedans and station wagons. The total estimated cost savings is $9,200 per year. The substitution of 66 passenger carrying vehicles for light trucks in fiscal year 1975 would result in an additional savings of about $13,200 each year.

The Forest Service analyzes current work plans and programs in determining its overall passenger carrying vehicle requirements. This analysis includes a careful study of the number of vehicles needed at each field station using as a guiding principle the ownership of only the minimum number of dependable units required to serve programs for which funds are budgeted. Also, it is Forest Service policy to utilize Interagency Motor Pools or commercial car rental services to the fullest practicable extent. Passenger car use is restricted and is integrated with various activities so as to attain good utilization of all vehicles.

Additions are financed from program funds in direct relationship to the anticipated use of the equipment. Distribution of costs to appropriations is based on analysis of use of the equipment fleet for the past three years and the estimated use for the budget year.

Number of Vehicles

The Forest Service had a net active fleet of 1,024 passenger carrying vehicles at the start of fiscal year 1974. It will add 46 units during the year, making a total of 1,070 units available at the start of fiscal year 1975, excluding possible transfers to other agencies. It is proposed that the total number of passenger carrying vehicles be increased to 1,136 by the end of fiscal year 1975.

As of June 30, 1973, the age and mileage classes of the passenger carrying vehicles on hand, exclusive of 28 buses, were:

Age Data

Year	Number of Vehicles
1968 and older	325
1969	204
1970	161
1971	84
1972	77
1973	145
Total	996

Mileage Data

Miles	Number of Vehicles
60,000 and over	342
50,000 to 59,999	126
40,000 to 49,999	150
30,000 to 39,999	111
20,000 to 29,999	61
10,000 to 19,999	51
0 to 9,999	155
Total	996

Use of Vehicles

Passenger carrying vehicles are used by:

(1) Forest officers in the protection, utilization, management and development of the National Forests and land utilization projects and in the program for control of forest pests.

(2) Research technicians on experimental forests, and ranges, on field research projects and forest surveys.

(3) Foresters engaged in carrying out the laws providing for State and private forestry cooperation.

(4) Regional office field-going administrative personnel in performing, directing, and inspecting field work.

The Forest Service is essentially a field organization and its passenger carrying vehicles are located mainly at Regional, National Forest, and Ranger District headquarters, and experimental Forests and Ranges. There are over 225 million acres within the exterior boundaries of the National Forest.

About 631 million acres of State and private forest land are included within the areas which benefit from Federal participation in the cooperative forest program. Much of this area is without common carrier service, and most forest areas and research centers are remote from commercial travel routes, requiring extensive use of motor vehicles as a means of transportation. The major portion of transportation needs, particularly at Regional and Forest Supervisor levels and at other larger headquarters, involves multiple passenger use and can be more expeditiously and economically met by use of sedans and station wagons than by other types of vehicles.

AIRCRAFT

Replacement of Aircraft

The 1975 estimates propose replacement of four aircraft by purchase and replacements with more suitable aircraft by transfer from other agencies as available. The Forest Service currently has 53 aircraft:

7 Single-engine reconnaissance and transport airplanes
24 Light twin-engine reconnaissance and transport airplanes
16 Medium and heavy cargo and transport airplanes (9 medium, 7 heavy)
5 T34-B lead planes (2-place scout)
1 Multi-engine airplane converted to an air tanker
*53

* Excludes 2 aircraft on hand awaiting disposal.

The replacements by purchase will be primarily medium twin-engine airplanes suitable for leadplane work in directing air tanker retardant dropping attack on forest fires. The North American OV-10A Bronco, currently being used by the Air Force is considered to have the most desirable characteristics to increase efficiency and improve safety in the leadplane mission.

Two large helicopters are on loan from the Army. These helicopters are being used for test and evaluation project in determining suitability of specific vision equipment for night helicopter operation. The equipment includes the Iroquois Night Fighter and Night Tracker (INFANT) and Forward Looking Infrared (FLIR) systems, and the night vision goggles. The loan of the helicopters will be terminated when the evaluation project is completed.

Tentative plans include requesting loan of a large heavy lift helicopter from the Army for use in a development project on helicopter logging. The project objective will be to develop efficient, economical and safe procedures which are now marginal.

One light twin-engine airplane is modified, equipped, and used primarily for fire mapping with infrared equipment in low visibility of smoke and at night.

One medium twin-engine is modified, equipped and used primarily for high altitude fire detection usually at night with infrared equipment. A second medium twin is being modified for Infrared Scanner missions.

The multi-engine airplane obtained from the military was converted to air tanker configuration for test and evaluation project to determine if suitable for dropping retardants. It is now being used in research project on high altitude retardant dropping.

The multipurpose reconnaissance and transport airplanes are used primarily to transport smokejumpers, firefighters, administrative personnel, equipment and supplies to remote and inaccessible areas where commercial services are inadequate or not available for protection and suppression of forest fires. Other use is to locate and survey timber stand and vegetation conditions such as insect infestations, blowdown, diseased areas, undesirable species, and to appraise resources and damage and evaluate effectiveness of control.

The T34-B lead airplanes are primarily single-purpose military model aircraft used by air tanker bosses to direct and control the dropping of retardants on forest fires by contract air tankers. These are to be replaced with light twins to provide two engine safety and improved efficiency.

The services of suitable airplanes to perform specific Forest Service missions are becoming increasingly more difficult to obtain from commercial sources. In some locations only the Forest Service needs the type of flights and they are insufficient in number to warrant operators furnishing the service. Aviation operators must therefore give first consideration to furnishing services for best revenue. In many instances the aircraft available is not suitable for Forest Service work.

Four heavy twin-engine transport airplanes are leased and operated for dual purpose in transporting firefighting crews or dropping smokejumpers. Three leased light twins fill additional requirements for leadplanes in directing air tanker retardant attack on fires.

Two single-engine T-28's are on temporary loan from the Navy for evaluation as air tanker leadplanes, especially where faster speed is needed.

Aircraft purchases are financed from either appropriated funds or the Forest Service Working Capital Fund, or a combination of both. Replacement costs of aircraft partially or completely destroyed in a crash accident are financed from program funds in relationship to anticipated use.

Changes three and four would give the Forest Service the authority to exchange partial interests (water rights for water, rights-of-way for rights-of-way, etc.), which are of particular value to the Forest Service.

Presently most of the exchanges are made under the authority of the General Exchange Act (42 Stat. 465, as amended) and other acts. These authorities do not, however, provide for exchange of partial interests in lands. They cover exchange of National Forest land for land and National Forest timber for land. The Forest Service is acquiring an increasing amount of partial interests in lands through purchase of scenic easements, right-of-way easements, etc. There are several instances when the interest of the Government would be best served if there was authority to exchange these partial interests for other lands or interest in lands.

The proviso (change four) will limit the use of the Act of August 3, 1956 (70 Stat. 1034; 7 U.S.C. 428a). Without this proviso all exchanges made could be made under the authority of this Act. It is intended that the 1956 authority be used sparingly.

Change five would eliminate the language which was added to the 1974 Appropriations Act to assure that the Congress would consent to any regional reorganization plans in fiscal year 1974.

If the Congress were to continue to include language in appropriation acts requiring Congressional consent of regional reorganization plans, our ability to implement needed reorganizations would be consideraly slowed.

The Forest Service has made many changes in organization through the years to obtain the most efficient and economic operation. These changes came as a result of extensive study and considered improved transportation, technology and methods of doing business. The administration of the National Forest System has been improved as a result of these changes.

This language would limit the ability of Forest Service management to take advantage of opportunities to improve efficiency and effectiveness by shifting Regional boundaries.

It is proposed that this language not be included in future appropriation acts.

The Forest Service plans to obtain the views of the Appropriations Subcommittees and the Agriculture and Forestry Committees in the House and Senate and the Member of Congress who would be affected before implementing regional reorganization plans even without this language.

ROADS AND TRAILS FOR STATES, NATIONAL FORESTS FUND
(Permanent appropriation)

Appropriation, 1973	$33,871,106
Appropriation, 1974	45,468,547
Budget estimate, 1975	40,500,000
Decrease (due to an estimated decrease in National Forest receipts in fiscal year 1974)	-4,968,547

The permanent appropriation of 10 percent of National Forest receipts pursuant to the Act of March 4, 1913 (16 USC 501) is transferred to and merged with the annual appropriation for Forest Roads and Trails. The explanation of the use of these funds is included in the justification for that appropriation item.

EXPENSES, BRUSH DISPOSAL
(Permanent appropriation)

Appropriation, 1973	$23,310,037
Budget estimate, 1974	23,000,000
Budget estimate, 1975	22,440,000
Decrease (due to estimated decrease in receipts in fiscal year 1975)	-560,000

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Brush disposal	$18,642,139	$25,000,000	$25,247,000	$247,000
Unobligated balance brought forward	-18,885,967	-23,553,865	-21,553,865	2,000,000
Unobligated balance carried forward	23,553,865	21,553,865	18,746,865	-2,807,000
Appropriation or estimate	23,310,037	23,000,000	22,440,000	-560,000

Timber cutting normally increases the fire hazard because of dry fuel increase in the form of logging slash. This slash may also:

(1) Impair reforestation.
(2) Contribute to the buildup of insect populations.
(3) Cause damage to stream channels.
(4) Degrade esthetics of the forest environment.

The objective of this program is the disposal of brush and other debris resulting from timber sale operations. When disposal is necessary National Forest timber sale contracts require treatment or deposit of funds for treatment of debris from cutting operations. When economical and expedient the work is performed by the timber purchaser. When not done by the purchaser, it is done by the Government, using deposits to cover costs of the work as authorized under Section 6 of the Act of April 24, 1950 (16 USC 490).

The effect of timber cutting and the manner of treating slash vary widely among regions. Brush disposal may be accomplished in several ways such as crushing, chipping, burning, or extra fire protection through the critical phase of natural disposal. Combinations of these are often used.

In the Eastern Regions, low volume cut per acre, high utilization, and rapid decomposition reduce the slash disposal work necessary. Exceptions occur in sales where a heavy cut per acre is made, such as the jack pine stands of Minnesota. In such areas, slash is crushed and mixed with mineral soil by disking with heavy equipment. This reduces the hazard and provides a good seedbed to aid regeneration. Treatment of slash to prevent insect epidemics is sometimes necessary in these areas.

In contrast, more slash disposal is required on most sale areas of the West. High volumes per acre generally produce heavy slash. Long dry periods with lightning and man-caused fire risk result in extremely hazardous fire potential. The warm, humid conditions necessary for rapid slash deterioration seldom occur. Treatment varies greatly with different methods of cutting, but generally requires some burning to reduce volumes of slash fuels. Slash may be burned in place or piled and burned under varied weather conditions. Fuel arrangements are planned which allow burning at times when smoke dispersal is favorable and will not influence air quality in population areas.

Within regions, slash disposal follows general prescriptions. Individual needs of each sale are planned and appraised prior to advertisement of the sale. The appropriate specific requirements are incorporated into each timber sale contract. In each instance, the method used will require adequate ecological, environmental, and resource protection at the least expense.

FOREST FIRE PREVENTION
(Permanent appropriation)

Appropriation, 1973	$228,373
Budget estimate, 1974	250,000
Budget estimate, 1975	250,000

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Forest fire prevention	$218,674	$275,000	$277,000	$2,000
Unobligated balance brought forward	-180,326	-190,025	-165,025	25,000
Unobligated balance carried forward	190,025	165,025	138,025	-27,000
Appropriation or estimate	228,373	250,000	250,000	- -

The Smokey Bear licensing program is an important part of the Cooperative Forest Fire Prevention Campaign, and accomplishes its purpose through dissemination to the public of Smokey Bear's forest fire prevention message on commercial products licensed by the Chief of the Forest Service, and by support of the Smokey Bear Junior Forest Rangers, exhibits, and the Smokey Bear awards program through contribution of fees and royalties by licensees. Among the educational items presently available under this authority are books, games, bookcovers, television shows, Viewmaster reels, litterbags, children's clothing, musical recordings, and exhibits, to name a few. These items carry the forest fire prevention message to millions of Americans each year.

Examples of Recent Accomplishments

(1) Achieved a 27 percent increase in mass media donations of public service time and space to Smokey's 1972 campaign. The Advertising Council estimates that comparable time and space would have cost a commercial advertiser $40.1 million.

(2) Provided the funds to print and distribute 103,000 transit cards on forest fire prevention; 1,300 7-foot (3-sheet) posters for display in metropolitan transit stations; and 1,900 large (24-sheet) posters for display on downtown billboards.

(3) Secured a special distribution of full sets of newspaper ads to 350 labor press editors through the Director of Public Relations, AFL-CIO.

(4) More than doubled distribution of forest fire prevention filmed spots for use on cable television, sending two 60-second spots to each of 153 system operators.

(5) Published a new illustrated catalog of "Smokey Bear" licenses and licensed products, to increase the use of such items in forestry agencies and in rural market places.

RESTORATION OF FOREST LANDS AND IMPROVEMENTS

(Permanent appropriation)

Appropriation, 1973	$27,483
Budget estimate, 1974	50,000
Budget estimate, 1975	50,000

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Restoration of forest lands and improvements	$18,660	$50,000	$50,000	- -
Unobligated balance brought forward	-8,778	-17,601	-17,601	- -
Unobligated balance carried forward	17,601	17,601	17,601	- -
Appropriation or estimate	27,483	50,000	50,000	- -

Recoveries from cash bonds or forfeitures under surety bonds by permittees or timber purchasers, who fail to complete performance of improvement, protection, or rehabilitation work required under the permit or timber sale contract, are used to cover the cost to the United States of completing such work on lands under Forest Service administration. Funds received as settlement of a claim are used for improvement, protection, or rehabilitation made necessary by the action which led to the cash settlement (Act of June 20, 1958, 16 USC 579c).

PAYMENT TO MINNESOTA (COOK, LAKE, AND ST. LOUIS COUNTIES) FROM THE NATIONAL FORESTS FUND

(Permanent appropriation)

Appropriation, 1973	$259,038
Appropriation, 1974	259,038
Budget estimate, 1975	259,038

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Payment to Minnesota from the National Forests Fund (appropriation or estimate)	$259,038	$259,038	$259,038	- -

The Act of June 22, 1948, as amended (16 USC 577c-577h) provides that the Secretary of the Treasury, upon certification of the Secretary of Agriculture, shall pay to the State of Minnesota at the close of each fiscal year from any National Forest receipts not otherwise appropriated an amount equivalent to three-fourths of one percent of the fair appraised value of certain National Forest lands in the counties of Cook, Lake, and St. Louis situated within the Superior National Forest. The Act further provides that payment to the State shall be distributed to each of these counties in conformity with the fair appraised value of such National Forest lands in each county.

PAYMENTS TO COUNTIES, NATIONAL GRASSLANDS
(Permanent appropriation)

Appropriation, 1973	$508,864
Budget estimate, 1974	549,000
Budget estimate, 1975	549,000

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Payment to counties (appropriation or estimate)	$508,864	$549,000	$549,000	- -

At the end of each calendar year, 25 percent of the revenues from use of submarginal lands are paid to counties under the provisions of Title III of the Bankhead-Jones Farm Tenant Act, approved July 22, 1937 (7 USC 1012). Payments are made on the provision that they are used for school or road purposes, or both.

PAYMENTS TO SCHOOL FUNDS, ARIZONA AND NEW MEXICO
(Permanent appropriation)

Appropriation, 1973	$114,043
Appropriation, 1974	124,307
Budget estimate, 1975	115,000
Decrease (due to an estimated decrease in National Forest receipts in fiscal year 1974)	-9,307

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Payments to school funds (appropriation or estimate)	$114,043	$124,307	$115,000	-$9,307

Under provisions of the Act of June 20, 1910 (36 Stat. 562, 573) certain areas within National Forests were granted to the States for school purposes. The percentage that these lands are of the total National Forest area within the State is used in determining payments to the States. The receipts from all National Forest land within the State are used as the basis for applying the percentage. For example, if total receipts for the State are $100,000 and if 10 percent of lands are in the "granted for school purposes" category, the payment to the State would be $10,000. The amounts so paid are deducted from the net receipts before computing the 25 percent payments to States.

As soon after the close of the fiscal year as the receipts from National Forests and the area of school lands in the States of Arizona and New Mexico are determined, the payments are made to the States. Payments in fiscal year 1973 to Arizona were $113,212 and to New Mexico $831.

PAYMENTS TO STATES, NATIONAL FORESTS FUND
(Permanent appropriation)

Appropriation, 1973	$84,676,129
Appropriation, 1974	113,668,668
Budget estimate, 1975	101,200,000
Decrease (due to an estimated decrease in National Forest receipts)	-12,468,668

PROJECT STATEMENT

Project	1973	1974 estimate	1975 estimate	Increase or decrease
Payments to States (appropriation or estimate)	$84,676,129	$113,668,668	$101,200,000	-$12,468,668

The Act of May 23, 1908, as amended (16 USC 500) requires, with a few exceptions, that 25 percent of all money received from the National Forests during any fiscal year be paid to the States in which the forests are located, for the benefit of public schools and public roads of the county or counties in which such National Forests are situated. The amount of this appropriation varies each year in direct proportion to National Forest receipts during the previous fiscal year.

The amounts set aside from receipts collected from the sale of National Forest timber, grazing, special use permits, power, mineral leases, and admission and user fees, before the 25 percent is applied are listed below:

(1) Payment to the State of Minnesota covering certain National Forest lands in Counties of Cook, Lake, and St. Louis situated within the Superior National Forest is made under the terms of the Act of June 22, 1948, as amended (16 USC 577c-577h). Receipts collected from the areas covered by this Act are excluded when the 25 percent payment to the State of Minnesota is computed.

(2) For lands in certain counties in Utah, Nevada, and California, the States receive 25 percent of receipts only after funds, if made available by Congress, have been set aside for the acquisition of National Forest lands within the specified National Forests under the terms of special acts authorizing appropriations from forest receipts for this purpose.

(3) Payments to the States of Arizona and New Mexico under the provisions of the Act of June 20, 1910 (36 Stat. 562, 573), of shares of the gross receipts from the National Forests in those States which are proportionate to the areas of land granted to the States for school purposes within the National Forests.

WORKING CAPITAL FUND

The Working Capital Fund was established by the Act of August 3, 1956 (16 USC 579b), as amended by the Act of October 23, 1962 (16 USC 579b). It is a self-sustaining revolving fund which provides services to National Forests, Experiment Stations, and when necessary, to other Federal agencies, and as provided by law to State and private agencies and persons who cooperate with the Forest Service in fire control and other authorized programs.

The following services were provided by the Working Capital Fund in fiscal year 1973:

(1) Equipment service.--This service owns, operates, maintains, and replaces approximately 13,500 pieces of common use motor driven and similar equipment. This equipment is rented to a total of 146 administrative units, i.e., National Forests, Experiment Stations and other units, and in some cases to other agencies, at rates which recover the cost of operation, repair and maintenance, management, and depreciation. The rates also include an increment which provides additional cash which when added to depreciation earnings and the residual value of equipment provides sufficient funds to replace the equipment. This service operates 74 repair shops.

(2) Aircraft service.--This service operates and maintains 57 Forest Service owned aircraft used in fire surveillance and suppression and in other Forest Service programs. The aircraft are based at 16 locations and are rented to National Forests, Experiment Stations, and in some cases to other agencies, at rates which recover the cost of depreciation, operation, maintenance, repair, and improvements in the airworthiness of the aircraft. Aircraft replacement costs are financed from either appropriated funds or the Forest Service Working Capital Fund, or a combination of both. This service operates two aircraft maintenance shops.

(3) Supply service.--This service operates the following common services:

Central Supply.--Grass seed is procured, stored and issued from two locations. Issuances and sales are made to National Forests, Experiment Stations, and others at prices which recover cost.

Photo reproduction.--Six photo reproduction laboratories store, reproduce, and supply aerial photographs, aerial maps, and other photographs of National Forest lands. The photographic reproductions are sold to National Forests, Experiment Stations, and others at cost.

Sign shop.--These include four small shops which manufacture and supply special signs for the National Forests for use in regulating traffic and as information to the public and other users of the National Forests. The signs are sold to National Forests and Experiment Stations at cost.

Subsistence.--There are 18 facilities which prepare and serve meals at cost to Forest Service work crews working in remote areas where adequate public restaurant facilities are not available.

Cribbing.--This facility is located on the Angeles National Forest, California to manufacture special concrete structural material used in embankments for erosion control purposes along access roads in the National Forests. This material is sold to National Forests at prices which recover costs.

(4) Nurseries.--This service operates 12 forest tree nurseries and cold storage facilities for storage of tree and seed stock and three seed extractories. Tree seed is procured, cleaned, bagged, and stored in refrigerated facilities. Tree and seed stock is sold to National Forests, States, and other Federal agencies at cost.

Volume of Business for the Various Major Activities of the Working Capital Fund

(In thousands)

	1973 actual	1974 estimate	1975 estimate
Equipment service	$25,351	$27,736	$27,272
Aircraft service	1,238	1,793	1,410
Supply service	2,509	2,186	1,736
Nursery service	3,437	3,828	3,835
Totals	32,535	35,543	34,253

The Working Capital Fund requires no cash appropriation. Initially, its assets were purchased by regular Forest Service appropriations and were donated to the fund. Where expansion of facilities is required that expansion is financed by Forest Service regular appropriations and the resulting assets are donated to the fund.

COOPERATIVE WORK, FOREST SERVICE (TRUST FUND)

Contributions are received from cooperators, including counties, States, timber sale operators, individuals, and associations, and are expended by the Forest Service in accordance with the terms of the applicable cooperative agreements. The work consists of protection and improvement of the National Forests, work performed for National Forest users, and forest investigations and protection, reforestation, and administration of private forest lands.

The major programs conducted under this account are described below in terms of the projects reflected in the statement at the end of this section.

(1) Construction and Maintenance of Roads and Trails, and

(2) Construction and Maintenance of Other Improvements.

Under the Acts of June 30, 1914 (16 USC 498) and March 3, 1925, April 24, 1950 (16 USC 572) and October 13, 1964 (16 USC 537) deposits for cooperative work are accepted from State and local government agencies, associations, Federal timber purchasers, users of roads, and others for the construction and maintenance of roads, trails, and other improvements and for performing work which is the National Forest users' responsibility, this method of performance of the work being of mutual benefit or of benefit to the public at large. Cooperative deposits received for wildlife habitat improvement for States from their hunting and fishing fees are included in this activity.

(3) Protection of National Forest and Adjacent Non-Federal Lands. The Act of June 30, 1914 (16 USC 498) authorizes the acceptance of contributions for the protection of the National Forests and the Act of March 3, 1925, as amended by Section 5, Act of April 24, 1950 (16 USC 572), authorizes the acceptance of deposits for the protection of non-Federal lands in or near the National Forests. The major portion of the obligations is for the protection of private lands from fire. This arrangement helps both parties since there are millions of acres of non-Federal forest land intermingled with Federal ownership on the National Forests. The lands in non-Federal ownership are usually in small tracts. It would be uneconomical for the owner to set up a fire control organization for the protection of his land. The advantage to the Government is that in many cases it would be necessary to suppress the fires on the non-Federal land without reimbursement in order to protect the adjoining Federal land.

(4) Sale Area Betterment (including reforestation). Section 3 of the Act of June 9, 1930 (16 USC 576b) provides for deposits of funds by timber sale purchasers to cover the cost of reforestation and special cultural measures to improve the future stand of timber on the areas cutover by the purchaser. Accomplishments under this program are reported under the Forest land management subappropriation along with accomplishments for reforestation and stand improvement for that subappropriation.

(5) Scaling. Under provisions of the Act of April 24, 1950 (16 USC 572) and of Section 210 of the Act of September 21, 1944 (16 USC 572a) acceptance of deposits from timber purchasers for cooperative scaling service is authorized. Such arrangements are established only when requested by the operator and when the operator pays the extra cost of such services, either in advance or through reimbursement under appropriate payment guarantees.

(6) Research Investigations. The Acts of June 30, 1914 (16 USC 498) and May 22, 1928 (16 USC 581i-1) authorize the acceptance of deposits for forestry research. Deposits are received from State and other public agencies, and from industrial, association, and other private agencies to finance research projects of mutual interest and benefit to both parties. The deposits may be made either in a single sum or on a continuing basis, and may either partially or wholly cover the cost of the research. The cooperative research projects may involve any aspect of forestry and vary widely as to scope and duration.

A very common example of such cooperation is for a State to make a deposit to the Cooperative work fund in order to intensify or to speed up completion of a comprehensive survey of the forest resources of the State. Other examples are State contributions toward forest fire research. The results of such cooperative investigations are made available to the general public as well as to the depositor.

(7) Administration of Non-Federal Lands. The Act of March 3, 1925, as amended by Section 5, Act of April 24, 1950 (16 USC 572) authorizes the acceptance of deposits for the administration of non-Federal lands. These deposits are made by non-Federal owners having land intermingled with or adjacent to National Forests who wish these lands managed in accordance with good forest management practices. Their holdings are usually too small to warrant the employment of professional foresters to administer such tracts. The advantages to the Government include the avoidance of possible high fire hazard areas resulting from improper cutting practices, the elimination of the necessity of precisely marking the boundaries of the private land, and additional private forest land handled under proper forest practices.

(8) Reforestation (private lands). The Act of March 3, 1925, as amended by Section 5, Act of April 24, 1950 (16 USC 572) authorizes the acceptance of deposits for reforestation of non-Federal lands situated within or near a National Forest. This work is limited to areas of non-Federal land within a planting project on the National Forests or to areas in which certain civic and other public-spirited organizations have taken an interest.

(9) Statement on Utilization of Funds. Following is a statement of funds received and obligated and balances available by major activities:

COOPERATIVE WORK, FOREST SERVICE--Trust Fund

	Balance Available June 30, 1972	Actual Fiscal Year 1973			Estimate Fiscal Year 1974			Estimate Fiscal Year 1975		
		Funds Received	Obligations	Balance	Funds Received	Obligations	Balance	Funds Received	Obligations	Balance
1. Construction and maintenance of roads and trails	$6,690,551	$10,314,183	$7,772,771	$9,231,963	$9,000,000	$8,890,000	$9,341,963	$12,360,000	$9,200,000	$12,501,963
2. Construction and maintenance of other improvements	759,394	1,062,755	801,443	1,020,706	800,000	840,000	980,706	1,000,000	890,000	1,090,706
3. Protection on National Forests and adjacent private land:										
(a) Fire	589,888	2,611,945	2,514,316	687,517	2,000,000	2,640,000	47,517	2,600,000	2,600,000	47,517
(b) Other	2,609,233	2,735,090	2,355,003	2,989,320	2,000,000	2,439,000	2,550,320	2,700,000	2,600,000	2,650,320
4. Sale area betterment on National Forest lands (including reforestation)	56,946,447	42,594,721	32,629,279	66,911,889	47,800,000	42,558,000	72,153,889	46,740,000	42,975,000	75,918,889
5. Scaling of timber	246,145	1,445,561	1,405,406	286,300	1,400,000	1,426,000	260,300	1,400,000	1,426,000	234,300
6. Research investigations	245,062	777,373	690,147	332,288	600,000	710,000	222,288	700,000	727,000	195,288
7. Administration of private lands	21,719	65,672	67,815	19,576	65,000	68,000	16,576	65,000	68,000	13,576
8. Reforestation (private lands)	115,271	31,945	36,855	110,361	35,000	37,000	108,361	35,000	37,000	106,361
Total	68,223,710	61,639,245	48,273,035	81,589,920	63,700,000	59,608,000	85,681,920	67,600,000	60,523,000	92,758,920

NOTE: Balances carried forward are due primarily to necessity of deferring work for which funds are deposited until the most practicable time for accomplishment. For instance, funds for sale area betterment are received in advance of timber cutting, but work cannot be started until cutting operations are completed. The time lag sometimes extends for several years, depending on the amount of preparatory work required in the sale area and weather conditions.

Above obligations for 1973 include refunds to cooperators in the amount of $104,798.

LOG EXPORT PROHIBITION

Mrs. HANSEN. Please explain the rationale for proposing to delete the log export prohibition in the 1975 bill.

Mr. MCGUIRE. The rationale is that, even though the Morse amendment has expired, the Secretary of Agriculture has authority to regulate log exports and, in fact, was doing so prior to the passage of the Morse amendment.

I think the rationale here is that the administration would prefer to revert to the situation of utilizing prior authorities. However, we do not feel strongly about this particular item, and we respect the wishes of the committee.

Mrs. HANSEN. You say the Morse amendment expired. If the log export language is deleted from the appropriation bill, what would keep you from going to 1 billion?

Mr. MCGUIRE. We would have the authority that set it at any level at all. We use existing authority in Alaska to prohibit log exports entirely. This has been in effect for a long time.

Mrs. HANSEN. Mr. McGuire, thank you very much for an excellent hearing. I wish to thank every member of the staff who participated.

Mr. MCGUIRE. We want to thank you and all of the committee for your support and understanding. We are going to miss you and Mr. Wyatt, all of us will.

Mr. WYATT. We expect, Chief, that Mr. McDade will carry on and see that the funding of the Forest Service reaches even new plateaus next year. We expect when Mrs. Hansen and I come to him with a request to assist you he will be very responsive.

One final thing for the record, since this is more or less my swan song, Chief, and your last appearance on the regular bill.

I would like to compliment you upon your presentation and your testimony and your stewardship of the Forest Service and the members of your staff who have cooperated so well. I hope we are able to do something magnificent for you budgetwise this year as far as reforestation and State and local private forestry, and research is concerned.

Mr. MCGUIRE. Thank you very much. I appreciate it.

Mrs. HANSEN. It has really been a pleasure to work with the Forest Service. The best part of it is it's a service managed by professionals doing a good capable job. I only wish the day would come when the Office of Management and Budget would consult the professionals to find out what the professional forester's attitude toward the forest future is. I think this is mandatory.

THURSDAY, MARCH 14, 1974.

BUREAU OF LAND MANAGEMENT

WITNESSES

JACK O. HORTON, ASSISTANT SECRETARY, LAND AND WATER RESOURCES
CURT BERKLUND, DIRECTOR
GEORGE TURCOTT, ASSOCIATE DIRECTOR
FRANK EDWARDS, ASSISTANT DIRECTOR, MINERALS
EDWARD HASTEY, ASSISTANT DIRECTOR, ADMINISTRATION
PAUL VETTERICK, CHIEF, DIVISION OF BUDGET AND PROGRAM DEVELOPMENT
WILLIAM D. BETTENBERG, DEPUTY DIRECTOR OF BUDGET

Mrs. HANSEN. The committee will come to order.

This morning we have the Bureau of Land Management and the principal witnesses are the Assistant Secretary for Land and Water Resources, Mr. Jack Horton, and Mr. Curt Berklund, BLM Director.

Mr. Berklund at this point in the record we will insert your biography.

[The information follows:]

BIOGRAPHY OF CURT J. BERKLUND, DIRECTOR OF BLM

The appointment of Curt Berklund, 44, of Cottonwood, Idaho, as Director of the Department's Bureau of Land Management was announced by Secretary of the Interior Rogers C. B. Morton on July 13, 1973.

Mr. Berklund succeeds Burton W. Silcock who was sworn in July 12 as Federal cochairman of the Joint Federal-State Land Use Planning Commission for Alaska.

Mr. Berklund joined the Department in April 1970, as Assistant to the Associate Director, Bureau of Land Management and Special Assistant to the Assistant Secretary for Public Land Management. In April 1972 he was named Deputy Assistant Secretary in the Office of the Assistant Secretary for Public Land Management.

The Secretary of the Interior designated Mr. Berklund Acting Assistant Secretary for Public Land Management January 23, 1973 to the newly established Assistant Secretary for Land and Water Resources in the development and administration of policies and programs concerned with public lands.

In January 1972 he received the outstanding award from the Director, Bureau of Land Management, for superior performance as Chairman of the Department's Public Land Law Review Committee which developed the Departments' Public Land Legislative Proposals.

In January 1973, Mr. Berklund received an honor award citation for his skill and hard work in carrying forward programs for the balanced management of public lands.

From 1950 to 1967, Mr. Berklund was an executive with several resource industries, basically lumbering and ranching. From 1964 to 1967, he was president of the Berklund International Lumber Co., St. Maries, Idaho.

From 1960 to 1967, he was vice president of American River Lumber Co., Inc., Elk City, Idaho. He also served as partner and general manager of the William Berklund Forest Products Co. and of the American River Lumber Co., both of Cottonwood, Idaho.

In 1967, the fixed assets of all these resource industries were sold and Berklund made studies of forestry and range management in 22 countries, including five behind the iron curtain, at the invitation of Canterbury University in New Zealand and Washington State University.

Berklund was graduated from North Park College, Chicago, Ill., in 1948 and also attended Michigan Technological University. He was born in Fence, Wis., in June 1929. He is married to the former Adele Marian Mars of Marquette, Mich. They have six children.

INTRODUCTION OF WITNESSES

Mrs. HANSEN. Would you introduce the people who are here with you Mr. Berklund?

Mr. BERKLUND. Madam Chairman, with the Bureau of Land Management today is our Assistant Secretary for Land and Water Resources, our line Assistant Secretary: Bill Betterberg, who is Deputy to Frank Wiles, Director of Budget for the Department; on my right is George Turcott, Associate Director of the Bureau of Land Management. To my left is Ed Hastey, Assistant Director for Administration.

Mrs. HANSEN. We have met before.

Mr. BERKLUND. And Paul Vetterick, who is the Bureau of Land Management's Chief, Division of Budget and Program Development; Frank Edwards, Assistant Director for Mineral Management; and Pat Harvey, one of our budget analysts.

STATEMENT OF THE ASSISTANT SECRETARY

Mrs. HANSEN. Finally you people have learned to bring some women up here. I think that is an excellent idea. Mr. Horton, you may proceed with your statement.

Mr. HORTON. Madam Chairman, the Bureau of Land Management programs, which you will be reviewing today, recognize the rapidly increasing importance of the national resource lands. Once considered America's leftover or forgotten lands, they are becoming increasingly significant in meeting the economic and recreation demands of the Nation.

The material importance of these lands and their resources is accentuated by the Nation's energy situation and by the consequent need to develop new sources of energy minerals, particularly oil, gas, and coal.

We believe that the present oil and gas situation is a present manifestation of longer-term trends in the availability of all natural resources as worldwide demands for natural resources grow against a finite resource base.

Traditionally, the industrialized world has assumed that it could rely for much of its raw material needs on the cheap resources of the lesser developed countries. Now many of those countries are developing their own industrial capacity and taking other steps to limit the amount of resources available for export or increased their prices.

CONSUMPTION OF THE WORLD'S RESOURCES

Only a few years ago the United States with 6 percent of the world's population, consumed 35 percent of the world's resource production. Currently, even with substantial increases in our own consumption of resources, we are consuming 25 percent of the world's total. Consequently, the rest of the world is catching up, using a greater share of available resources.

The development and conservation of the many basic resources contained within our national resource lands will become increasingly important to maintaining our standard of living and basic sufficiency in many commodities. These include energy minerals, nonenergy minerals, and the renewable resource group.

ENERGY DEVELOPMENT

For example, President Nixon's new national goal of seeking energy self-sufficiency in the 1980's can only be accomplished by greatly increased production of oil and gas, and coal as well as from geothermal steam resources on the national resource lands and the Outer Continental Shelf. The Bureau's budget request includes the necessary funds and manpower to make these basic energy resources available while providing for advanced land use planning and maximum environmental safeguards.

The national resource lands also have a significant role in meeting the American people's desires for a variety of outdoor recreation pursuits, particularly in areas such as the California desert where visitation is up to 12 million visitor days a year.

RECREATION USE

Recreation use of these lands has sky-rocketed in the past decade and we project this growth to continue. Increased use requires more intensified management and the development of new facilities. This budget will help the Bureau manage the recreation values under its jurisdiction, protect other resources subject to damage through recreation pressures, and provide a safe environment for the growing number of visitors to the national resource lands.

ALASKA NATIVE CLAIMS SETTLEMENT ACT

Early implementation of the Alaska Native Claims Settlement Act is another important Bureau of Land Management effort. Selection of lands by the Natives and for national interest areas is proceeding in accordance with the provisions and time frame established by the act. As you know, the Bureau of Land Management has an enormous realty and survey workload in Alaska to process not only Native selections, but ongoing State selections under the Statehood Act.

To accomplish this work on a timely basis, this budget proposes expansion of realty and cadastral activities to achieve final conveyance of selected lands as rapidly as possible.

OTHER PROGRAM FEATURES

I have briefly touched on three major program areas identified in the Bureau of Land Management's fiscal 1975 budget request. In addition to these programs, the budget proposes other vital expansions for augmenting production of timber from national resource lands outside of western Oregon; for implementing the Wild Horse and Burro Act; for facilities maintenance; and for administrative support. The Bureau's range, watershed, wildlife, and supporting programs are essentially continued at the 1974 program level in this budget.

In total, the Bureau of Labor Management's requests represents the means to accomplish those priority programs necessary to meet the demands and expectations of the public. They will help determine the productivity of these lands and the contribution they will make to our national needs, now and in the future.

PERSONAL OBSERVATIONS

Madam Chairman, I might add a brief personal note after my year's experience now with the Bureau of Land Management. It has been a very great privilege to visit a number of these areas and to see the terrific impacts that are being made both from the need for energy extraction and certainly from public recreation.

I spent 4 days in the California desert. The need there is overwhelming, the responsibility that we have, and if we don't assume our responsibilities nobody else is going to do it. We are looking at 12 million visitor-use days a year. It could be 17 in the next couple of years. It requires close Federal, State, and local county liaison, but beyond that with 13 million acres of our own there we have a real job to do with the number of people that are pouring out from Los Angeles and San Diego.

I would just add one further point of emphasis and that is from my experience in Alaska as the chairman of the Federal-State Land Planning Commission that there is a very high moral responsibility for the Federal Government to expedite the surveying of Native lands that have been selected or will be selected. The orders of magnitude up there are just enormous compared to the lower 48.

Mrs. HANSEN. This committee has been concerned for many years about the cadastral survey work in Alaska. At the rate your budget was going it was going to be 100 years before you ever got through.

The committee could foresee the tremendous workload that was going to come about as a result of Native claims legislation.

NEED FOR BLM ORGANIC ACT

Mr. HORTON. I think overall we are hoping 1974 will be the red letter year for the Bureau. The Congress gave to the Forest Service its Organic Act in 1897 and here we are 77 years after that, with no Organic Act for the 450 million acres that the BLM has jurisdiction over.

We are very hopeful that Congress will give to the Bureau the desperately needed set of guidelines for modern day management of the lands and enforcement authority.

Mrs. HANSEN. What is the status of that legislation?

Mr. HORTON. We hope it will be marked up by the Senate Interior Committee this week. The House Interior Committee will be holding additional field hearings. I think in general, we are reasonably optimistic that we will get a bill this calendar year.

Mr. BERKLUND. Yes; we have been told it will be out of the House in April. They are scheduling two field hearings later this month, one in Oregon, one in Utah, and then they will hold House hearings here in Washington, but we expect the Senate to complete markup of a bill within the next week or two.

Mrs. HANSEN. Thank you very much, Mr. Horton.

DIRECTOR'S PREPARED STATEMENT

Mr. Berklund, do you have a statement?

Mr. BERKLUND. Yes, Madam Chairman. I have a prepared statement.

32-043 O - 74 - 27

Mrs. HANSEN. Do you want to place it in the record and summarize it for us?

Mr. BERKLUND. Yes, I would very much appreciate the opportunity to put it in the record and summarize it very briefly.

[The statement follows:]

Madam Chairman, it is a distinct honor to appear before the committee in support of our 1975 budget for managing the National Resource Lands.

Our total appropriations requested for fiscal year 1975 is $173 million exclusive of $121 million in permanent appropriations, most of which represents payments to States and counties. The $173 million is an increase of $33 million when compared to the amount appropriated to date for 1974 and our requested pay supplemental for 1974; $32 million of the requested increase is in our management of lands and resources appropriation. The remaining $1 million in the range improvement fund is attributable to increased grazing receipts.

The total requested increase of $33 million includes $5.7 million for rent of office space and other physical facilities, such as warehouses, under the new method of financing space. Also included in the total is $1.3 million to annualize the cost of the October 1973 pay raise. Exclusive of these items, our request includes $28.5 million for program increases offset by decreases in construction and fire rehabilitation activities totalling $2.5 million.

The Bureau has major responsibilities in meeting the vital national goal of increasing domestic energy supplies while protecting and preserving our environment. The 450 million acres of national resource lands and the Outer Continental Shelf areas managed by BLM contain our largest potential energy resources. For example, our Outer Continental Shelf (OCS) reserves are estimated at 377 billion barrels of oil and 1,517 trillion cubic feet of gas, enough oil and gas to last over 60 years at present rates of total national consumption. Dwarfing even the OCS are the resources contained in the western oil shale deposits estimated at 600 billion barrels of oil; the world's largest known potentially developable source of oil. Other important national resource land energy resources include approximately 85 percent of the U.S. low sulfur coal deposits and over half the known and potentially valuable geothermal steam resources.

We are keenly aware of the need to make public land energy resources available for development by the private sector with a fair return to the Government. We are equally aware of our responsibilities to do so in a manner which provides for maximum safeguards of our environment and mitigation of unavoidable environmental impacts. Our budget request gives heavy emphasis to both of these objectives and includes increases totaling $18.5 million for energy related programs. The major energy program items include:

The sum of $10.3 million for the Outer Continental Shelf program to initiate environmental research on the impact of oil and gas development in new and potential leasing areas and to fully staff environmental assessment teams.

The sum of $2.3 million for environmental analysis of potential energy development actions in onshore areas.

The sum of $1 million to accelerate the Bureau's land-use planning system primarily in areas with abundant coal resources.

The sum of $1.3 million for preparation of leasing schedules and carrying out leasing programs for coal, oil shale, and geothermal steam.

The sum of $2 million for surface protection and compliance activities.

The sum of $1.5 million to annualize Trans-Alaska pipeline program expenses.

In addition to our energy program, the budget includes a request for an additional $2 million to cope with the rapidly expanding use of national resource lands for a large variety of recreational activities. Individual components of the recreation increase are for the management of the unique California Desert area, management of wild and scenic rivers and trails including a 1976 Bicentennial trails program, protection of cultural resources, and management of off-road vehicle use on national resource lands.

A total of $5 million in additional funds is requested for realty and cadastral survey activities required to convey lands to Alaskan Natives under the Alaska Native Claims Settlement Act. Less substantial but highly important increases are also included for continuing the implementation of the Wild Horse and Burro Act, for public domain forestry through fund adjustments, for general administration, and for providing adequate maintenance of BLM buildings, roads and recreation facilities.

Our construction requests reflect an essentially level program for public lands development roads and trails, and decreasing amounts for recreation and building construction. Within the Oregon and California Grant Land Fund, decreases for road and recreation construction are offset by increases for forest protection, development, and management activities.

In 1975, our programs are expected to generate over $5.3 billion in receipts of which $119 million will be paid to State and counties. While these revenues are substantial, and actually exceed the entire Interior Department budget by nearly $2 billion, they represent only a small fraction of the values which the BLM managed lands and resources provide the American people. Because of the importance of our fund requests to the continued protection and development of this public estate, we urge your continued support of these vital land management programs.

HIGHLIGHT STATEMENT

Mr. BERKLUND. I have a very brief summary, Madam Chairman. I wish to tell you it is a distinct honor to be before your committee again, the third time in 2 weeks. I hope we haven't worn out our welcome but it hasn't diminished our expectations and hopes.

We are here in support of our 1975 budget. Our total appropriation request for fiscal year 1975 is $173 million exclusive of the $121 million in the permanent appropriations. The $173 million portion is an increase of $33 million. It includes $5.7 million for rent of office space, $1.3 million to annualize the cost of the October 1973 pay raise, and $28.5 million in program requests.

Madam Chairman, The Bureau has major responsibilities in meeting the vital national goal of increasing domestic energy supplies while protecting and preserving our environment.

Our budget request gives heavy emphasis to both of these objectives and includes increases totaling $18.5 million for energy-related programs.

The major energy program items include $10.3 million for the Outer Continental Shelf program. That is based on a 3 million acre per year leasing objective; $2.3 million for environmental analysis of potential energy development actions in onshore areas, $1 million to accelerate the Bureau of Land Management's planning system.

Mrs. HANSEN. On the onshore areas, does this include the oil shale lands?

Mr. BERKLUND. The onshore area that we are referring to here is for potential public land and offsite developments for oil and gas, geothermal and principally, coal. Oil shale has been included as a separate item in this budget.

There is $1.3 million for preparation of leasing schedules for coal, oil shale, and geothermal steam. There is $2 million for surface protection of lease areas; and $1.5 million to annualize the Trans-Alaska Pipeline program expenses.

In addition, the budget includes a request in recreation programs for an additional $2 million for the management of the unique California desert area, wild and scenic rivers and trails, protection of cultural resources and management of off-road recreational vehicle use on national resource lands.

A total of $5 million in additional funds is requested for realty and cadastral survey activities required to convey lands to Alaskan Natives under the Alaska Native Claims Settlement Act.

Less substantially but highly important increases are also included for continuing the implementation of the Wild Horse and Burro Act,

for public domain forestry through fund adjustments, for general administration, and for providing adequate maintenance of BLM buildings, roads, and recreational facilities.

In 1975, our programs are expected to generate over $5.3 billion in receipts, of which $119 million will be paid to States and counties. These revenues are substantial but represent only a small fraction of the values of the BLM-managed lands and resources.

Because of the importance of our fund requests to the continued protection and development of the public estate, we urge your continued support of these vital land management programs.

APPROPRIATIONS COMPARED TO RECEIPTS

Mrs. HANSEN. How do your management funds compare to the $5.3 billion receipts, as a percentage?

Mr. BERKLUND. We wouldn't have that with us.

Mrs. HANSEN. Do you want to place it in the record for us?

Mr. BERKLUND. Yes, Madam Chairman.

[The information follows:]

BLM management programs in relation to receipts

Fiscal year 1975 estimated receipts (President's budget)	billion	$5.3
Fiscal year 1975 estimated receipts (revised estimate[1])	do	8.6
Fiscal year 1975 BLM management budget[2]	million	175.0
Management budget as a percent of President's budget receipt estimate		3.3
Management budget as a percentage of revised receipt estimate		2.0

[1] Revised current estimate reflecting the expected impact of higher oil prices and leasing additional acreage on Outer Continental Shelf bonus bids, a revised estimate of receipts from the prototype oil shale leasing program based on lease sales to date in Colorado and Utah, and revised estimates of receipts from upland oil and gas and geothermal resources leases and lease applications.

[2] Includes all BLM appropriations except $118,900,000 in permanent appropriations for payments to States and counties.

RESOURCES ON BLM LANDS

Mrs. HANSEN. At this time, would you place in the record for us a map of your BLM lands showing the distribution of your various resources?

Mr. BERKLUND. Yes, Madam Chairman.

[The information follows:]



Legend

LANDS MANAGED BY BLM

COAL – COAL & OIL & GAS

OIL & GAS

OIL SHALE

GEOTHERMAL STEAM

THE NATIONAL RESOURCE LANDS IN THE WESTERN STATES

United States Department of the Interior

Bureau of Land Management

BLM MANAGED ACREAGE

Mrs. HANSEN. Many people are under the illusion that the BLM has wide holdings in the East. As you know, this is not true. The Bureau of Land Management's lands are in the West.

Mr. BERKLUND. Basically in the 11 Western States and Alaska.

Mrs. HANSEN. That is right. Would you also place in the record the acreage per State that are BLM lands?

Mr. BERKLUND. Yes, ma'am.

[The information follows:]

Bureau of Land Management—surface acreage managed, by State

State:	*Acres*
Alaska	276,307,960
Arizona	12,536,968
California	15,585,619
Colorado	8,331,896
Idaho	12,048,825
Minnesota	43,396
Montana	8,145,052
Nevada	48,359,949
New Mexico	13,038,688
North Dakota	68,639
Oregon	15,729,628
South Dakota	276,352
Utah	22,722,316
Washington	291,826
Wyoming	17,486,953
Others (less than 10,000 acres per State)	19,151
Total	450,933,218

BLM ENERGY PROGRAMS

Mrs. HANSEN. Mr. Berklund, the energy crisis has again focused public attention on the natural resources of our public lands and the need to manage them properly.

Please summarize for the committee the ways in which your agency is responding to our Nation's energy needs while protecting the public interest and avoiding environmental degradation.

Mr. BERKLUND. Madam Chairman, there are three major areas where we feel we have an opportunity to contribute to the maximum extent in meeting this.

First would be in meeting the self-sufficiency objective, project independence, in providing additional energy sources while assuring the fair return to the Government of the sale of resources and protecting the environment.

We will expand our coal leasing. We will include five competitive leases for geothermal. We will be monitoring and following all steps in the development of oil shale development, and on the OCS we are hoping to be able to lease 10 million acres in calendar year 1975, up from our previous objective of leasing 3 million acres per year.

GEOTHERMAL LEASING FORM

Mrs. HANSEN. Are your forms all prepared for your geothermal leases?

Mr. BERKLUND. Yes, they are.

Mrs. HANSEN. Do you want to send the committee a copy of your lease forms for geothermal? I believe we have samples here for coal, onshore oil, and the Outer Continental Shelf oil and gas, but I do not think we have at this time a copy of the leases made on the oil shale and geothermal lands.

Mr. BERKLUND. Yes, Madam Chairman.

I think we have it with us and we will supply it for the committee.

[Note: The information was supplied to the committee.]

Mrs. HANSEN. Fine.

ENERGY PLANNING AND ENVIRONMENTAL PROGRAMS

Mr. BERKLUND. The second point I would like to emphasize is our program to insure that all other resource values are considered in the decision to lease Federal lands for energy mineral development. We will be completing many land use plans, management framework plans which we discussed the other day, in order to identify the areas that are best suited to developing for energy resources.

Another program area will be one to minimize the environmental impact, to conduct research, to develop sound leases, to improve our lease stipulations, and to check on compliance with these stipulations and regulations during operations.

ENVIRONMENTAL AND PROTECTIVE MEASURES

The third area of program emphasis helps insure that full environmental considerations and protective measures are a part of all leasing actions. This includes off and on shore research, surface protection management and pipeline monitoring.

I have a program summary covering all three of these categories which we can provide for the record.

[The information follows:]

BUREAU OF LAND MANAGEMENT
1975 ENERGY RELATED PROGRAM INCREASES
BY MAJOR OBJECTIVES

Objectives/Programs	FY 1975 Increase $000's	FY 1975 Increase Posn's.	FY 1975 Total Program $000's	FY 1975 Total Program Posn's.	Expected Outputs
Meeting the self-sufficiency objective of Project Independence. Insuring fair return to the government for resources leased.					
Coal leasing.....	$1,050	35	$1,820	70	12 million additional tons of coal from Federal leases in 1975 increasing to 61 million additional tons by 1979.
Geothermal resources leasing.....	180	-	730	26	5 competitive lease sales in 1975.
Oil shale leasing.....	100	-	865	57	Monitor prototype oil shale leases.
OCS Leasing.....					Lease 10 million acres.
Impact statement preparation 1/	575	21	1,076	39	43 impact statements.
Subtotal.....	$1,905	56	4,491	192	
Insuring that all other resource values are considered in the decision to lease Federal lands for energy minerals development					
Land use planning for energy resource areas.....	$1,050	28	2,367	63	Complete land use plans to guide the orderly development of energy and other related land uses.
Subtotal.....	$1,050	28	2,367	63	

Objectives/Programs	FY 1975 Increase $000's	FY 1975 Increase Posn's.	FY 1975 Total Program $000's	FY 1975 Total Program Posn's.	Expected Outputs
Minimizing environmental impacts through research, development of lease stipulations and mitigation requirements, compliance checks, etc.					
OCS baseline research and environmental assessment activities.....	$10,300	43	$13,760	145	Required to facilitate increased leasing in existing and frontier areas.
Environmental assessment activities for upland energy resources.....	1,725	65	3,229	118	Environmental analysis for 1,400 separate actions, primarily upland oil and gas leases.
Surface protection-stipulations and compliance.....	650	26	1,043	42	Performing technical and compliance examinations on all leases on a pipeline basis by the end of 1977.
Surface protection-soil and hydrologic data acquisition....	1,400	5	2,057	37	Analysis of over burden by core sampling 1500 sites.
Trans-Alaska Pipeline monitoring	1,500	--	8,714	44	Surveillance of construction activities at the level required to insure compliance with stipulations.
Subtotal increases.....	$15,575	139	28,203	386	
Total, all energy increases....	18,530	223	35,061	641	

1/ Represents the portion of the environmental analysis increase which is for the mechanical process of preparing and distributing impact statements, as contrasted to that portion devoted to assessing and increasing knowledge of probable environmental impacts which is reported in the last category.

MANAGEMENT COSTS PER ACRE

Mrs. HANSEN. You say in your highlight statement:

Natural resource land managed by the Bureau of Land Management total over 450 million acres, 20 percent of the land area in the United States.

You also administer an additional 369 million acres of other Federal and private lands which constitute the public mineral estate, and 1.146 billion acres of the Outer Continental Shelf out to the 2,500 meter ocean depth.

Would you place in the record for us the management money spent per acre for the 450 million acres, for the 369 million acres, and for the 1.146 billion OCS acres? Also, add in what the Geological Survey spends in the Outer Continental Shelf.

The reason we are doing this is because most managers of private resource lands spend a sizable amount more per acre for the management of their lands than does the Government.

I think it is becoming increasingly critical that we begin to face the realities of what the budget must contain in order to manage these lands properly.

[The information follows:]

BUREAU OF LAND MANAGEMENT—MANAGEMENT COSTS PER ACRE, FISCAL YEAR 1975

	Total acreage (millions)	Total management costs	Per-acre management costs
Surface and mineral estate managed by BLM	450	$160,704,000	$0.3571
Mineral estate only managed by BLM	369	500,000	.0014
Outer Continental Shelf [1]	1,146	13,760,000	.0120
Total	1,965	174,964,000	.0890

[1] In addition to BLM management costs, the Geological Survey's proposed budget includes $21,000,000 for investigations and interpretation of OCS resources, and for regulation of OCS operations. This amount, when combined with BLM's environmental assessment and leasing costs, would result in total per-acre management cost of $0.0304.

DOMESTIC INVESTMENTS IN RESOURCES

Mrs. HANSEN. It seems to take a tremendous amount of effort to get our natural resource budget up. Your total budget this year is $293 million of which about $120 million is payments to States and counties.

Yesterday I read the budget figures on the total spending in Cambodia, Laos, Thailand. They are more than $3 billion. That is almost as big as the entire budget for the Department of the Interior and related agencies which this committee handles. With our scarce budget resources we must manage a total of 754 million acres of land, provide for the people of the Trust Territories, the Indian world, and portions of Guam. Samoa. the Virgin Islands.

Mr. HORTON. And the Outer Continental Shelf.

Mrs. HANSEN. Yes; that is involved.

The future of America is closely tied to our oil, gas, coal, and mineral resources.

The forests are in the same category. If we undermanage our forests there are going to be no trees for the future.

Somebody down at the Office of Management and Budget has to understand that if you are going to manage your lands you have to do it in a businesslike manner.

This is America's investment.

Mr. HORTON. The ratio you are seeking, management funds per acre, both on shore and off shore, would be a very valuable thing for certainly the management review of our own agencies.

The irony here is that at least the western stockmen have always managed their land on a head-per-acre basis, in other words, how many head can you run per acre, and I think we should probably do that in Government.

Mrs. HANSEN. That is right.

Dr. Long, do you have a question at this point?

NONCOMPETITIVE OIL AND GAS RENTALS

Mr. LONG. I would like to ask some questions about the charge per acre on the noncompetitive oil and gas leases.

You have to charge at least 50 cents an acre, but you are allowed to charge more; is that right?

Mr. EDWARDS. Yes, that is right. It is 50 cents minimum per acre by statute. Regulations can set it higher.

Mr. LONG. When was this minimum price set?

Mr. EDWARDS. It was several years ago.

Mr. LONG. It was a great many years ago, wasn't it?

Mr. EDWARDS. Yes; a great many years ago.

Mr. LONG. Fifty cents means a lot less now than it did then. Isn't that so?

Mr. EDWARDS. Yes, sir.

Mr. LONG. Why haven't you raised it?

Mr. EDWARDS. Well, in consideration of the noncompetitive leases, there are a vast number of these leases that are really nonproductive.

In other words, they have not been drilled; or on some that have been drilled, there are dry holes, and they really have not been very productive. That is the reason that they are on a noncompetitive basis.

If we knew there were resources there, they would go on a competitive basis.

Mr. LONG. You mean the 50-cents figure was too high when it was set?

Mr. EDWARDS. Well, no, sir, I don't know as I could say it was too high.

Mr. LONG. The total lease of 75 million acres is $37.5 million a year. That is piddling, isn't it, when it comes to what it might pay off from one field?

GEOTHERMAL RENTALS

Mr. EDWARDS. Not in comparison with other resources.

For instance, the Geothermal Steam Act that was passed just 4 years ago set the minimal rental at $1 an acre. There are other resource values that are involved where the statutes specify a floor or a minimum value, and apparently Congress felt that $1 an acre rental for geothermal steam was adequate at the time. That was just passed 4 years ago.

Mr. LONG. My point is Congress told you, you couldn't charge less than this, but they gave you the right to charge more. Since then, money has depreciated. Why haven't you protected the Treasury and

the taxpayer of the United States by raising the price as the value of the dollar has gone down? The price of oil has gone up enormously.

INCENTIVES FOR OIL AND GAS DEVELOPMENT

Mr. TURCOTT. I might elaborate a little bit. You are correct, I believe the statute talks about a minimum of 50 cents per acre. We want to recall that the 1920 Mineral Leasing Act, in terms of its provisions and the amendments over the years, has many features to grant an incentive to people to explore and develop for oil and gas resources and other hydrocarbons. The minimum has been held to on the basis of trying to get people, through the noncompetitive basis, to lease and then explore.

Now, the problem is that only about 10 percent of the noncompetitive oil and gas leases now in existence are in a productive status. Under the current situation, there is vast expansion now in the applications filed.

Mr. LONG. Isn't that partly because the price is so low? If you charged them more, they might have a greater incentive to go ahead and explore because the cost of making these payments on undeveloped land would be too great.

Mr. TURCOTT. What I am leading up to, sir, is that there are two features.

We have testified in other testimony in front of legislative committees that if there were attention paid to the administration's proposed Mineral Leasing Act of 1973, which would eliminate this noncompetitive feature of the 1920 Mineral Leasing Act, that we would put it all on a competitive basis, and that rentals, royalties, and the whole process would be different.

In addition to that, if that were not forthcoming, we have in other testimony suggested that the statutory minimum be raised.

Mr. LONG. So you do think it ought to be raised. After all this pulling and hauling on the witness stand, you end up by saying you agree that it should be raised. You don't even have to ask for statutory authority. You can raise it any time you want to. The statutory authority applies only to the minimum. It doesn't apply to any maximum.

Mr. TURCOTT. Right, but the features I have talked about of granting incentive, as you say, is a cheap way to get people to lease lands and then subsequently develop and explore. This has been overriding to date in the Department to raise the minimum.

Mr. LONG. I am just wondering whether this doesn't work the opposite of what you claim you are trying to do.

FAIR MARKET VALUE

Mr. HORTON. Madam Chairman, I think Dr. Long has a very important point. In my brief experience in the Department, when the subject has been raised it has been our hope that we could get the administration's new mineral leasing policy actually enacted. The problem is how do you determine and ascertain what is a fair market value—should this be an arbitrary figure set by the executive branch? Should we have the authority for competitive leasing which is set by the market?

As Dr. Long appreciates, we have had three oil-shale sales in the last 3 months, and we have set the price to be determined by the competitive atmosphere of an open market, and were we to set an arbitrary level, I think we would be open to all sorts of accusations, so we are very hopeful that our legislation can be passed.

Mr. LONG. You would like to get away from that charge altogether and get to competitive lease?

Mr. HORTON. That is our hope.

Mr. LONG. I certainly applaud that.

INCENTIVES FOR OIL AND GAS RECOVERY

Aside from that, what steps do you plan to take to assure that oil production from public land is maximized, assuming that is a desirable thing to do, or don't you feel that it is? There are two questions there.

Mr. BERKLUND. I think when we were here earlier before this committee we talked about the efforts we are putting into research for secondary and tertiary recovery. We are now looking within the Department at possibilities of incentives, ways of encouraging industry to use these systems as soon as technology has been proven and production rates have been established.

Mr. LONG. I hear your words but I don't know what they mean.

Mr. BERKLUND. What the Department is attempting to do is to be able to recover the most oil or gas in the reserves that are producing today.

Mr. LONG. I understand that and I felt we should be doing that and moving ahead, and I am shocked that the Bureau of Mines only has a request for a piddling $17 million for research to do that. I am shocked that it is leaving it up to the oil companies to do the main body of research.

Of course the oil companies have proved to the public, and to me at least, if not to you, that they aren't really very interested in getting more oil out of their existing wells. They would rather go where they can get it a lot cheaper even if that means that we become dependent on other countries. So I would like to know what the specifics are that you plan to use to maximize this oil production.

Mr. BERKLUND. This is what we are developing right now, trying to develop incentives for industry to do it.

Mr. LONG. What incentives?

Mr. BERKLUND. That is what we are trying to determine, which way we do it, whether we use decreasing royalties as the wells have less capacity to produce, or other ways that can reach out to them where they can utilize their own dollars, but yet give us the maximum conservation of the oil and gas resource that we have in the ground.

Mr. LONG. What have you done? How long have you been working on this?

Mr. BERKLUND. It is mostly Geological Survey's field, but we are working with them and it has just been in the last few months that we have been looking at the incentive program.

Mr. LONG. You sound vague and general on this. Do you have any-

USGS STUDY ON CAPPED WELLS

Mr. TURCOTT. The USGS has been making a study for some weeks of all shut-in or capped wells, as they are described.

Mrs. HANSEN. Is this on public lands?

Mr. TURCOTT. Yes, all the public lands, upland and OCS. They are making a determination, using their vast operating experience with these wells because they keep very close track of them, whether there is capacity in these wells that should be developed. Industry has capped them for whatever their business or other reasons; the lessee has shut them in. This analysis is finished or almost finished and it is to be submitted to the Secretary of the Interior for his review. Under the law, under the leases themselves, and the operating regulation of the USGS, if there are any actions that can be taken to develop any residual oil or gas left in these shut-in wells, action could be taken.

Mr. LONG. You are just groping at this point. You haven't really got your hands on anything?

Mr. HORTON. The research is in Geological Survey. I think when they appear before you, you will have the opportunity to ask them.

OIL AND GAS PRODUCTION FROM PUBLIC LANDS

Mrs. HANSEN. They did discuss this at great length. Mr. Turcott, what percent of the oil in production now comes from public lands and what percent comes from the mineral estate owned by the United States on private lands?

Mr. TURCOTT. We have a very fine table we could present for the record on that. It does not separate the features you mentioned, the oil and gas from the public and the mineral rights lands. That can be secured from the USGS, however, Madam Chairman.

Mrs. HANSEN. Will you secure it for us and place it in the record?

Mr. TURCOTT. Yes.

[The information follows:]

OIL AND GAS PRODUCTION ON PUBLIC LAND

According to information available and estimates made by the U.S. Geological Survey, public land production of oil and gas in fiscal year 1973 contributed approximately 17 percent of total domestic production.

To determine the production from surface ownership (surface estate) versus production from private land where minerals are reserved (mineral estate) would involve a lease-by-lease analysis and a land status check in each of our State offices. Our best estimate, based on the land ownership status of acreage leased, is that approximately 30 percent of public land oil and gas production comes from the mineral estate.

Based on this estimated ratio, the following distribution of oil and gas production for fiscal year 1973 is as follows:

	Oil in millions of barrels	Percent of total	Gas in thousands of cubic feet	Percent of total
OCS[1]	394.88	66	3,042,430,438	73
Public lands	117.42	19	661,056,782	16
Public mineral estate[2]	90.48	15	474,738,612	11
Total	602.78	100	4,178,225,832	100

[1] Oil and condensate.
[2] Includes USFS, Corps of Engineers, BSF&W, GSA, VA, Coast Guard, B/R and mineral state.

Mr. BERKLUND. Seventeen percent of it is coming from the public lands but we would like to give you the breakdown for the record.

Mrs. HANSEN. All right.

FACTORS IN LEASE DEVELOPMENT

Mr. LONG. If I may resume, can you justify this business of letting a person lease this land and tie it up for years? The way it looks to me is that what this 50 cents does is just work the opposite of what it was claimed to do.

It really enables, for a rather small sum of money, certain oil companies to tie up a lot of the public lands for years and years and years at a relatively small cost rather than releasing them so that other people might go ahead on them.

Would you agree with that?

Mr. HORTON. I think it is not, Dr. Long, in the price at which the lease is sold but rather in section 7 of the Mineral Leasing Act.

We don't have the Solicitor with us, but that requires that the lessee operate his lease with diligent development and continuous operation but there is a further subsection in section 7 that allows him to pay an advanced royalty instead of providing for diligent development and continuous operation, and the companies, particularly the coal brokers that have more or less sat on these leases, have chosen to provide advanced royalty rather than diligent development. We have in the Solicitor's Office now a very active analysis. We testified on this yesterday before the Senate Interior Committee, on the ways legally that we can instigate more rapidly development in existing coal leases than we have now. I would guess that we will have a conclusion to that analysis and a decision by the Secretary within the next month to 6 weeks.

Mr. LONG. I think it is pretty clear that the 1920 act was not written with an energy crisis in mind.

Isn't that true?

Mr. TURCOTT. I don't know what the protocol is but, as I mentioned to Dr. Long previously, at another legislative hearing where I was supporting Assistant Secretary Horton I went into five or six features that bear on this issue. If we just looked at the Mineral Leasing Act itself under contemporary times with respect to the energy problems it would point the need for legislative action to give us some contemporary items to deal with the situation. If I could give that to you from that other record, I would be very happy to include it in the record.

Mrs. HANSEN. Please.

Mr. LONG. We will be delighted to have that.

[The information follows:]

STEPS TO ENCOURAGE DEVELOPMENT OF OIL AND GAS LEASES

The following was provided by Mr. Turcott in testimony on H.R. 11840 before the House Interior and Insular Affairs Committee on December 18, 1973.

1. Increase the acreage limitations from the present 246,080 acres per person, association, or corporation in each State (except Alaska) to 300,000 acres. The acreage limitation in Alaska is 300,000 acres in the northern leasing district and in the southern leasing district, respectively, and no change is recommended. The acreage limitation of 246,080 acres is computed separately for public lands

and for acquired lands. However, the public land statistics show that, except for North Dakota, only a minimal amount of acquired land is available for lease in the various western States, whereas practically all of the land available for lease in the eastern States is acquired land. Thus, in actual practice, this acreage limitation is not overly generous since it includes not only record title and operating rights in such leases but also the acreage held under options to acquire interests in Federal oil and gas leases.

2. Waive acreage chargeability on all producing leases whether or not committed to a cooperative or unit plan of operation or a development contract.

The act presently provides that all leases operated under any cooperative or unit plan of operation approved or prescribed by the Secretary shall be excepted in determining holdings or control under the provisions of any section of the act. As of December 31, 1972, only 7.6 million acres were committed to such unit plans. No similar exception is provided for nonunitized leases which are in production through a well or wells situated on the leasehold or through allocated production pursuant to communitization or drilling agreements authorized under section 17(j) of the act.

3. Credit rentals for any lease year in which actual drilling operations are commenced on the leasehold during the primary term of the lease against future rentals or production royalties.

This provision would provide some incentive for early development of the leased lands. A 2-year extension is prescribed under the act for any lease on which actual drilling operations are commenced prior to the end of its primary term. This particular recommendation would serve to encourage commencement of such operations at an earlier date, rather than at the end of the primary term, which is 5 years for competitive leases and 10 years for noncompetitive leases. Even if the term of noncompetitive leases were shortened to 5 years (which we recommend), this proposal would provide some incentive for the more than 100,000 leases presently outstanding.

4. Provide for a 5-year primary term for both competitive leases and noncompetitive leases which are now being issued for primary terms of 5 and 10 years, respectively.

In all too many instances these leases, noncompetitive leases in particular, are acquired for speculative purposes and held to the end of their primary terms without any attempt to test or develop the leased lands. If any development is commenced, it is usually begun shortly before the expiration of the primary term of the lease in order to earn a 2-year extension as authorized under section 17(e) of the Act, as amended September 2, 1960.

5. Increase the annual rental from 50 cents per acre to $1 per acre, and the minimum royalty from $1 per acre to $2 per acre.

The 1935 amendment to the Mineral Leasing Act provided for the issuance of noncompetitive oil and gas leases at a rental of not less than 25 cents per annum. The rental rate remained unchanged until the enactment of the September 2, 1960, amendatory act which prescribed a rental rate on such leases of not less than 50 cents per acre. Minimum royalty in lieu of rental was first prescribed by the amendatory act of 1946 which also set the rate at $1 per acre. There has been no change in the minimum royalty rate since that time. The argument that the lower rental (as compared to private leases) encourages development of the Federal leases is unrealistic and has, instead, promoted leasing largely for speculative purposes. The increase in the rental and minimum royalty would, we believe, serve as a disincentive to holding such leases for speculation or for tax shelters.

IMPLEMENTATION OF PLLRC FINDINGS

Mrs. HANSEN. Mr. Turcott, we invested well over $1 million in a Public Land Law Review Commission. The report was submitted more than 2 years ago and to date I do not believe any of the recommendations have been implemented. How many recommendations have you seen fit to act on?

Mr. BERKLUND. Madam Chairman, we elected not to try to implement it in itself totally. What we did do is take segments and use it. When we proposed a revision of the mining law last year and a new Mineral Leasing Act we followed very closely the recommendations of the Public Land Law Review Commission but there were some changes and some modification.

The Organic Act of BLM that is now before Congress has taken many of the things from the Public Land Law Review Commission. Its record I think is valuable to us. In the report were also many studies that the Commission had completed and they are being utilized right now within the Department of the Interior.

Mr. LONG. I see on page 10 your budget justifications indicate that the revenues from the Outer Continental Shelf leases will decrease by $1 million by 1975.

Mrs. HANSEN. We haven't placed the justifications in the record so we will take this up by categories.

If you can hold that we will take it in order in the record.

Mr. LONG. That is all I have at this time, Madam Chairman.

THE NEED FOR MANAGEMENT PERSONNEL

Mr. BERKLUND. Madam Chairman, could I go back to one other point?

Mrs. HANSEN. Please.

Mr. BERKLUND. You were making a point here with our Assistant Secretary on the negligence of the management of the resource lands when we were talking about the deficiency in dollars.

I think one thing we have to bear in mind, that as well as dollars, the key to resource management is people and I think personnel should be considered along with dollars.

Mrs. HANSEN. But it takes dollars to hire people.

Mr. BERKLUND. We have to have the authorization for people, too. We are trying our best to manage 2 billion acres of land and OCS resources and our total employment is just a little bigger than that of the Smithsonian Institution.

Mrs. HANSEN. I know.

Mr. BERKLUND. I think we should think of these things together as we go along.

UTAH OIL SHALE LAND SELECTIONS

Mrs. HANSEN. I have a general question here on the Utah suit against the Interior Department over the shale lands. Do you want to give us some highlights on that?

Mr. HORTON. Madam Chairman, I will be happy to provide the background.

The suit is being filed at the choice of the Governor of Utah against the Secretary of the Interior for his failure to transfer to the State 157,000 acres of oil shale land in the State of Utah. They feel they have the right to select from there, in lieu selection land, for lands that were previously taken by the Federal Government for forests, for parks, and recreation areas.

Mrs. HANSEN. Why were these never given back at the time that their enabling act passed?

Mr. HORTON. The authority stems from the Statehood Act. The authority to select lands was contained in the act and these in lieu selections are lands selected in place of land in the State which was not available for various reasons. The Statehood Act gives them the right as I understand it to select additional lands to meet their total entitlement.

32-043 O - 74 - 28

One concern with the suit was whether or not it would prejudice bidding on the oil shale lease sale which was held just last week, the first 5,000 acre tract in the State of Utah.

The results of that sale came in at a high bid of $75 million, so at least the arrangement that the Department of the Interior made with the Governor of Utah did not affect the magnitude of the sale, at least in our best judgment.

Mrs. HANSEN. Did you accept that bid?

Mr. HORTON. The bid has not been accepted yet. It is still under analysis. But the arrangements, and the Director can amplify on this, were that the terms and conditions of the lease would be binding on the lessee, no matter which Government ended up owning the land. Thus, the successful bidder would be under the same obligations and have the same opportunities whether they were owned by the State of Utah or the Department of Interior.

Mrs. HANSEN. Mr. Turcott?

Mr. TURCOTT. With regard to the first part of your question, under the Statehood Act the State of Utah was to get four sections per township for school purposes. It was before the lands were surveyed—this is the key—so that the Federal Government had to survey before it could patent these to the State government. There were other withdrawals, mostly national monuments, national parks, Indian reservations—so that in effect the State was left short because we could not patent to a State until the lands were surveyed but they can be withdrawn or put under other jurisdiction by action of Congress.

Mrs. HANSEN. With your budget it is a wonder you ever got anything.

Mr. TURCOTT. A new law was then passed. In lieu of these shortages, they could select land in other places.

Mr. BERKLUND. These oil shale selections were filed in 1961. The Secretary has the responsibility then of processing these applications. He must look at them, classify the lands for selection, and resolve the question of disparity of values. This has been one aspect that has delayed the processing. In addition we are now proceeding with an environmental impact statement. Whether we will act on environmental grounds or on the other question of disparity of values is uncertain. The matter is now before the courts where the two issues should be resolved.

Mrs. HANSEN. Are all your leases now subject to environmental impact statements?

Mr. BERKLUND. We are doing a complete analysis on every action we take and in this analysis, the bottom line of that is whether a full impact statement is needed or not. We are not preparing environmental statements on all Federal actions. We are preparing them on the major Federal actions that will significantly impact the human environment.

LOG EXPORT IMPLEMENTATION

Mrs. HANSEN. What difficulties, if any, has BLM experienced in implementing the log export prohibition?

Mr. BERKLUND. We put the limitation condition in all our sales provisions. We have come up with proposed rulemaking for regulations. We have been working very closely with the Forest Service. We have had some in-house delays in getting those regulations out. But it has

been a condition of sale ever since the 1974 Appropriation Act was passed and industry itself tells me they are watching it very closely for us.

Mrs. HANSEN. How many board feet were exported from public lands in 1970, 1971, 1972, and 1973?

Mr. BERKLUND. Requests for export in 1971 was 2.3 million board feet; in 1972, 5 million; and in 1973 it was 18 million board feet.

This year it is down drastically, I believe.

Mrs. HANSEN. This year it should be down.

Mr. BERKLUND. Those contracts run 24 months to 36 months now so there could be older sales subject to export yet, Madam Chairman.

WOOD UTILIZATION FROM BLM TIMBER SALES

Mrs. HANSEN. Last year there was a GAO report titled "More Usable Dead or Damaged Trees Should be Salvaged to Help Meet Timber Demands."

Do your current logging practices enable you to use more dead or damaged trees? Are you using the research developed by the Forest Service?

Mr. BERKLUND. Madam Chairman, through the methods that we use for disposal of timber we feel that we have the best utilization that economics can provide. To go beyond this utilization may take some other incentives.

Mrs. HANSEN. Such as?

Mr. HASTEY. Under our cruise procedure we sell the timber in place on a lump sum basis rather than a log scale. There is an incentive to move almost all the timber out. Of course there is a marginal log that the logger may not care to move from the area as the Director implied. Other incentives must be provided the sale purchaser to remove the marginal log.

CLEARCUTTING PRACTICES

Mrs. HANSEN. Do you have the same guidelines on clearcutting that the Forest Service observes so that you don't leave your slopes subject to problems of erosion, watershed loss, and so on?

Mr. BERKLUND. Madam Chairman, we have had instructions out on our cutting practices for many years now. When the Senate guidelines were produced they were very close to our own policy. We didn't immediately adjust to the guidelines because they were close. I think there were one or two minor recommendations that the Senate had which we adopted. It puts us very consistent with the Forest Service at the present time, but note that we are only clearcutting about one-third of our lands and selectively cutting about two-thirds of them.

Mrs. HANSEN. And your clearcutting is largely in the Pacific Northwest, is it not?

Mr. BERKLUND. Yes, most of our cutting is on the O. & C. lands of western Oregon.

ANNUAL BLM CUT

Mrs. HANSEN. What is the percentage of cut on the O. & C. lands as relative to the total cut on all BLM lands.

Mr. BERKLUND. Our total annual cut is 1.2 billion board feet of which about 50 million feet this year is from public domain areas. The rest is from western Oregon.

CLEARCUTTING CRITERIA

Mr. YATES. Are there particular forests in which you engage in clearcutting, or do you do it generally?

Mr. BERKLUND. No; we do it through planning and the silvicultural requirements of the valuable tree species.

Mr. YATES. As I understand, there are only two types of tree that are clearcut. Douglas fir was one and there was one other. I just wonder whether this is true or whether you just clearcut wherever we go?

Mr. BERKLUND. No, we only clearcut in those timber types that require it but we don't always clearcut in those areas. It depends on the planning, the soil conditions, the slopes, and the other conditions that prevail on the ground.

Mrs. HANSEN. Watershed and wildlife habitat and so on.

Mr. BERKLUND. Everything goes into the planning system. We only clearcut about one-third of the lands we cut. They are usually done with a plan for esthetic values. They are cut on terrain. They are not rectangular or squares like they used to be. You don't notice the checkerboards as much. They lend themselves to terrain so as to blend with the natural form of the land.

Mr. YATES. Is there a maximum number of acres that you clearcut?

Mr. BERKLUND. Most of ours are rather small. We don't have a maximum. Neither do we have a minimum. Most of them run in the area of about 20 to 40 acres.

Mr. YATES. I was told there was a maximum of 44 acres.

Mrs. HANSEN. That may be the Forest Service.

Mr. YATES. Yes, that is the Forest Service.

Mr. HASTEY. In southern Oregon where you have very hot south slopes then your clearcuts, if you do have them, would be very small. Most of our cuts in southern Oregon would be selective cut because of high temperatures and a low rainfall.

Mrs. HANSEN. Douglas fir won't grow in the shade. You either have to thin or you have to have open land for it to grow.

Is this not correct?

Mr. BERKLUND. Yes. Because of the pressures we wouldn't clearcut unless we needed it as an ultimate management tool in order to get what we can from the land, and in Douglas fir, as the chairman has stated, we have to open these areas up in order to get the sunshine on the soil. Otherwise we are going to have lower productive lands in terms of less important tree species.

Mrs. HANSEN. And your O. & C. lands are some of the most productive lands in the United States, aren't they?

Mr. BERKLUND. Yes; we have very high productive lands. Most of our highest site classes are on the O. & C. lands.

JUSTIFICATION MATERIAL

Mrs. HANSEN. We will insert pages 1 through 11 in the record at this point.

[Justification pages 1 through 11 follow:]

DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Summary Energy Research and Development Analysis 1/
Management of Lands and Resources

(in thousands of dollars)

Activity Project or Program	FY 1974 Amount Available	FY 1975 Regular Budget	FY 1975 Budget Amendment H.D.2/	FY 1975 Total Request	Increase (+) or decrease (-) 1975 compared with 1974
Resource Management Conservation and Protection OCS Research	$1,100	$1,100	$9,700	$10,800	+ $9,700
Subtotal, Energy R&D	1,100	1,100	9,700	10,800	+ 9,700
All other activities	95,858	118,234	---	118,234	+ 22,376
Total, Management of Lands & Resources	$96,958	$119,334	$9,700	$129,034	+$32,076

1/ This table shows the relation of the FY 1975 budget amendment for the accelerated energy R&D program to the FY 1975 regular budget request and the FY 1974 amount available.

2/ House Document number to be determined.

HIGHLIGHT STATEMENT

National Resource Lands managed by the Bureau of Land Management total over 450 million acres, 20% of the land area in the United States. BLM also administers an additional 369 million acres of other Federal and private lands which constitutes the public mineral estate, and 1.146 billion acres of the Outer Continental Shelf (OCS) to the 2,500 meter ocean depth. Because of their vast size and wealth of natural resources, the management of these lands has an increasingly important impact on the social, economic, and environmental affairs of the Nation.

In 1972, public and OCS lands furnished 30 percent of the total mineral production in the United States, and satisfied 17 percent of domestic requirements for oil and gas. Because of the urgent National need to develop additional energy sources, efforts are being intensified to make Bureau-managed energy resources available. Coal and oil shale reserves, geothermal steam areas, and the Outer Continental Shelf will provide a majority of the sources for increased domestic energy production.

Other vital resources such as water, forage, timber, wildlife, recreation opportunities and the land itself contribute to the Nation's economic, social and environmental well-being.

The Bureau's Budget for 1975 is aimed at contributing directly to meeting urgent national priorities and implementing enacted legislation to assure proper use, development and protection of these resources.

FUEL AND ENERGY PROGRAMS

Expanded efforts are proposed which will help to alleviate National energy shortages. Accelerated leasing of fuel resources will require inventory and analysis of potential energy production areas, developing land use plans and environmental analyses, and proper administration of leases to assure surface protection and rehabilitation of developed areas. New production from domestic energy reserves is essential to offset the anticipated twofold increase in energy consumption by 1985, yet this must be accomplished by minimizing the impact on environmental quality. The Bureau's action plans for accomplishing these objectives include:

° Outer Continental Shelf Leasing. The Bureau has expanded lease sales to 6 million acres. Expedient assessment and development of the estimated 377 billion barrels of oil and 1,517 trillion cubic feet of gas under appropriate environmental criteria is essential. A proposed $10,300,000 increase will provide for additional staffing of Pacific, Atlantic and Alaska

environmental assessment teams initated in FY 1974, added capability for designing and supervising contract studies and emphasis on undersea pipeline and coral reef management to facilitate this expanded leasing effort.

° Inventory and Planning. The allocation of National Resource Lands for energy development including production sites and related facilities should be made within the framework of comprehensive land use plans. An increase of $1,050,000 provides for accelerating Management Framework Plans in potential energy areas. These plans relate resource inventory data to socio-economic and environmental considerations, involve public meetings and hearings, and result in decisions as to what uses will be made of the available resource management opportunities. They provide the basis for an orderly course of action to allow for complex energy-related land uses such as coal gasification and other power plants, transmission lines, oil and gas pipelines and roads, which often compete with other possible resource uses and developments. Management Framework Plans will be completed in the coal areas of Montana, North Dakota, Wyoming and Utah; and in a known geothermal resource area in both California and Nevada.

° Environmental Analysis for Energy Actions. Accelerated energy resource production requires intensified environmental analyses and impact statement preparation in advance of energy resource development. A proposed $2,300,000 increase will provide capability to prepare quality environmental analyses for upland oil and gas exploration and development. It will also provide the Bureau the capability to perform environmental work associated with facilities on or across National Resource Lands such as waste disposal areas, right-of-way, special use sites, pipelines and transmission lines, related to the development or privately owned coal, oil and gas and other fuel sources. This program, coupled with BLM's land use planning program (MFP's) provides an effective means to systematically study development proposals, analyse their impact and prescribe mitigation measures to minimize potential environmental damage.

° Upland Energy Minerals Leasing. An orderly lease program to convert major resources for coal and oil shale into significant energy producers, and to develop geothermal steam as a clean supplemental energy source is of prime importance for long-term self-sufficiency. The proposed increase will implement a managed coal leasing program on which preliminary work was begun in FY 1974. A five-year lease schedule for the States of North Dakota, Montana, Wyoming, Utah, Colorado, and New Mexico will relate regional Federal coal and the Federal sector's portion of satisfying coal-derived energy demand. Geothermal steam and oil shale leasing efforts, which received a mid-year supplemental appropriation of $450,000 in FY 1974 will be continued throughout FY 1975. Extending those efforts includes admin-

istering the first six oil shale prototype lease sales, and processing applications under the grandfather right provision for geothermal leases. The Budget increase of $280,000 will annualize the costs of these two programs in FY 1975.

° Surface Rehabilitation and Protection. Proposals to avoid and minimize the effect of large scale mining on the environment are included in this budget. With the country facing an immediate energy shortage and fuel mineral extraction increasing, protection of areas subject to mineral operation is essential to preventing irreparable surface damage. This program increase will provide for conducting tests to determine reclamation potential or limitations in lease areas, and supply the required capability to incorporate protective stipulations in mineral leases and permits, and monitor their compliance.

° Alaska Pipeline Inspection. An increase of $1,500,000 is requested for full-year costs of a 3rd party contractor who will assist the Authorized Officer in technical review and surveillance of pipeline construction activities across the interior of Alaska. The proposed increase annualizes funds appropriated for the technical surveillance contract in the last half of FY 1974. Workloads on the pipeline project will expand tremendously in the early part of the four-year construction period with a gradual deceleration in the last two years. Project workloads include preliminary and final design review, checking compliance with stipulations, assuring engineering quality control, performing spot check inspections of construction, reviewing permittees' quality assurance programs, reviewing and overseeing procedures and operations for starting oil flow, and reviewing contingency planning.

RECREATION MANAGEMENT PROGRAMS

The Bureau is experiencing widespread recreation use at an increased rate and in a variety of pursuits. Demand for recreation opportunities in the United States is likely to triple by the year 2000. Both the magnitude of this demand and the variety of recreation activities contribute to BLM's recreation management problems. Only 18 full-time field visitor management personnel are available on 172 million acres of National Resource Lands in the conterminous western states. Sixty-six million acres of this land are within a three-hour drive, and 6 million acres are within a forty-mile radius of cities having a combined population of 35 million people. This and the fact that four million off-road vehicles are using the National Resource Lands each year continues to jeopardize archeologic and historic features, and other recreation values.

Our proposed recreation increase of $2,050,000 consists of four components to develop systems of visitor management, and protect unique natural and cultural resources as directed by legislation,

Executive Order, and other authority.

° For Off-Road Vehicles, an increase of $260,000 will be used to augment the implementation of Executive Order 11644, which calls for managing the use of off-road vehicles on all Federal lands. It is estimated that 20 million visitor days are generated by the use of approximately 4 million Off-Road Vehicles (ORV's). This use has the potential to literally destroy surface resources, and indiscriminate ORV use has already obliterated unique cultural values along the Lower Colorado River in Arizona and California. The increase will be used to solicit the public's assistance in designating ORV trails and areas, and to mark ORV use boundaries and describe conditions of use on maps and brochures. This will result in closing 35 critical areas susceptible to heavy damage from ORV's, designating 35 open areas, patrolling closed and restricted areas, and issuing and monitoring permits for up to 150 organized events.

° Protection of the Cultural Environment. An increase of $300,000 is proposed. The increase will complete a cultural inventory on 5% of the National Resource Lands in FY 1975, identify important cultural features that are in danger of being lost or damaged, provide archeological expertise in critical areas and develop contract services with universities, museums, and historical societies to assist in managing the cultural resources.

° Wild and Scenic Rivers, National Trails and Bicentennial Trails. A proposed increase of $640,000 will be used to preserve, protect, and manage selected rivers and trails in National systems as directed in Public Laws 90-542 (Wild and Scenic Rivers Act) and 90-543 (National Trails Systems Act) and to fund BLM's participation in the Nation's Bicentennial celebration. Timely, informed decisions on both existing and potential Wild and Scenic Rivers are crucial to protect management options and prevent irreversible actions from altering the character of rivers. The increase will also fund development and implementation of a management plan for the Pacific Crest Trail, and evaluation of the Oregon Trail for possible inclusion in the National Trail System. The Bicentennial proposal provides for the identification, protection, and publicizing of the Pony Express, Oregon, and Escalante Trails by 1976.

FORESTRY PROGRAM

An increase of $1,425,000 in forestry programs on National Resource Lands outside of western Oregon will provide for marketing an additional 100 million board feet of timber, and long-term improvements of forest management on National Resource Lands outside western Oregon. These increase funds are made available by a corresponding decrease in O&C work normally funded in this activity. The resulting decrease an investment in O&C forest management will be offset by an increase in the

forest development, protection, and management activity of the O&C Grant Lands appropriation which is made possible by increased Western Oregon timber receipts. The increase is part of a plan to reduce the Nation's dependence on wood-product imports at a time when demand for timber is increasing. Housing construction, the single largest consumer of wood products, is expected to maintain the 1973 average of 1.6 million starts.

National Resource Lands excluding Western Oregon and Alaska contain approximately 2 million acres of commercial forest lands and some 23 million acres of wood lands. Management has largely been custodial with limited timber sales. There is a capacity for increased production, but only through intensive management.

Specific accomplishments from this increase include: acceleration of a seven-state reinventory begun in FY 1972 to provide a basis for a new annual timber sale offering and to develop an intensive forest management plan by 1976; marketing an additional 100 million board feet of timber in FY 1975 worth about $ 5 million in added receipts; and increasing reforestation and stand improvement to improve future timber production.

WILD HORSE AND BURRO PROGRAM

Implementation of the Wild Horse and Burro Act (Public Law 92-195) began in FY 1974. The proposed increase for FY 1975 augments the initial funding so that 1,600 private claims now on file for 17,000 animals can be settled. Processing these claims involves public meetings, advertising, joint cooperation with state agencies and supervising the gathering and removal of claimed animals. Humane gathering of the animals whether on private lands or on Federal land involves detailed planning, expenses to construct facilities, and considerable manpower. The Act calls for protection, control, and management of the animals, and early implementation of herd management plans is critical to maintain a healthy population that the habitat can safely support. A public information and education program will also be developed because it is important that the public understands and participates in developing a plan that balances wild horses and burros with other multiple uses.

ALASKA NATIVE CLAIMS PROGRAM

This proposed increase consists of $1,735,000 for land and realty service activities, and $3,265,000 for cadastral survey to implement the Alaska Native Claims Act. The Act set short time frames for determining final disposition of some 165 million acres in Alaska. It calls for fair and just settlement of claims by Natives and Native groups resulting in a grant of 40 million acres, 80 million acres for national purposes - parks, wildlife refuge and forests - and 45

million acres for final classification for public purposes. An additional 104 million acres granted to the State under the Alaska Statehood Act adds to the workload of processing encumbrances on land within selection areas, adjudicating special use applications, investigating claims, and maintaining land status records. Of the total state selections, 16 million acres have been patented or tentatively approved.

Surveys to legally describe and locate the land will be required on a massive scale so that patents may be issued to legitimate land claimants.

This additional emphasis for finalizing disposition of public lands in Alaska is critical to the timely implementation of fair and equitable land settlements on behalf of all Alaskans.

GSA SPACE COSTS

Public Law 92-313, Public Buildings Amendments of 1972, requires that effective July 1, 1974, agencies be charged for space and related services provided by the General Services Administration (GSA) at approximate commercial equivalent rates. The estimated requirement for space and related services in GSA facilities based on rates supplied by GSA is $6,500,000.

Construction & Maintenance

Funding levels have not been adequate to keep pace with increased costs of maintenance requirements. Rising costs of wages, materials, and services have seriously affected BLM's ability to maintain buildings, developed recreation sites, and roads and trails on a level that assures safe conditions for employees and the public and protects the investment in these facilities.

The proposed increase of $1,387,000 provides for taking corrective measures to repair or replace damaged and deteriorating facilities including developed recreation sites where use is accelerating; eliminate hazards such as open mine shafts and debris in areas of intensive use; and avoid long-run costs of rebuilding roads and trails by performing preventive maintenance.

The budget also includes $1,703,000 for construction of high priority buildings and recreation facilities.

Summaries of requested appropriations and receipts appear on the following pages:

Summary of Appropriations

	FY 1974	FY 1975	Increase (+) Decrease (-)
	(in thousands of dollars)		
Management of Lands and Resources			
1. Resource Management, Conservation, and Protection	$ 78,511	$106,903	$+28,392
2. Cadastral Survey	8,624	12,580	+ 3,956
3. Firefighting and Rehabilitation	6,400	5,400	- 1,000
4. General Administration	3,423	4,151	+ 728
Total, Management of Lands and Resources	96,958 1/	129,034	+32,076
Construction and Maintenance			
1. Construction	3,235	1,703	- 1,532
2. Maintenance	3,565	4,952	+ 1,387
Total, Construction & Maintenance	6,800	6,655	- 145
Public Lands Development Roads and Trails (Liquidation of Contract Authority)	4,000	4,070	+ 70
Oregon and California Grant Lands (Indefinite)	28,750	28,750	---
Range Improvements (Indefinite)	3,242	4,503	+ 1,261
Recreation Development and Operation of Recreation Facilities	165	242	+ 77
Subtotal	139,915	173,254	+33,339
Permanent Appropriations	105,065	120,105	+15,040
Grand Total	244,980	293,359	+48,379

1/ Includes proposed supplemental of $5,000,000 for civilian pay raises.

Summary of Receipts

As shown in the table below the Bureau continues to produce substantial revenues for the U.S. Treasury and for public land states and counties.

Receipts Collected by the Bureau ($ in millions)

	1972	1973	1974 a/	1975 a/
Total Receipts.....	$ 524	$4,229	$6,328	$5,329
For payment to States and Counties.....	- 90	- 96	- 104	- ~~109~~ 119
Deposited in Treasury.....	$ 434	$4,133	$6,224	~~$5,220~~ $ 5210

a/ Estimated

RECEIPT BY SOURCE

The following table shows actual receipts of the Bureau of Land Management for fiscal years 1971, 1972 and 1973 and estimated receipts for 1974 & 1975.

	Actual 1971	Actual 1972	Actual 1973	Estimate 1974	Estimate 1975
Sales, Public Lands and Materials....	$ 2,013,823	$ 1,941,520	$ 1,797,933	$ 2,200,000	$ 2,200,000
Fees & Commissions.	4,096,965	5,351,278	6,791,187	8,000,000	9,000,000
Mineral Leasing....	151,332,134	145,098,401	149,300,989	160,206,000	167,400,000
Mineral Leasing, Outer Continental Shelf.....	1,050,549,370	279,352,756	3,955,577,016	6,000,000,000*	5,000,000,000*
Grazing Fees.....	7,549,969	8,021,646	9,281,527	12,248,000	14,046,000
Right-of-Way Leases.	270,963	293,908	427,981	425,000	425,000
Timber Sale.....	70,663,296	83,519,703	104,642,478	125,800,000	126,200,000
Trans-Alaska Pipeline.....	---	---	---	18,200,000	9,550,000
Miscellaneous Receipts	482,104	341,584	463,674	475,000	475,000
Total	$1,286,958,624	$523,920,796	$4,228,282,785	6,327,554,000	5,329,296,000

* Despite a critical need for additional resources, the receipt level for FY 1974 and FY 1975 will depend upon the anticipated impact of each proposed sale upon the environment as well as the continuing safe operation of existing OCS facilities. NOTE: This table does not include P.L. 86-649 funds.

PAYMENTS OF BUREAU OF LAND MANAGEMENT RECEIPTS TO STATES, FY 1973

State	Sales of Public Lands and Timber	Mineral Leases and Permits	Taylor Grazing Districts	Taylor Grazing Leases	Other	Total
Alabama	---	9,995	---	---	---	9,995
Alaska	3,213	5,944,455	---	---	---	5,947,668
Arizona	6,686	176,191	32,927	47,218	---	263,022
Arkansas	2	16,165	---	---	---	16,167
California	60,048	3,083,815	6,838	56,621	---	3,207,322
Colorado	6,526	4,040,535	33,112	21,504	---	4,101,677
Florida	74	2,489	---	---	---	2,563
Idaho	34,256	399,164	62,476	15,532	---	511,428
Kansas	---	175,761	---	11	---	175,772
Louisiana	3	260,189	---	---	---	260,192
Michigan	---	16,650	---	---	---	16,650
Mississippi	1	9,483	---	---	---	9,484
Montana	11,910	2,645,046	39,534	58,080	193,905 a/	2,948,475
Nebraska	---	3,577	---	438	---	4,015
Nevada	29,077	361,498	113,746	11,894	---	516,215
New Mexico	7,668	13,934,508	69,418	90,422	7,190 a/	14,109,206
North Dakota	45	216,460	---	3,193	---	219,698
Oklahoma	---	260,496	---	97	---	260,593
Oregon	150,289	66,752	48,467	26,911	38,186,536 b/	38,478,955
South Dakota	1,116	78,421	---	27,141	---	106,678
Utah	3,426	4,056,326	59,969	---	2,975 a/	4,122,696
Washington	1,993	196	---	10,881	---	13,070
Wyoming	3,313	20,469,102	70,656	147,493	---	20,690,564
All Others	87	---	---	---	---	87
Total	319,733	56,227,274	537,143	517,436	38,390,606	95,992,192

a/ Executive Orders 10787, November 6, 1958, and 10890, Oct. 27, 1960, from grazing and mineral receipts, L.U. Lands.
b/ From "O&C" Lands, $37,666,826; Coos Bay Wagon Road Lands, $519,710

FOREST FUNDING ADJUSTMENTS

Mrs. HANSEN. You state in your forestry program that the requested increase is made available by a corresponding decrease in O. & C. work normally funded in this activity. Would you explain this to the committee?

Mr. BERKLUND. Madam Chairman, I would like to have Ed Hastey explain that to you.

Mr. HASTEY. As you know, Mrs. Hansen, in the 1937 O. & C. Act Congress made available up to 25 percent of the receipts to be appropriated as seen fit by Congress to manage western Oregon. These funds are reflected in our MLR appropriation. In the early fifties Congress decided to appropriate an additional 25 percent which would normally have gone to the counties to make certain improvements on the O. & C. lands, while still retaining a certain amount of the first 25 percent for O. & C. management. This second 25 percent became the O. & C. grant land fund.

In this increase for the public domain forest program, because of the high increase in O. & C. receipts, the administration saw fit to move more of the O. & C. work over into the O. & C. fund and which would free up $1.4 million for public domain forest management from the regular MLR forestry appropriation.

This is not using western Oregon receipts for public domain forestry management. It only moves the work on behalf of western Oregon from one account to another.

In the O. & C. appropriation we are now increasing our dollars in management work within our overall ceiling, whereas in the public domain we are using that as an offset to increase our management outside of western Oregon.

Mrs. HANSEN. You have the agreement of the O. & C. area I assume.

Mr. HASTEY. Between both sources of funds, we are reducing the amount of money we are spending in western Oregon from that we normally would have spent. We have discussed this with O. & C. county commissioners.

Mrs. HANSEN. How much are you reducing it?

Mr. HASTEY. $1.4 million.

IMPACT OF ADJUSTMENT ON O. & C. MANAGEMENT

Mrs. HANSEN. What does this mean in terms of the management of those O. & C. lands? You are well aware that O. & C. lands are among the best managed forest lands in the United States.

Mr. HASTEY. It would be a reduction of about $1.4 million in road construction. That would be the bottom line.

Mrs. HANSEN. Who is going to pick that tab up? You don't get that timber out without roads.

O. & C. TIMBER PRICES

Mr. HASTEY. The one thing that has made this possible is the high increase in O. & C. receipts with a corresponding increase in the O. & C. grant land fund.

Mrs. HANSEN. Don't you think they anticipated that too?

Mr. HASTEY. We did not anticipate that even when we put the fiscal year 1974 budget together last year.

Mrs. HANSEN. You might not have but don't you think the O. & C. area did?

Mr. HASTEY. No, I think it surprised everybody.

Mrs. HANSEN. They could see what the timber market was.

Mr. HASTEY. We are up to an average price per thousand board feet of about $140.

Mrs. HANSEN. You are doing a little extra revenue sharing, only in reverse.

Mr. HASTEY. Yes, ma'am, but the counties share in 50 percent of these increasing revenues.

Mr. BERKLUND. It exceeded even their expectations.

Mrs. HANSEN. Yes, but remember that the timber market is never stable. You go up 1 year and down another year. There has been a crisis in the timber area ever since I can remember. You are up today and you are down tomorrow.

Mr. HASTEY. This is very true. This is the danger of course of operating on a receipt limitation appropriation. As long as the receipts are going up we are in good shape.

Mrs. HANSEN. Supposing they were to fall in the near future. Then where do you go?

Mr. HASTEY. We would have to come back to this committee through the Office of Management and Budget for additional direct appropriations. This is the danger. If our receipts drop off and we don't have advanced road construction then we do have problems.

NEED FOR O. & C. ROADS

Mrs. HANSEN. As you are well aware, when you get into a sale there has to be some provision for roads. Isn't this correct?

Mr. HASTEY. Yes, ma'am. A lack of road construction would not affect the immediate timber sale program but a sustained lack for 5, 6, or 7 years would.

Mrs. HANSEN. What about the timber sale program in 3 or 4 years? I don't think you should ever look at your management of public lands on a year-by-year basis.

This is what I have been harping at you people about. What you do is rob Peter to pay Paul. You are always doing it. When you slow down your roads program, doesn't this in effect decrease your sales?

Mr. HASTEY. Yes, ma'am.

Mrs. HANSEN. And it could decrease the size of your bids, couldn't it?

Mr. HASTEY. Yes, ma'am.

Mrs. HANSEN. Isn't this kind of nonsense? You are going to have an impact on the economy of 18 counties. These timber receipts are most important to their total economy, aren't they?

Mr. HASTEY. Yes, ma'am.

Mrs. HANSEN. These are the timber production counties of Oregon.

Mr. HASTEY. Yes.

Mrs. HANSEN. They are not the industrial counties of Oregon.

Mr. HASTEY. They are highly dependent on the timber industry.

32-048 O - 74 - 29

Mrs. HANSEN. That is right. They have nothing else. Has Mr. Wyatt discovered this in your budget?

Mr. HASTEY. Yes, ma'am.

Mrs. HANSEN. Did he approve?

Mr. HASTEY. The O. & C. counties are aware of it, too.

Mrs. HANSEN. What you are doing is causing destruction in 3, 4, or 5 years. Your revenues to the Treasury are going to go down and your revenues to O. & C. counties are going to go down because of your failure to be able to obtain a decent bid.

I think it is a bad policy. Who dreamed this up, OMB or you people?

Mr. HASTEY. It is the administration's position that we should take this action.

Mrs. HANSEN. I think they are out of their minds.

Mr. HASTEY. In defense of the action taken, as long as our receipts are increasing we can live with this decision, but, like you forecast, if the receipts do drop off in the years that follow then we are going to have problems.

Mrs. HANSEN. My point is that you have 18 counties whose economy is almost entirely dependent on timber. They have no other industries. These are not industrial areas at all. I can just see that you are not going to have roads planned or built or ready so that you make a sale at the top price.

Mr. BERKLUND. Madam Chairman, we have to agree with you that we have received very good dividends on our road investments when it comes to the sale of timber in Oregon.

Mrs. HANSEN. I just don't happen to agree with this administration policy. I want you to tell them that down in the Office of Management and Budget.

Mr. BERKLUND. Madam Chairman, I have to repeat that our investments on roads in the O. & C. lands have paid us very high dividends in future sales. It has been a very good investment in the past.

Mrs. HANSEN. And this is why your receipts are high?

Mr. BERKLUND. That is right. It reflects directly into the receipts.

Mrs. HANSEN. Because you can make sales of timber that is reachable, you have a good bid price.

Mr. BERKLUND. Right.

Mrs. HANSEN. I just wonder who dreamed this up. It isn't any economy at all.

Mr. YATES. May I go off the record a moment?

Mrs. HANSEN. Yes.

[Discussion off the record.]

TRANS-ALASKA PIPELINE RECEIPTS

Mrs. HANSEN. Why do your Trans-Alaska Pipeline receipts show a decrease from $18.2 million to $9.550 million in 1975?

Mr. BERKLUND. Madam Chairman, the amount shown in fiscal year 1974 includes the portion that they paid immediately upon the issuance of the permit which covered several past years. The fiscal year 1975 amount reflects those collections scheduled to come over the balance of the last year or so.

OCS RECEIPTS

Mrs. HANSEN. Dr. Long, do you have any questions on pages 1 through 11?

Mr. LONG. Yes. You say that the revenues for the Outer Continental Shelf leases will decrease by $1 billion in fiscal year 1975. If the Outer Continental Shelf leasing program is being accelerated, why is a drop in revenues anticipated?

Mr. BERKLUND. Congressman, when this was prepared, we were still looking at the annual goal of leasing 3 million acres. This has since increased or accelerated. We brought about $1.3 billion in receipts into 1974 because of a sale that was held late in fiscal year 1973. Eighty percent of the bonuses from that sale came in fiscal year 1974, so it showed up as 1974 revenues.

We projected essentially the same bid level on 3 million acres of sale leases in 1975 at the time our budget was prepared. Presently, we have new projections and we should probably get some corrections in the record if we could supply it here. We have a new projection for fiscal year 1975 OCS receipts at $8.2 billion.

[The information follows:]

RECEIPT BY SOURCE

The following table shows actual receipts of the Bureau of Land Management for fiscal years 1971, 1972 and 1973 and estimated receipts for 1974 and 1975. FY 1974 and 1975 receipt estimates have been revised to reflect the following :

(1) Increased filing fees resulting from additional simultaneous oil and gas filings and non-competitive geothermal lease applications
(2) Increased mineral leasing revenues from oil shale and geothermal lease sales
(3) Increased OCS revenues
(4) Elimination of Trans-Alaska Pipeline receipts which will be shown under the Office of the Secretary

	Actual 1971	Actual 1972	Actual 1973	Estimate 1974	Estimate 1975
Sales, Public Lands and Materials....	$ 2,013,823	$ 1,941,520	$ 1,797,933	$ 2,200,000	$ 2,200,000
Fees & Commissions.	4,096,965	5,351,278	6,791,187	11,307,250	12,790,000
Mineral Leasing....	151,332,134	145,098,401	149,300,989	229,605,000	233,925,000
Mineral Leasing, Outer Continental Shelf.....	1,050,549,370	279,352,756	3,955,577,016	6,000,000,000*	8,200,000,000*
Grazing Fees.....	7,549,969	8,021,646	9,281,527	12,248,000	14,046,000
Right-of-Way Leases.	270,963	293,908	427,981	425,000	425,000
Timber Sale.....	70,663,296	83,519,703	104,642,478	125,800,000	126,200,000
Trans-Alaska Pipeline.....	---	---	---	---	---
Miscellaneous Receipts	482,104	341,584	463,674	475,000	475,000
Total	$1,286,958,624	$523,920,796	$4,228,282,785	6,382,060,250	8,590,061,000

* Despite a critical need for additional resources, the receipt level for FY 1974 and FY 1975 will depend upon the anticipated impact of each proposed sale upon the environment as well as the continuing safe operation of existing OCS facilities. NOTE: This table does not include P.L. 86-649 funds.

Mr. LONG. As compared with what?

Mr. BERKLUND. The original projection was $5 billion.

Mr. LONG. It won't be a billion less. It will be about $3 billion greater?

Mr. BERKLUND. That is correct.

Mr. LONG. Greater than fiscal 1974 or what?

Mr. BERKLUND. Yes; $2.2 billion greater than 1974, $3.2 billion greater than the original projection for 1975.

Mr. LONG. What about 1973, as compared with 1975?

Mr. BERKLUND. Over twice as much.

Mr. LONG. Thank you.

NEW 10-MILLION-ACRE OCS LEASING GOAL

Mr. EVANS. Apparently, then, this budget request does not take into account the President's stated goal of increasing OCS leases to 10 million acres in new leases by 1975. How much input did the BLM have on this decision? Extensive, minimal, or none?

Mr. BERKLUND. The decision was made to lease 10 million acres in a year through normal executive branch procedures, and we did have input to that extent. The decision, like many others made each year, did not coincide fully with the annual budget cycle. The decision was based in part on information which we supplied to Department earlier this year.

Mr. EVANS. Do you think that this increase in leasing is possible, while maintaining present environmental standards, and protecting the taxpayers' interest in getting the optimum development in resources and proper revenues?

Mr. BERKLUND. We believe the program goals can be achieved concurrent with the maintenance or even improvement of environmental standards. Our present budget deals with the needs to some extent. It will be done through a strengthened program of research and contract studies, increased in-house professional capability, and greater liaison with State and public groups during the leasing and development stages. Programs are also being strengthened to monitor equipment and capital availability, presale evaluations, and the issuance of individual leases in relation to our overall leasing goals. As Secretary Morton has said in previous testimony, the 10 million acres is a target for 1 year, and the results will be carefully evaluated before final decision is made on the rate and location of leasing in the years beyond 1975.

MANAGEMENT OF LANDS AND RESOURCES

Mrs. HANSEN. We will insert pages 12 through 84 in the record at this point.

[The justification pages follow:]

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Management of Lands and Resources

Appropriation, 1973	$78,065,000	
Supplemental appropriation, 1973	18,500,000	
Total Appropriation, 1973		$96,565,000
Transferred to "Operating Expenses, Public Building Service", General Services Administration		284,379
Total Available, 1973		$96,280,621
Appropriation, 1974	$83,932,000	
Supplemental appropriation, 1974	8,450,000	
Proposed supplemental appropriation (civilian pay raise), 1974	5,000,000	
Total Appropriation, 1974		$97,382,000
Transferred to "Operating Expenses, Public Buildings Service", General Services Administration		- 424,000
Total Available, 1974		$96,958,000

Summary of Increases and Decreases, 1975

	Base for 1975	Increase/Decrease 1975
Resource Management Conservation and Protection Fuel and Energy Programs (+$18,530,000)		
To continue an accelerated Outer Continental Shelf leasing and management program with adequate environmental safeguards	$3,460,000	+$10,300,000

To accelerate land use planning with emphasis in energy areas.....	$1,317,000	+$1,050,000
To accelerate preparation of environmental analyses and statements in priority energy resource areas prior to development.....	2,005,000	+ 2,300,000
To expand available supplies of energy by developing a Government-motion coal leasing program and to annualize costs for increased effort in oil shale and geothermal steam lease administration.....	2,085,000	+ 1,330,000
To avoid or minimize environmental degradation caused by mineral leasing and exploration.....	1,050,000	+ 2,050,000
To provide full year costs of Alaska pipeline inspection.....	7,214,000	+ 1,500,000
Recreation Management Programs (+$2,050,000)		
To accelerate a program of directing and controlling ORV use pursuant to Executive Order 11644.....	350,000	+ 260,000
To identify, and protect cultural values as identified by Executive Order 11593.....	100,000	+ 300,000
To preserve, protect and manage wild and scenic rivers and trails.....	80,000	+ 640,000
To provide for increased management of the California Desert.....	1,232,000	+ 850,000

Other Increase Programs		
To market an additional 100 million board feet of timber on National Resource Lands outside Western Oregon.....	$2,286,000	[+$1,425,000]
To accelerate the implementation of public Law 92-195 for the protection, control and management of wild horses and burros.....	400,000	+ 300,000
To continue implementation of the Alaska Native Claims Settlement Act (Land & Minerals portion)	3,533,000	+1,735,000
To meet increased costs for employee compensation payments.....	320,000	+ 13,000
To provide for space and related services in GSA facilities - P.L. 92-313.....	---	+4,710,000
To annualize the October, 1973, pay raise for civilian employees.....	---	+1,054,000
		+7,812,000
Cadastral Survey		
To expand Alaska cadastral survey capability to meet the requirements of the Alaska Native Claims Settlement Act.....	1,225,000	+$3,265,000
To provide for space and related services in GSA facilities - P.L. 92-313.....	---	+ 571,000
To annualize the October, 1973, pay raise for civilian employees.....	---	+ 120,000
		+$3,956,000
Firefighting and Rehabilitation		
Decrease equal to FY 1974 fire rehabilitation supplemental.....	---	-$1,000,000
		-$1,000,000

General Administration

To provide for increased administrative workload	$3,285,000	+$ 200,000	
To provide for space and related services to GSA facilities - P.L. 92-313	---	+ 452,000	
To annualize the October, 1973, pay raise for civilian employees	---	+ 76,000	
			+$ 728,000
Net Increase, FY 1975			+$ 32,076,000
Budget Estimates, FY 1975			$129,034,000

MANAGEMENT OF LANDS AND RESOURCES
Analysis by Activities

Activity	FY 1973 Amount Available	FY 1974 Appropriations	FY 1974 Pay Cost Supplemental	FY 1974 Transfers[a]	FY 1974 Adjusted Amount Available
1. Resource management, conservation and protection.....	$61,400,257	$74,722,000	$4,110,000	-321,000	$78,511,000
2. Cadastral survey.....	7,881,280	8,201,000	526,000	-103,000	8,624,000
3. Firefighting and rehabilitation.....	23,842,123	6,400,000	-----	-----	6,400,000
4. General administration.....	2,984,000	3,059,000	364,000	-----	3,423,000
Unobligated balance lapsing.	190,471	------	-----	-----	------
Total.....	$96,298,131	$92,382,000	$5,000,000	-424,000	$96,958,000

[a] Transfer to Public Buildings Service, General Services Administration.

MANAGEMENT OF LANDS AND RESOURCES
Analysis by Activities

	FY 1973 Amount Available	FY 1974 Adjusted Amount Available	FY 1975 Estimate	Increase(+) Decrease(-) 1975 Compared with 1974	Page Ref.
1. Resource management conservation, and protection.....	$61,400,257	$78,511,000	$106,903,000	+$28,392,000	18
2. Cadastral Survey....	7,881,280	8,624,000	12,580,000	+ 3,956,000	72
3. Firefighting and rehabilitation.....	23,842,123	6,400,000	5,400,000	- 1,000,000	77
4. General administration.....	2,984,000	3,423,000	4,151,000	+ 728,000	80
Unobligated balance lapsing.....	190,471	-----	-----	-----	
Total.....	$96,298,131	$96,958,000	$129,034,000	+$32,076,000	

1. RESOURCE MANAGEMENT, CONSERVATION & PROTECTION

Analysis by Subactivities

Subactivity	FY 1973 Amount Available	FY 1974 Amount Available	FY 1975 Estimate	Increase (+) or Decrease (-) 1975 Compared with 1974 Total Program
Land & Minerals Management.....	$19,118,630	$26,409,000	$45,731,000	+$19,322,000
Alaska Pipeline Inspection.....	897,853	7,214,000	8,868,000	+ 1,654,000
Range Management..	7,108,736	7,973,000	9,133,000	+ 1,160,000
Forestry.....	7,721,316	8,256,000	8,998,000	+ 742,000
Soil & Watershed Conservation.....	13,387,129	14,341,000	16,565,000	+ 2,224,000
Fire Protection...	7,433,095	7,712,000	8,095,000	+ 383,000
Recreation & Wildlife.....	5,733,498	6,606,000	9,513,000	+ 2,907,000
Total.....	$61,400,257	$78,511,000	$106,903,000	+$28,392,000

1. RESOURCE MANAGEMENT, CONSERVATION AND PROTECTION
Analysis of Change in Subactivities
by Program Feature
FY 1975 Compared with FY 1974

	PROGRAM FEATURES (In thousands)													
	FUEL AND ENERGY PROGRAMS													
	(1a)	(1b)	(1c)	(1d)	(1e)	(1f)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	OCS Leasing	Inventory and Planning for Energy Areas	Environmental Analysis for Energy	Upland Mineral Leasing	Surface Protection	Trans-Alaska Pipeline	Rec. Mgmt. Programs	Forest Mgmt. Outside Western Oregon	Wild Horses	Alaska Native Claims	BEC Payment	GSA Space Costs	Pay Cost Annualization	Net Increase
Land and Mineral Mgt.....	+$10,300	+$ 470	$+1,920	$+1,330	$+ 975	---	$+ 125	---,	---	$+1,735	---	$+2,015	$+ 452	+$19,322
Alaska Pipeline Insp.....	---	---	---	---	---	+$1,500	---	---	---	---	---	+ 126	+ 28	+1,654
Range Mgt.....	---	+ 75	+ 71	---	---	---	+ 25	---	+$ 300	---	---	+ 563	+ 126	+1,160
Forestry.....	---	+ 30	+ 63	---	---	---	---	+($1,425) 1/	---	---	---	+ 531	+ 118	+ 742
Soil and Watershed Conserv.....	---	+ 195	+ 85	---	+1,075	---	+ 25	---	---	---	+$ 13	+ 679	+ 152	+2,224
Fire Protection.....	---	---	---	---	---	---	---	---	---	---	---	+ 313	+ 70	+ 383
Recreation and Wildlife.....	---	+ 280	+ 161	---	---	---	+1,875	---	---	---	---	+ 483	+ 108	+2,907
Total.....	+$10,300	$1,050	$+2,300	$+1,330	$+2,050	$+1,500	$+2,050	$+1,425	$+ 300	$+1,735	$+ 13	$+4,710	$+1,054	+$28,392

1/ Offset by decrease in Western Oregon Forest Management program financed by this activity.

1. Resource Management, Conservation and Protection: FY 1974, $78,511,000; FY 1975, $106,903,000; an increase of $28,392,000. The increase consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
1. Energy Programs				
(1a) +$10,300,000	+43	$13,760,000	145	To continue an accelerated Outer Continental Shelf Leasing and Management program with adequate environmental safeguards.
(1b) + 1,050,000	+28	6,590,000	221	To accelerate land use planning with emphasis in energy areas.
(1c) + 2,300,000	+86	4,305,000	157	To accelerate preparation of environmental analyses and statements in priority energy resource areas prior to development.
(1d) + 1,330,000	+35	3,415,000	159	To expand available supplies of energy by developing a Government-motion coal leasing program and to annualize costs for increased effort in oil shale and geothermal steam leasing.
(1e) + 2,050,000	+31	3,100,000	79	To avoid or minimize environmental degradation caused by mineral leasing and exploration.
(1f) + 1,500,000	-	8,714,000	44	To provide full year costs of Alaska pipeline inspection.

2. Recreation Programs

(2a)	+ 260,000	+ 7	610,000	21	To accelerate a program of directing and controlling ORV use pursuant to Executive Order 11644.
(2b)	+ 300,000	+ 4	400,000	9	To identify, and protect cultural values as identified by legislation and Executive Order 11593.
(2c)	+ 640,000	+ 8	720,000	12	To preserve, protect and manage wild and scenic rivers and trails.
(2d)	+ 850,000	+28	2,082,000	46	To provide for increased management of the California Desert.
(3)	[1,425,000] 1/	[43]	3,711,000	150	To market an additional 100 million board feet of timber on National Resource Lands outside Western Oregon.
(4)	+ 300,000	+ 6	700,000	12	To accelerate the implementation of public Law 92-195 for the protection, control and management of wild horses and burros.
(5)	+1,735,000	+45	5,268,000	152	To continue implementation of the Alaska Native Claims Settlement Act.
(6)	+ 13,000	-	333,000	-	To meet increased costs for employee compensation payments.
(7)	+4,710,000	-	4,710,000	-	To provide for space and related services in GSA facilities - P.L. 92-313.

(8)	+1,054,000	-	1,054,000	-	To annualize the October 1973 pay raise for civilian employees.
Total	+$28,392,000	+321			

1/ Offset by decrease in Western Oregon forest management program financed by this activity.

Cost Factors Involved in Increases

(1a) Forty-three permanent man-years at an average annual cost of $16,000, $688,000; travel and per diem for field studies and examinations at an average annual cost of $2,000, $86,000; rent, communication, supplies, materials and equipment, $20,000; contractual cost for studies and analysis, $9,506,000 (OCS).

(1b) Twenty-eight permanent man-years at an average annual cost of $16,000, $448,000; five temporary man-years at an average annual cost of $10,000, $50,000; travel and per diem for field studies, inventories and analysis at an average annual cost of $3,000, $99,000; rent, communications, printing, supplies, materials and equipment, $100,000; contractual costs for studies, inventories and analysis, $353,000 (Land Use Planning).

(1c) Eighty-six permanent man-years at an average annual cost of $16,000, $1,376,000; travel and per diem for field studies and analysis at an average annual cost of $3,000, $252,000; rent, communication, printing supplies, materials and equipment, $250,000; contractual costs, costs for studies and analysis, $422,000 (Environmental Analysis).

(1d) Thirty-five permanent man-years at an average annual cost of $16,000, $560,000; five temporary man-years at an average annual salary of $10,000, $50,000; travel and transportation of persons at an average annual cost of $3,000, $120,000; contractual services for studies and analysis $500,000; rent, communications, printing, supplies and materials, $100,000 (Coal, Oil Shale, Geothermal).

(1e) Thirty-one permanent man-years at an average annual cost of $16,000, $496,000; five temporary man-years at an average annual cost of $10,000, $50,000; travel and transportation of persons for field studies and analysis at an average annual cost of $4,000; $140,000; contractual services for studies and analysis, $1,274,000; rent, communications, printing, supplies and materials, $90,000 (Surface Protection).

(1f) Contractual services for inspection of pipeline, $1,500,000.

(2a) Seven permanent man-years for management of ORV use at an average annual cost of $16,000, $112,000; travel, transportation of persons and per diem at an average annual cost of $5,000, $35,000; rent, communications, printing, supplies, materials and equipment, $113,000.

(2b) Four permanent man-years for the protection and enhancement of cultural values at an average cost of $16,000; $64,000; travel and per diem for field studies at an average cost of $3,000, $12,000; equipment, communications, rent, printing, supplies and materials, $50,000; contractual services for studies and protection of cultural resources $174,000.

32-043 O - 74 - 30

(2c) Eight permanent man-years to manage rivers and trails at an average annual cost of $16,000, $128,000; travel and per diem at an average annual cost of $4,000, $32,000; equipment, rent, communications, supplies and materials, $35,000; contractual studies $445,000.

(2d) Twenty-eight permanent man-years to provide increased management on the California Desert at an average annual cost of $16,000, $448,000; fifteen temporary man-years at an average annual cost of $10,000, $150,000; travel, transportation of persons and per diem at an average annual cost of $4,000, $172,000; rent, communication, equipment, supplies and materials, $80,000.

3. Forty-three permanent man-years to provide additional forest management of National Resource Lands outside western Oregon at an average annual cost of $16,000,000, $688,000; thirty temporary man-years at an average annual cost of $10,000, $300,000; travel, transportation of persons and per diem at an average annual cost of $2,000, $146,000; rent, communications and printing, $100,000; supplies, materials and equipment $191,000.

(4) Six permanent man-years for surveillance and protection of wild horse and burros at an average annual cost of $16,000; $96,000; ten temporary man-years at an average cost of $10,000, $100,000; travel, transportation of persons and per diem at an average cost of $3,000, $48,000; rent, communications, supplies, materials and equipment, $36,000; contractual costs for analysis and studies of horses and burros, $20,000.

(5) Forty-five permanent man-years at an average annual cost of $20,000, $900,000; thirty temporary man-years at an average cost of $12,000, $360,000; travel and per diem for field studies at an average cost of $4,000, $300,000; rent, communications, supplies, materials and equipment, $175,000. (ANCSA)

(6) $13,000 for increased cost of employee compensation payments.

(7) For space and related services in GSA facilities, $4,710,000.

(8) To annualize the October, 1973 pay raise for civilian employees, $1,054,000.

Need for Increase:

(1) Fuel and Energy Programs: Achieving domestic sufficiency in energy production by 1980 has become an urgent National goal. Worldwide energy shortages are having major impacts on the American people, both in changing their accustomed style of living and in economic consequences. Energy consumption in the United States doubled in the last 20 years, and ways must be found to approximately double energy supplies again in the next 11 years to sustain the American economy and way of life.

This country is entering a period characterized by a widening gap between its demand for energy and its capacity to supply energy from domestic sources. This problem is becoming aggravated as the domestic use of natural gas continues to exceed additions to proven reserves and the demand for crude oil further accelerates beyond the ability of presently developed domestic capacity to meet it.

These conditions will result in a growing dependency for energy from foreign sources with consequential security, economic and foreign trade implications, unless production of domestic supplies is accelerated. Further magnifying the implications of importing fuels are recent substantial increases in the price of foreign crude oil.

Public lands are a major source of energy fuels whose development in an environmentally sound manner can substantially increase domestic energy supplies. Oil Shale reserves in Colorado, Utah, and Wyoming are one of the largest known energy resources remaining in the world, and a majority of the Oil Shale reserves and the known potentially developable Geothermal Steam resources are found on the National Resource Lands. National Resource Lands contain more than three-fourths of the United States' low sulfur coal deposits -- the Nation's largest energy reserve. Under present technological and economic conditions, oil and gas reserves included in the Outer Continental Shelf, have the greatest short-term potential to alleviate oil and gas shortages. OCS reserves are estimated at 377 billion barrels of oil and 1,517 trillion cubic feet of gas. It is estimated that the North Slope of Alaska, to be tapped by the Trans Alaska Pipeline, contains 9.6 billion barrels of recoverable oil.

The Bureau has developed and initiated action plans for accelerated energy programs. Essential elements in implementing these initiatives include accomplishing an accelerated inventory and analysis of proven and potential energy resources where the Federal contribution will be significant, and developing subsequent land use plans and environmental analyses on priority areas. Accelerated leasing programs also require development of protective stipulations that assure surface protection and rehabilitation of lease areas.

Additional funds and positions are required in FY 1975 to carry out these energy initiatives. Specific programs and amounts are shown below and discussed in detail on the following pages:

Fuel and Energy Programs

Program	Requested Increase Amount	Requested Increase Positions	Total Program Amount	Total Program Positions
Outer Continental Shelf Leasing.....	$10,300,000	43	$13,760,000	145
Land Use Planning in Energy Areas...	1,050,000	28	6,590,000	221
Environmental Analysis on Energy Actions..	2,300,000	86	4,305,000	157
Coal, Oil Shale, and Geothermal Steam Leasing Programs..	1,330,000	35	3,415,000	159
Surface Rehabilitation and Protection....	2,050,000	31	3,100,000	79
Trans-Alaska Pipeline Monitoring	1,500,000	-	8,714,000	44
Total Increases	$18,530,000	223		

(1a) Outer Continental Shelf Leasing +$10,300,000 + 43 Positions

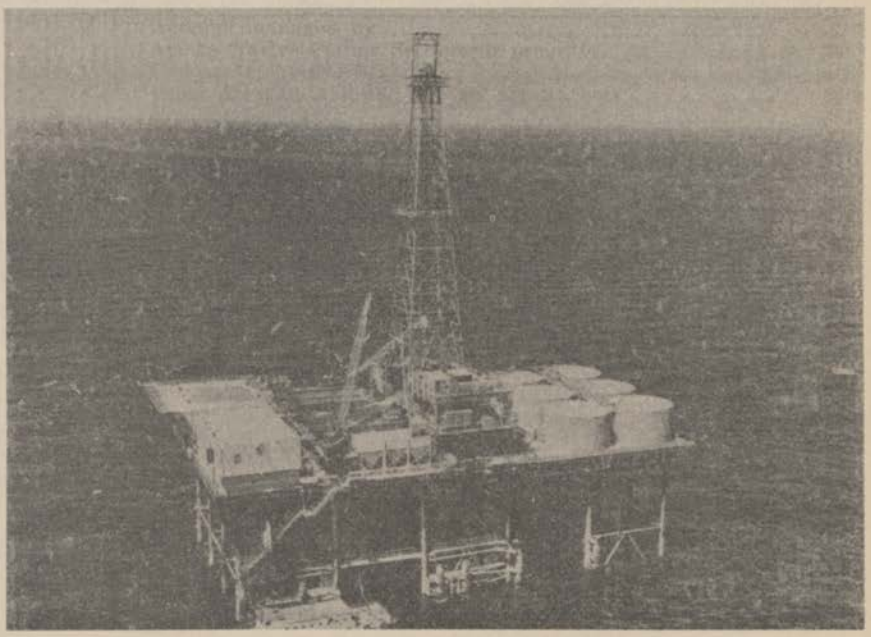
Commercial interest in the Outer Continental Shelf, as evidenced by recent leasing activity, is justified on the basis of estimated crude oil and gas reserves. The United States Geological Survey recently estimated potential recoverable crude oil and gas resources in the OCS under current technology and economics to be:

	Oil	Gas
Gulf of Mexico -	134 billion barrels;	577 trillion cubic feet
Pacific OCS -	54 billion barrels;	52 trillion cubic feet
Atlantic OCS -	93 billion barrels;	408 trillion cubic feet
Alaska OCS -	96 billion barrels;	480 trillion cubic feet
Total	377 billion barrels;	1,517 trillion cubic feet

These totals represent 62% of the U.S. potential oil resources and 65% of the potential gas resources. Noting that the speed at which we can increase our domestic energy production will depend in large measure on how rapidly these OCS resources can be developed, the President in his April 18, 1973, Energy Message directed the Secretary of the Interior to take steps to increase OCS acreage leased to 3 million acres beginning with expanded sales in 1974. By 1985, this accelerated leasing rate could increase annual energy production by an estimated 1.5 billion barrels of oil (approximately 16 percent of our projected oil requirements in that year), and 5 trillion cubic feet of natural gas (approximately 20 percent of expected demand for natural gas that year.

Approximately two-thirds of the potential oil and gas OCS resources exist in currently undeveloped OCS areas - the Pacific, Atlantic and Alaska. Expedient assessment and development of these large reserves, under appropriate environmental criteria, is essential.

The program increase involves: obtaining information through research on the impact of oil and gas production on the marine environment; providing for additional staffing of Pacific, Atlantic, and Alaska environmental assessment teams initiated in FY 1974, and adding capability for designing and supervising contract studies and for undersea pipeline and coral reef management.



DRILLING PLATFORM ON OUTER CONTINENTAL SHELF

° Research on the Marine Environment $9,700,000 20 Positions

Elimination of basic uncertainties about the impact of OCS operations on the marine environment is a crucial objective of this portion of the proposed increase. Although some research is available on the effect of oil and gas development in part of the Gulf of Mexico, this proposal provides for data collection and studies in scheduled and potential frontier leasing areas. The five areas to be studied represent distinct environmental characteristics different from offshore areas previously under lease. Thus, information on the impact of oil and gas activity in these virgin areas is non-existent; and it is not practical to substitute or project data from other areas to dissimilar regions. The areas proposed for funding in this request include: Mississippi, Alabama, Florida, (MAFLA area) Southern California, South Texas, Atlantic and the Gulf of Alaska.

Specific features of the proposed increase are: (1) gathering key biological, chemical, geological and physical environmental data for the five areas; (2) monitoring these factors during drilling and production activities; and (3) determining and assessing changes in key indicators of marine flora, fauna, and physical characteristics. This research program will be accomplished almost entirely by contract through establishing sampling stations spaced in each of the five areas. Control stations will also be placed outside the leasing areas to differentiate which changes in key indicators are the result of oil and gas operations. The monitoring aspect of the research will cover all aspects of oil and gas activity. For example, drilling activities are the source of chemical and other foreign properties introduced to the marine environment as are platforms and workboats. Platform placement and undersea pipeline operations represent environmental disturbance, the extent and nature of which is not fully known. Data obtained in these studies will be extrapolated to future lease areas within the same general regions with similar characteristics; therefore, it is not expected that each and every lease will require impact evaluation efforts of this nature.

Through coordination with existing Federal research committees and state entities, information will be obtained which predicts the environmental impact of oil and gas leasing and contributes to the design of long-term leasing plans and objectives.

° Environmental Assessment Teams ($365,000) (15 Positions)

Our experience in the Gulf of Mexico indicates that environmental assessment teams should be approximately twelve to thirteen members in size to adequately gather and assess data relating to the environmental impact of potential mineral development in heavily populated, politically sensitive areas. Sales in the Pacific and Alaska (Lower Cook Inlet) are tentatively scheduled for FY 1977. In order to achieve the stated Bureau goal of extensive pre-lease knowledge of environmental conditions, it is imperative that the teams be fully staffed as soon as possible.

The Pacific and Alaska OCS offices, in addition to their environmental assessment capability are expected to have full leasing capability to respond to the scheduled lease sales. Complete staffing for the Atlantic team is also essential to accomplish environmental base line studies in potential lease areas. Further, there is an increasing interest in development of hard minerals on the Atlantic OCS which must also be evaluated for environmental impact. If it is determined that leasing operations can proceed in the Atlantic, in an environmentally satisfactory manner, environmental studies for specific lease areas may be required as early as FY 1975.

° Pipeline and Coral Reef Management ($195,000) (6 Positions)

The program increase is necessary both for the accelerated OCS lease schedule and for improved pipeline management efforts to satisfy current environmental and land use planning requirements. The Bureau is currently developing a program with USGS for improved management of OCS pipelines.

Expanded lease schedules involve additional effort by BLM in the areas of pipeline routing and system development, environment, economics and record keeping. Evaluation of the impact of initial sitings and their cumulative impact is now an integral part of Environmental Impact Statements for a proposed lease sale. Existing pipeline networks along with future proposals are being analyzed to establish future pipeline corridors. Also critical is the multiple use planning effort required to plan pipeline systems and to process right-of-way applications. There are currently 341 permits comprising approximately 3,000 miles on the OCS with 4 applications pending. Right-of-way applications are expected to increase from the five year average of 40 to 70 in FY 1975 and beyond.

Consideration of coral reef environments is critical to maintaining and preserving the quality of marine environment impacted by OCS development. BLM has the responsibility to conduct periodic evaluation studies on the impact of oil and gas development on nearby lease areas.

Activities include studies required under the terms of lease stipulations and base line data inventories and studies and analysis related to possible oil and gas development. Impacts on these unique natural communities must be fully considered in Environmental Impact Statements for proposed lease sales. In many cases, original research is required, particularly in new lease areas. The proposed increase provides for protection and management of the biotic communities in the area of coral reefs through development and supervision of lease stipulations and by general study and research.

• Contract Design and Supervision ($40,000) (2 Positions)

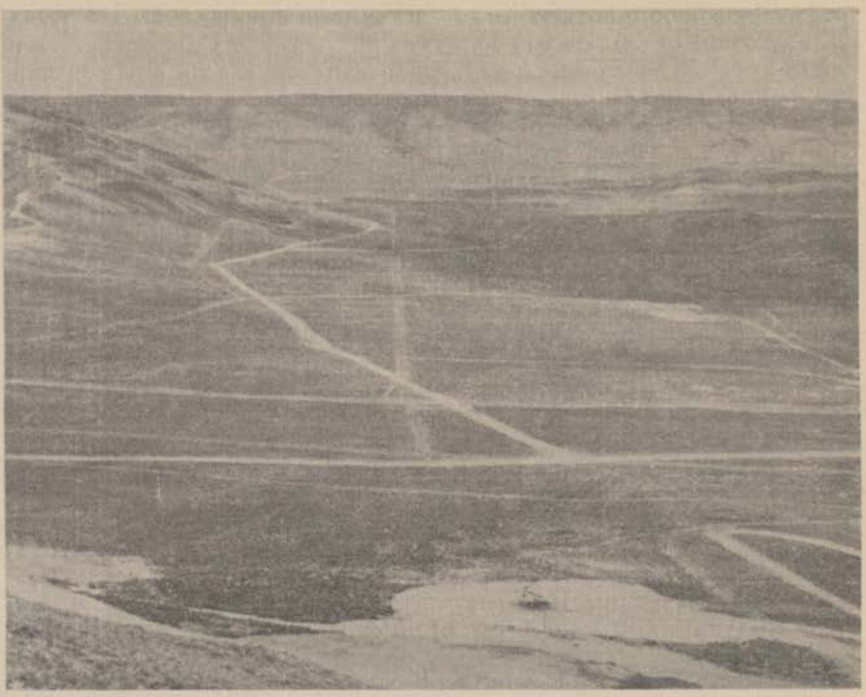
As part of the on-going program of $1.1 million, contract studies in FY 1975 are planned to obtain and analyse environmental, natural resource, and economic data necessary to support OCS management decision-making including possible revisions of the five-year leasing schedule and to prepare environmental impact statements.

Considerable amounts of time are required in designing and supervising these studies. As our leasing activities expand into new areas, our need for environmental, economic, and resource data increases. Staff members currently carrying out these functions are needed full-time to do the work associated with the accelerated leasing program. As a result of this growing need for data through contract studies, two positions are required for study design and supervision.

(1b) Inventory & Planning for Energy Areas, +$1,050,000 28 Positions

This proposed increase provides for integrating energy development proposals, sites and related facilities into orderly, responsive land use plans for all resource and public values in energy resource areas. Land use plans, called Management Framework Plans, (MFP's) are developed to integrate resource inventory data and information with socio-economic and environmental considerations. Resource opportunities are documented and conflicts between competing uses are identified. The plan shows how these conflicts will be reconciled. The public, state and local governments and interest groups are fully involved in the planning process through consultation and public hearings. The importance of and necessity for comprehensive land use planning for energy areas is illustrated by the magnitude of potential coal and other energy developments proposed in the western United States.

Coal production from Montana, North Dakota, Wyoming and Utah is expected to increase as much as 1,000 percent by 1985, and industry plans indicate a potential for as many as 20 coal gasification plants with thousands of miles of transmission lines, oil and gas pipelines and aqueducts. Reports have predicted that new power plants alone could create up to 25,000 jobs in eastern Montana. New towns, new railroads and highways will add to the competition for land uses resulting from coal and other energy resource developments.



TIMELY PLANNING WILL RESTORE ORDER TO ENERGY DEVELOPMENT AND ATTENDANT LAND USES.

The increase funds will provide for completing MFP's for 11 planning units in coal areas of Montana, North Dakota, Wyoming and Utah; completing resource inventories and MFP's, within one known geothermal resource area in both California and Nevada; and support plans necessary for making power transmission corridor determinations.

Plans that consider all the impacts of energy resource development will pave the way to achieving the goal of providing new supplies of clean energy with full consideration of other resource values.

(1c) Environmental Analysis for Energy Actions +$2,300,000 +86 Pos.

The workload in carrying out requirements of the National Environmental Policy Act for environmental analysis and preparation of environmental impact statements increases proportionately with the emphasis on in-increasing domestic production of energy resources.

For example, oil and gas operations normally involve five distinct phases - preliminary investigations, exploratory drilling, development, production, and finally abandonment. Each of the five phases has specific operations or activities that impact the environment. Whether large or small, each impact must be assessed according to the particular circumstances. The proposed increase aims to mount and sustain a maximum effort to assure that environmental analyses and statements where required are completed in high priority areas, prepare where required before energy resource development begins and without delaying achievement of the National goal of expanded resource production. Of the total proposed increase, $1,400,000 will provide the capability to prepare quality environmental analyses to facilitate upland oil and gas exploration and development associated with BLM leases. The remaining $900,000 of the budget increase will finance preparation of environmental analyses and statements associated with the development of public and private energy sources and their distribution. This workload includes evaluation of the environmental impact of proposed new facilities for which applications are filed. These are facilities closely associated with energy resource developments such as pipelines, transmission lines, railroads, waste disposal areas, rights-of-way, and a variety of land permits for special features (buildings, communications sites, etc.). This workload is estimated at 1,400 environmental analyses, 43 impact statements and review of 140 statements prepared by other agencies.



ENVIRONMENTAL ANALYSIS OF ENERGY AREAS ASSURES OPTIMUM RESTORATION AFTER CRITICAL FUEL SOURCE IS EXTRACTED.

The Bureau's over-riding responsibility to the public is to assure that critically needed energy resource development on the National Resource Lands is consistent with established principles of multiple-use management, and environmental conservation. The environmental analysis program coupled with BLM's land use planning program (MFP's) is the best means at our disposal to systematically study development proposals, analyze their impact, and identify and prescribe means to mitigate or prevent potential environmental damage. Broad public acceptance of a leasing program which recognizes not only the Nation's energy requirements but its environmental protection responsibilities is essential, and can discourage litigation stemming from the National Environmental Policy Act, which could result in costly delays.

(1d) Upland Energy Minerals Management +$1,330,000 + 35 Positions

Coal, geothermal steam and oil shale programs are being developed to expand the available supply of energy resources through an accelerated program of lease offers. The leasing programs will operate under the controlling principles of multiple use and environmental management and will bring fair market value return to the U.S. Treasury from the sale of energy resources.

Major reserves in coal and oil shale make these resources a key consideration in alleviating energy shortages while geothermal steam provides a clean supplemental energy source of localized significance. The contribution that BLM will make in the development of these resources is evidenced by the proportions of the national coal, oil shale, and geothermal reserves that are found on public lands including: 85% of the low sulfur coal, 72% of the oil shale, 56% of known geothermal areas, and 60% of lands prospectively valuable for geothermal steam.

° Coal Leasing ($1,050,000) (35 Positions)

To be responsive to the current and critical need to increase domestic energy supplies, added capability is required to expand development and utilization of our coal resource. The proposed increase will enable us to make reserves on Federal lands available through competitive leasing while assuring that development is carefully controlled to avoid environmental mistakes and irreversible consequences.

With supplemental funding of $500,000 in FY 1974, the Bureau initiated development of a long term coal leasing program for Federal lands. The size, timing and location of coal lease sales are determined through an Energy Minerals Allocation Recommendation System (EMARS). The system relates coal reserves to energy needs by computer modeling techniques. Based upon this relationship lease allocation target recommendations are issued for Federal coal areas on a state by state basis.

Our existing land use planning system is used to determine optimum lease sites within states and establish final allocations. By identifying lease areas in advance and preparing 5 to 10 year schedules for lease sales, the Bureau can keep current with future demands, pre-test reclamation measures, develop effective reclamation stipulations and allow advance planning by industry. The final step in the process is the actual Federal-motion leasing which will begin under an initial schedule in FY 1975 with adequate lease administration and rehabilitation measures.



COAL STRIP MINING OPERATION IN WYOMING

The increase for 1975 is needed for the following specific aspects of this process:

- Inventorying and storing information on Federally owned coal reserves for both reserves under lease and potential reserves. Reserves will be ranked according to stripping ratios, proximity of transportation and susceptibility to reclamation.

- Accelerating the preparation of mineral ownership maps for coal states.

- Projection of short and long term regional demand for coal derived BTU's. Federal portions of this demand will then be related to inventoried Federal reserves.

- Selection of lease sites through the Bureau planning system which involves consideration of environmental factors, other resource values, social, economic implications and other possible constraints.

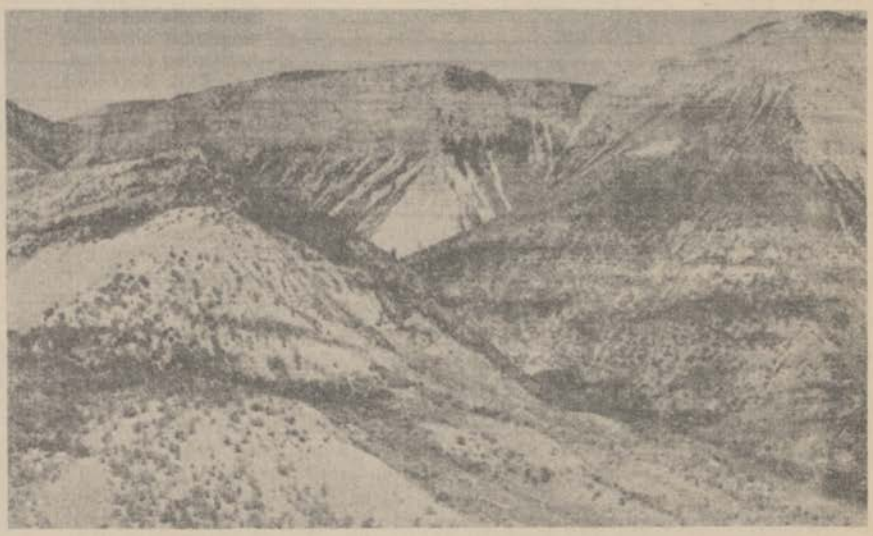
- Preparation of a five year leasing schedule which in FY 1975 will involve reserves in the states of North Dakota, Montana, Wyoming, Utah, Colorado and New Mexico.

- Develop and implement pre and post sale procedures to include analysis of minimum bonus bids.

° Geothermal Steam-Oil Shale Leasing (+$280,000) (0 Positions)

Expansion of the Bureau's Geothermal steam and oil shale programs to increase the available supply of these energy resources through an accelerated program of lease offers was financed by a supplemental appropriation of $450,000 in FY 1974. The leasing programs are consistent with and controlled by multiple use and environmental management principles. The supplemental funds were for a six month period beginning January 1, 1974. An additional amount of $280,000 is needed to annualize the costs of these programs in 1975.

With the total funds requested, the Bureau will continue the prototype oil shale program which is designed to (1) stimulate commercial production of oil from shale by private industry, (2) insure the maintenance of environmental integrity in oil shale areas, (3) develop methods and technology for environmental protection, (4) permit an equitable return on investment, and (5) develop lease management expertise for oil shale production. FY 1975 efforts will include monitoring pre-development oil shale operations for adequacy of stipulations and compliance and preparing the required annual progress report on the environmental aspects of developing the six prototype oil shale leases. The first prototype lease was held January 8, 1973 for a 5,000 acre tract in Colorado. The high bid for this one sale alone exceeded 210 million dollars. The other five sales will be held during the remainder of fiscal year 1974 involving one additional tract in Colorado and two tracts each in Utah and Wyoming.



OIL SHALE BLUFFS NEAR RIFLE, Colorado

Up to five competitive geothermal steam lease sales will be held in FY 1975. Initial geothermal steam leases scheduled to be awarded in FY 1974 in California and other western states will be administered. In addition, work to prepare environmental impact statements for new leases and to process non-competitive geothermal lease applications on an anticipated 20,000 acres in the 11 western states will be supported.

(1e) Surface Rehabilitation and Protection +2,050,000 +31 Pos.

The development of coal and oil shale will have a considerable impact on the surface environment. In the western States there are more than 100 billion tons of low sulfur coal close to the earths surface in seams 20 to 250 feet thick which can be strip mined economically. In comparison, oil shale reserves (some 600 billion barrels in gross deposit) will be developed more slowly awaiting analysis of prototype operations to be developed on the six FY 1974 lease sales. The six prototype leases involve 30,000 surface acres containing an estimated 4.3 billion tons of recoverable oil shale. A multi-phase program of protection and rehabilitation is essential to avoid and minimize the effect of large scale mining on the environment. Principle efforts will be directed toward the coal leasing program but will also include oil shale development where current action is required.

Initially, reclamation data such as soils and hydrologic data will be gathered on potential leasing areas to determine reclamation potential or limitations for general land use planning objectives. Reclamation characteristics will affect the determination of actual leasing sites to be developed. As the 5 and 10 year coal lease schedules are developed, data gathering and analysis will become specific to proposed lease sites. Components of reclamation studies include: testing soil in potential leasing areas to determine whether physical and chemical properties are capable of establishing and supporting introduced vegetation, and if not, determining techniques to produce vegetative cover in areas to be rehabilitated; collection of data on the quantity of surface and groudd water in potential leasing areas; analysis of overburden by core sampling 1,500 sites to determine strata best suited to support vegetation for stabilizing waste piles; investigating the economics and technicalities of moving, sorting and storing earth and rock material as associated with stripmining operations; and conducting the first phase of socio-economic studies to assess economic impact, water demand, transportation and population effects of large scale stripmining operations.

The reclamation data and analyses on potential coal and oil shale areas in conjunction with specific reclamation technology research being conducted by other agencies will allow pretesting of reclamation effectiveness, aid in making land use decisions to avoid areas where mining would not be acceptable. This work will also provide for development of effective reclamation stipulations and allow better coordination

with industry on reclamation needs.

Additional capability is also required to incorporate appropriate protective stipulations in leases and permits and to monitor their compliance. The Council on Environmental Quality and Departmental regulations require the protection and rehabilitation of lands before and after mineral exploration, development, and on-site processing of minerals and minerals materials.

The surface protection component of this increase continues on an accelerated basis of ongoing activities to meet established objectives of: (1) safeguarding the surface resources subject to damage because of onshore mineral leasing and exploration activities on approximately 80 million acres by 1978, (2) initiating technical and compliance examinations on all new permits, leases, and contract areas, (3) performing comprehensive technical and compliance examinations on all cases by the end of FY 1977., (4) fully meeting surface protection requirements on 16 million acres in FY 1975.

Combined rehabilitation and surface protection goals provide for proper environmental consideration of surface impacts in all phases of energy development beginning with the initial planning and continuing through production and reclamation.

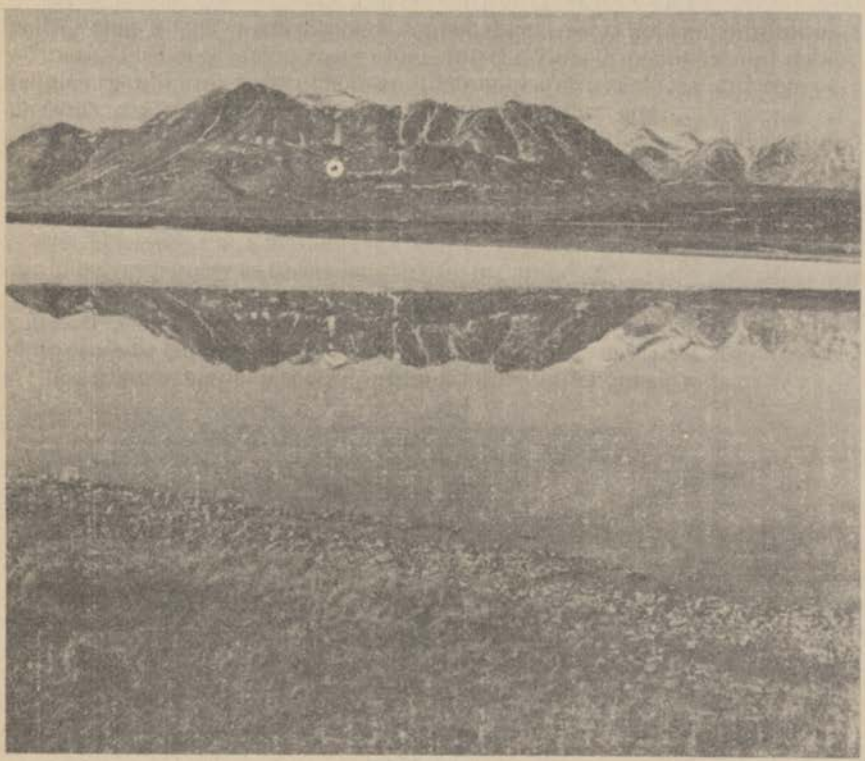
(1f) Alaska Pipeline Inspection $1,500,000 0 Positions

The increase provides full-year costs for contract inspection and construction activities for the Alaska pipeline and associated facilities. The Trans-Alaska Pipeline Authorization Act of November 16, 1973 (P.L. 93-153) cleared the way for issuance of pipeline construction right-of-way permits early in 1974. Construction of the pipeline from the North Slope oil fields at Prudhoe Bay to the Terminal port of Valdez on the Gulf of Alaska will begin soon after issuance of the permits. The 48 inch-diameter pipeline project extending approximately 800 miles will be the largest private construction project ever to be undertaken in North America and is expected to cost over 4 billion dollars. The pipeline will contribute significantly toward supplying energy resources in the lower 48 states, ultimately transporting up to two million barrels a day from the North Slope oil fields.

The workload will expand tremendously in the early part of the four year construction period with a gradual deceleration in the last two years. Immediate design review requirements of the pipeline and associated facilities, under a ninety day response requirement, will result in a sudden peak workload for engineering, environmental, and resource skills, that will continue at least through FY 1975. It is expected that several hundred people will be involved in the initial stages of design review. Under the Department of Interior supervision, the 3rd

party contractor will furnish technical assistance to complete preliminary and final design review, check compliance with the stipulations, assure engineering quality control, perform spot check inspections of construction, review permittees' quality assurance program, review and oversee procedures and operations for starting oil flow, and review contingency planning.

The 3rd party contract provides the means to react quickly to the fluctuating demands that will be made on overseeing agencies by this huge construction project. The 3rd party concept also readily accommodates the seasonal aspects of the severe northern climatic conditions. Adequate capability is essential to cover the multiple construction operations that will be conducted simultaneously along the 800 mile right-of-way through the fragile Alaska environment.



PIPELINE ROUTE PASSES THROUGH THE BROOKS RANGE

(2) Recreation Management Programs: The demand for recreation and the variety of recreation pursuits is expanding geometrically. By the year 2000, the population of the United States is expected to more than double; the demand for recreation is likely to more than triple.

The magnitude of demand and the variety of activities in which Americans participate, in essence, is the heart of the Bureau's recreation problems. Recreation use is placing increasing pressure on the National Resource Lands. BLM's role in the recreation management of these lands is to consider recreation as one of many integral parts of a multiple purpose basis giving a balance among recreation and other uses. This budget proposal for the recreation management of multiple purpose land addresses itself to a number of urgent conditions precipitated by the following statistics:

- Recreation use of public lands has increased from 9 million visitor days in 1964 to 49 million in 1972; eighty million or more visitor days are expected in 1980.

- Six million acres of National Resource Lands are within a forty mile radius of major western population centers having a combined population in excess of 35 million people. Within a three hour drive of these urban centers there are 66 million acres.

- Only 18 full-time field visitor management personnel are available on 172 million acres in the conterminous western states.

- Archaeologic and historic features are being destroyed at an estimated rate of two per day in the California Desert alone.

- Four million off-road vehicles, which have resource destruction potential, use National Resource Lands each year. ORV events with 200 to 2,000 participants are common.

A proposed total program increase of $2,050,000 and 47 positions to bring about a balance between the current situation and management capability in the field of outdoor recreation has two basic objectives:

- To develop and manage systems of visitor control which will assure the health and safety of the using public and the protection of natural resources; and,

- To protect the unique natural and cultural resources on the National Resource Lands as directed by legislation, Executive Order, and other authority.

32-043 O - 74 - 31

Program components directed at meeting outdoor recreation objectives are shown below and discussed in detail on the following pages:

Recreation Management Programs

Program	Requested Increase Amount	Requested Increase Positions	Total Program Amount	Total Program Positions
Off-road vehicle management.....	$260,000	7	$610,000	21
Protection of the cultural environment	300,000	4	400,000	9
Wild and Scenic Rivers and National Trails	640,000	8	720,000	12
California Desert management	850,000	28	2,082,000	46
	$2,050,000	47		

(2a) Off-Road Vehicles (ORV's) +$260,000 + 7 Positions

In a short time span, off-road vehicle use has become the recreation activity with the most widespread impact on the National Resource Lands. The characteristics of this pursuit result in a magnitude of management problems that require current action in order to protect the National Resource Lands and resources from irreparable damage, promote the safety of all users, and minimize conflicts among the various users of the National Resource Lands. The program increase will accelerate efforts to control and direct the use of ORV's towards these objectives.

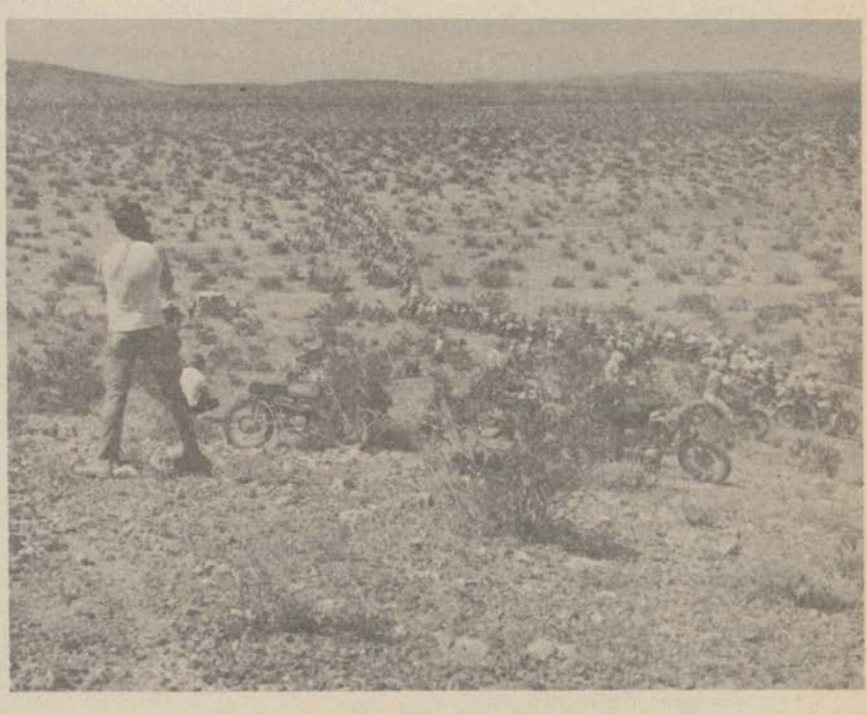
Some four million ORV's including automobiles, motorcycles, trucks, dune buggies, snowmobiles, campers and other vehicles use 150 million acres of National Resource Lands. It is estimated that 20 million visitor days of ORV use occur annually throughout the 11 western states. Intensive use around population centers causes the greatest impact on the land and environment, but extensive widespread use of remote areas also has an equally significant implication on public land management.

At present the Bureau has less than 20 rangers who are trained in ORV management, or if evenly distributed, one for every 7 1/2 million acres. As a result much of the ORV use on National Resource Lands remains uncontrolled and indiscriminate.

In recognition of the widespread implication of ORV use, Executive Order 11644 was issued which defines the ORV workload by requiring each Federal land managing agency to designate and manage areas and trails where ORV's may or may not be permitted. It directs public participation prior to area or trail designations, and requires marking ORV use boundaries with issuance of maps and brochures clearly describing conditions of use.

The increase will be used to designate 35 open ORV areas, and close 35 critical areas susceptable to heavy damage from ORV use, provide maps and brochures delineating open and closed areas that have been designated, patrol closed and restricted areas and issue and monitor permits for up to 150 ORV events in FY 1975. These actions will be in accordance with an inventory and planning effort which considers total land use.

This program will contribute to the protection of the land, environment, and fragile resources as well as provide recreational opportunities for the off-road vehicle enthusiast.



ORGANIZED ORV RALLY IN SOUTHERN CALIFORNIA

(2b) Protection of the Cultural Environment +$300,000 +4 Pos.

Accelerated use of the public lands has resulted in damaging pressure to archeological and historical features located throughout the West. Access to previously inaccessible sites has been provided by widespread use of off-road vehicles and by construction of roads both to serve the increased use of public resources and to extend public transportation systems. The program increase will support an expanded effort to identify and protect significant cultural values.

It is estimated that some 400,000 archeological sites exists on National Resource Lands. Many are unique in interpreting the Nation's western expansion or the life of early man on this continent. Pony Express stations, early mining towns now abandoned, old military forts, ruins of aboriginal communities, and Indian picture writings are examples of historic and pre-historic values which are rapidly disappearing. At least two sites are destroyed per day in the California Desert alone while irreparable damage is commonly occuring to features such as intaglios (huge figure outlines on the ground surface) along the Lower Colorado River. Pending large scale developments in coal, oil shale and other resources involving surface disturbance add to the urgency to identify cultural values.

Beginning with the Antiquities Act of 1906 and reinforced by the Historic Sites Act of 1935, the Recreation and Public Purpose Act of 1926 and the Historic Preservation Act of 1966, the Federal policy of preserving, protecting and administering cultural resources has been firmly established. To carry out this policy Executive Order 11593 for the Enhancement of the Cultural Environment directs Federal agencies to identify, protect and stabilize archeological and architectural features of significance. The program supported by the proposed increase will include:

- Identification of important cultural features that are in danger of being lost or damaged.

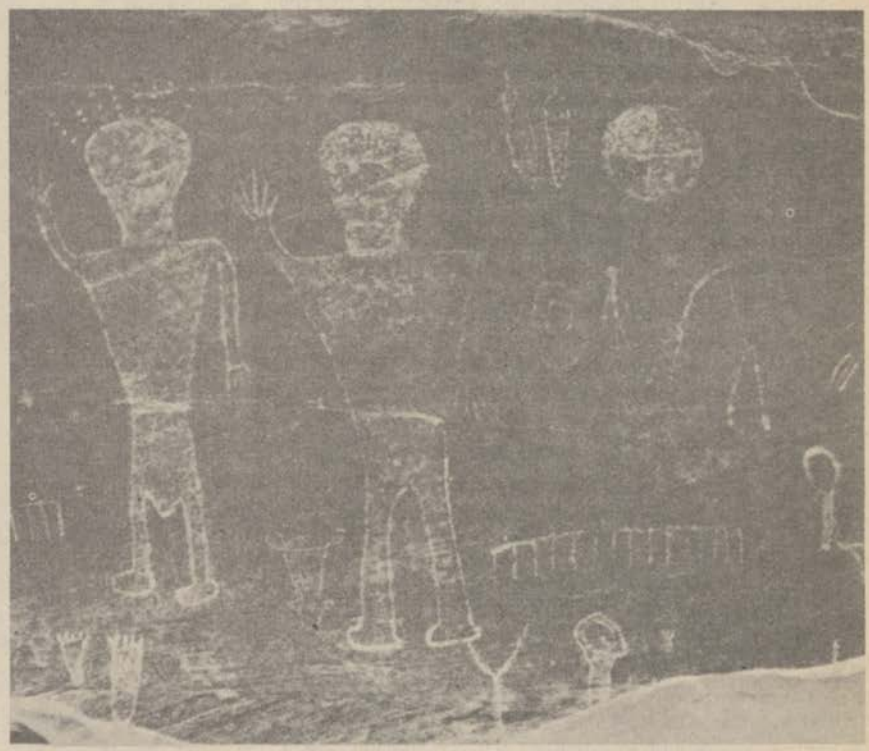
- Providing archeological expertise in critical areas.

- Completion of a cultural inventory on 5% of the public lands in FY 1975.

- Development of contract services with universities, museums, historical societies and other qualified entities to evaluate the most critical known areas and to establish program priorities.

Contracts will include literature searches; development of sampling systems; evaluations of oil shale areas in Colorado, coal fields in Montana and oil and gas areas in New Mexico all involving Indian culture; studies of pre-historic sites in Utah, Idaho and California and analysis of Lower Colorado features.

The urgency of the program is magnified by the rate archeological and historic sites are becoming known and accessible to the general public. The proposed increased activities provide for beginning long range program to protect the cultural environment as well as taking measures for immediate protection in critical and important areas.



PART OF A LARGE PICTOGRAPH IN UTAH WHICH HAS ESCAPED VANDALISM

(2c) Wild & Scenic Rivers, National Trails and Bicentennial Trails +$640,000 + 8 Positions

This program component is intended to preserve, protect and manage selected rivers and trails in national systems as directed in Public Law 90-542 (Wild and Scenic Rivers Act) and 90-543 (National Trails Systems Act.) The increase also funds BLM's participation in the Nation's Bicentennial celebration. The Bureau administers portions of 2 designated Wild and Scenic Rivers, the Rogue and Rio Grande, and is involved in the analysis of four rivers classified under P.L. 90-542 as "Study Rivers" for possible designation. BLM lands border at least 10 additional "Potential Study Rivers". Timely and knowledgeable decisions on potential Wild and Scenic Rivers are critical to long range planning to prevent water impoundment or management actions such as timber harvesting which would alter the character of the river.

Exploding use of white water on three potential Wild and Scenic Rivers dictates a need for additional river management. Some 80,000 enthusiasts rafted a popular stretch of the Stanislaus River in California in 1973. The same intensity of use is being experienced on other rivers in the West, including parts of the Colorado and Green Rivers in Utah. Management implications of this growing sport include a need for sanitation and primitive camping facilities, fire prevention measures, hazard identification, provision of launching and take-out places, and visitor management.

Program features of the Wild and Scenic Rivers increase include:

- Management under the terms of the Act of the two designated Wild and Scenic Rivers, the Rogue and the Rio Grande.

- Participate in the evaluation of the Salmon and the Bureau Rivers for possible inclusion in the Wild and Scenic River system.

- Initiate preliminary analysis on additional potential rivers traversing public lands.

- Implement river management on the white water rivers, such as the Stanislaus River in California, and the Upper Green and Colorado Rivers in Utah.

The increase will also provide for development and implementation of a management plan for the Pacific Crest Trail in cooperation with the Forest Service and evaluation of the Oregon Trail for possible inclusion in the National Trail System. The Pacific Crest Trail involves BLM lands in Oregon and California while historic Oregon Trail which carried settlers to the West, traverses National Resource Lands in Wyoming, Idaho and Oregon.

The Bicentennial to be held in 1976 commemorates the 200th anniversary of the United States as an independent Nation. Under this celebration, the Bureau plans to highlight three historic trails -the Pony Express, the Oregon, and the Escalante Trails. The Pony Express epitomizes the romance of opening the frontier and the need for early continental communications; the Oregon Trail was the main route of migration that opened the west; while the Escalante Trail opened up exploration of the four-state area of New Mexico, Utah, Colorado, and Arizona. The program will provide for identification at access points, marking sections of trail on the ground, providing interpretive facilities such as plaques, audio messages, brochures, and maps. Provision will also be made for backpackers or horseback riders to enjoy the experience of hiking or riding short stretches of trail. The program must be initiated in FY 1975 to be operative in time for the Nation's Bicentennial.

(2d) California Desert Management + $850,000 + 28 Positions

The Southern California Desert is a vast area some 240 miles in length and averaging 100 miles in width. Virtually untouched until recent years, the Desert is now undergoing people pressures that if unmanaged will result in widespread and permanent damage to cultural and natural values including archaeological and historic sites, wildlife, vegetation and watersheds. This program increase will provide more intensive management of the desert area to be supported by land use planning and other resource management as necessary to resolve conflicts. It does not duplicate program features in the ORV and cultural enhancement increases.

Some 11 million people live within a few hours drive of the Desert. From 1968 to 1973, visitor use has increased from 5 million to over 12 million visitor days. As important as the increase in visitation is, the style of use has changed from the original traveler to off-road vehicle enthusiasts and a multitude of other hobbyists.

Some 8 million off-road-vehicle visitor days involving mostly motorcycles, dune buggies, 4-wheel drive vehicles and pickups occurred in the desert last year. Seventy-one desert areas have been designated as either open, restricted, or closed to ORV use. Ten of these areas which are within 100 miles of the Los Angeles metropolitan area receive very intensive use. Other visitors on the desert include rock hounders, campers, picnickers, backpackers, sightseers, amateur archaeologists, etc. Desert activities last year resulted in 140 deaths and 2,000 serious injuries mostly occurring in unmanaged areas. In unregulated situations, the desert visitor is susceptible to many hazards such as abandoned mine shafts, discarded explosives, extreme temperatures, and hazards related to congested use.

Irreplaceable cultural values are being lost at an ever increasing rate due to unmanaged use. The desert contains some 1,000 known petroglyphs. The Mojave Desert section alone includes more pre-historic art than other area in the world. Much of this art is being removed, sometimes with high speed power tools, at a rate that will destroy 80% of the petroglyphs within the next 15 years.

In addition to recreation, the desert provides many other resources and land uses. Major facilities such as power line corridors are being constructed. Each year $160 million worth of minerals are produced. Big and small game are present, including endangered species such as the Desert Big Horn Sheep. Watershed and range values are significant.

This increase will concentrate on visitor management with associated efforts in planning and resource management. Primary activities include:

- Providing visitor management on 12 million acres including the 19 areas designated as "Recreation Lands". Activities will include increasing patrol activities by enlarging the Ranger staff from 7 to 23: manning the Barstow Way Station to provide interpretive information; visitor management and control; and safety management.

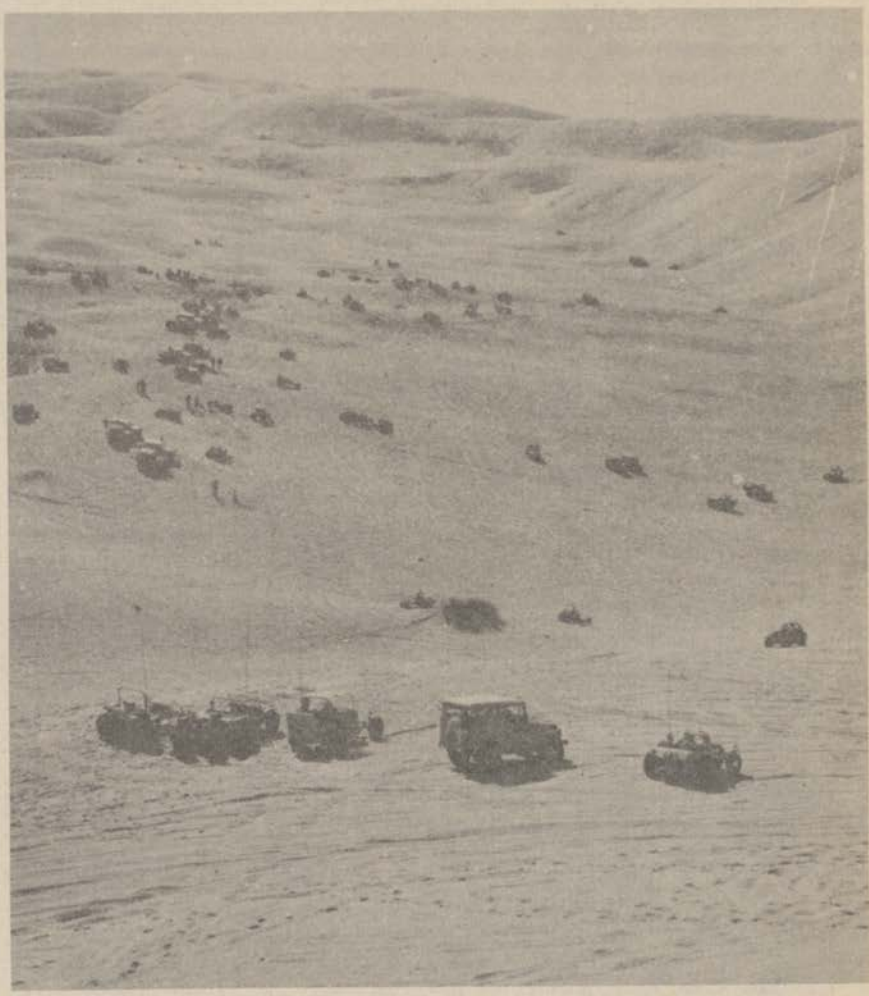
- Protection of archeological values and unique natural areas against inadvertent and vandal related destruction through identification protection and stabilization of significant sites. In addition, contract studies will be implemented with state or private institutions to evaluate important areas.

- Continuing critical off-road vehicle management under the recently initiated "Interim Critical Recreation Vehicle Management Plan". Developing activity plans as required and supervising of the 71 sites designated as open, limited or closed to ORV use and patroling the 10 intensive use areas located within 100 miles of Los Angeles.

- Continued associated planning for the resolution of conflicts between recreation use, mineral development, rights-of-way, fragile resources and other land developments.

- Adjudication of applications made under the public land laws to resolve conflicts of use on desert lands.

Improved management of the Desert will help provide for the safety and enjoyment of the millions of current users as well as help preserve this unique area for the enjoyment of future generations.



A TYPICAL HOLIDAY WEEKEND IN CALIFORNIA DESERT

These recreation program increases will significantly increase the Bureau's overall capability to manage rapidly expanding recreational use of the National Resource Lands while protecting the lands and their often unique resources for the use and enjoyment of future generations.

(3) Forestry Program (+ $1,425,000) (+ 43 Positions)

The FY 1975 increase of $1,425,000 and 43 permanent positions will provide for marketing an additional 100 million board feet of timber and for a long-term improvement of the level and quality of forest management on National Resource Lands outside Western Oregon. These increased funds are made available by a corresponding decrease in O&C forest management normally funded in this activity. The resulting decrease in the management of western Oregon forests financed by this appropriation will be offset by an increase in the Forest Development, Protection, and Management activity of the O&C Grant Lands appropriation which is made possible by increasing timber receipts from western Oregon in fiscal years 1974 and 1975.

The United States has not been self-sufficient in wood for 50 years and dependence on foreign timber is growing. National timber shortages experienced in recent years are predicted to intensify by 1980.



TIMBER PRODUCTION FROM FORESTED NATIONAL RESOURCE LANDS SUCH AS THIS CAN BE INCREASED

The Housing Act of 1968 established a 10 year goal of 26 million new and rehabilitated housing units, an average of 2.6 million units per year. Housing construction has accelerated from a pre-1971 average of

1.5 million starts to 2.3 million in 1972. Though housing starts dropped to 1.6 million in 1973, demand for wood products will continue to increase through year 2,000.

Federal forest lands contain 58 percent of the total standing inventory of softwood saw timber. Forest resources on the National Resource Lands excluding western Oregon and Alaska, include 2 million acres of commercial forests and approximately 23 million acres of woodlands.

There is a capacity for additional timber production on Natural Resource Lands by increasing the level of forest management and development. As a basis for an intensive management program, a seven state area is now being reinventoried; forest resources, multiple use and environmental factors studied; and new forest management plans developed for public review. This reinventory of public domain forest lands which was initiated in FY 1972 and is scheduled for completion by FY 1976, will provide the basis for a new annual timber sale offering. offering.

Specific accomplishments with the requested adjustment on behalf of forestry programs outside western Oregon will include:

- Acceleration of the inventory,and study program to develop an intensive forest management plan by 1976.

- Marketing of an additional 100 million board feet of timber in FY 1975. This production will increase Federal receipts by approximately 5 million dollars as the timber is harvested.

- Increasing reforestation and stand improvement activities to improve the quantity and quality of future timber production.

These actions are designed to increase the productivity of forest lands on a long term basis as well as the quality of timber produced. In addition, National Resource Lands will provide an additional supply of timber in FY 1975. Of particular importance is the accelerated development of forest resources while protecting and enhancing other key environmental components such as clean air, water production, wildlife, and recreation opportunities.

(4) Wild Horses and Burro Program +$300,000 +6 Positions

The proposed increase of $300,000 and 6 positions for FY 1975 will accelerate the program begun in FY 1974 to continue implementation of the Wild Horse and Burro Act (P.L. 92-195), which calls for the protection, control, and management of wild horses and burros. Public interest remains high in preserving these wild and free roaming animals as part of our national heritage.

Early implementation of herd management area plans is critical to maintaining healthy wild horse and burro populations that are consistent with the environment that sustains them. Current estimates of population indicate that approximately 40,000 to 50,000 head of wild horses and burros roam the Natural Resource Lands versus the original estimate of 27,000.

The major immediate workload that must be accomplished prior to final inventory and planning is the settlement of 1600 private claims now on file for approximately 17,000 animals. Processing of claims under the terms of the Act involves adjudication, public meetings, advertising, joint cooperation with state agencies and supervising of gathering and removal of successfully claimed animals. The act also requires BLM to remove wild horses and burros from private lands upon request. Experience to date indicates a large anticipated workload in gathering and removing animals from private lands and supervising the collections of claimed horses and burros from National Resource Lands. Humane capturing in the wide open plain areas requires detailed planning, construction of facilities, and manpower.



WILD HORSES ON BLM LAND

The program increase will facilitate the settlement of claims with priority to be given to critical overstocked areas. Intense inventories will be completed first in areas where claimed animals have been removed. Planning efforts are two fold. First a total land use plan must be developed in herd areas to determine conditions of use that are necessary to balance wild horses and burros with other muktiple uses and secondly, detailed herd management plans will be compiled for specific wild horse and burro areas. Other important activities requiring additional effort are surveillance and protection (including law enforcement), and a public information and education program.

The protection of wild horses and burros requires an intensified application of resource management principles and practices in order to protect and preserve these animals and to maintain their habitat. Immediate additional emphasis to the wild horse and burro program is critical to long term management objectives.

(5) Alaska Native Claims +$1,735,000 + 45 Positions

The proposed increase of $1,735,000 and 45 positions is for land and realty activities required to carry out the Alaska Native Claims Settlement Act (ANCSA). An additional increase of $3,265,000 and 20 positions is requested under the cadastral survey activity to accomplish survey work required to segregate ANCSA land dispositions.

ANCSA sets short time frames for disposing of over 40 million acres of land for village and regional selections to the Alaska Natives. A potential of 98 million acres of remaining state selections under the Alaska Statehood Act has yet to be satisfied. The requirements of ANCSA in addition to the State Selection Program result in a massive realty service workload in Alaska which cannot be postponed or deferred. The act directs the Secretary to promptly issue patents to all persons who have a lawful entry on public lands, in compliance with the public land laws including selections by the state. Major workloads yet to be accomplished include the transfer of lands for village and regional corporations, native allotments, state selections and clearance of encumbrances. It is estimated that the bulk of Native selections via village corporations will be made in the 12-month period prior to the deadline of December 1974. Regional corporation selections will be made in 1975. A multitude of associated realty actions such as native allotments, homesteads and mineral conflicts must be processed prior to or concurrently with Native selections to achieve orderly disposition of lands.

Time frames for major actions under ANCSA are listed below:

Action	Time Frame
- Withdrawals to implement ANCSA	Completed by deadline of September 1972
- Recommendations by Secretary to Congress on National Interest Areas	Completed by deadline of December 1973
- Village eligibility established	By June 1974
- Determine village entitlement (Acreage according to population etc.)	Immediately after 6/17/74
- Allocation of Land by village and region (Final determination of acreage allowed)	Immediately after 6/17/74
- Additional deficiency withdrawals (unforseen eligibility areas etc.)	Pending village eligibility determination
- Selections completed by Village Corporations (22 million Ac.)	By December 17, 1974
- Conveyance to village Corporations (22 million acres)	Immediately after application by interim conveyance
- Identification of public easements	Prior to issuance of Interim Conveyances for village selections
- Selection by Regional Corporation (16 million acres)	From December 1974 to December 1975
- Conveyance to Regional Corporations (16 million acres)	Immediately after application (by interim conveyances) December 1975
- Miscellaneous grants and Native Group Selections (2 mil. acres)	By December 1975
- Conveyance of Miscellaneous and Group Selection	Immediately after Application (by interim conveyance)

Action	Time Frame
- Native Allotments and other settlement type cases	Simultaneously with Village Regional, Miscellaneous grants and Native Selections.
- State Selections 52.3 million acres in application	Processing as capability will allow.
- 45.4 million acres to be selected	Prior to 1984 with any time frame extensions allowed under ANCSA.
- Public Interest Area Classifications by BLM (45 million acres)	No Deadline

The budgeted increase combined with current capability will provide for accomplishment within prescribed time frames of the following principle actions:

- Supplying status information and resource data to the Natives to assist in village and regional selections.
- Supplying information, data and support to other agencies charged with making studies or recommendations under ANCSA.
- Processing of an estimated 800 village selection applications involving some 22 million acres.
- Processing approximately 160 regional selection applications and 400 cases of miscellaneous grants.
- Concurrently processing 5,600 Native allotment applications.
- Determining disposition of approximately 5,000 to 6,000 additional land or mineral encumberances on land within Native claim selection areas.
- Processing 1,489 applications on files for state selections covering 52.3 million acres.

An additional lands and realty workload in Alaska includes 12,300 existing oil and gas applications and a large number of applications for special Land Use Permits for pipelines, withdrawals, reservations, airports, communication sites, townsites, and rights-of-way.

Installation of an automatic data processing (ADP) system has been initiated to store, sort, retrieve and display land status information for the purpose of maintaining current land status, accurate acreage controls and land case file monitoring.



A FUTURE BENEFICIARY OF THE ALASKA NATIVE CLAIMS SETTLEMENT ACT

Specific components of the ADP program are automating acreage control for 40 million acres of village and regional selections, 80 million acres of National Interest Areas, 104.5 million acres for state selections and general land status including all of Alaska (375 million acres). The system also includes docket control for over 23,000 lands and minerals cases and automating available resource information. Five additional positions are included in the total increase to implement these program features.

The total increase of 45 positions will allow BLM to systematically complete the mandatory actions required to keep pace with the time frames of the Act. Timely and knowledgeable decisions are critical to the long term land use situation of the vast Alaskan acreages involved under ANCSA.

(6) Bureau of Employees' Compensation + $13,000 0 Positions

The Bureau has been notified that its assessment from the Bureau of Employees' Compensation will be $332,670 in 1974, an increase of $13,000 over the FY 1973 assessment. An increase is requested to cover these added costs.

(7) GSA Space Costs + $4,710,000 0 Positions

Public Law 92-313, Public Buildings Amendments of 1972, requires that effective July 1, 1974, agencies be charged for space and related services provided by the General Services Administration (GSA) at approximate commercial equivalent rates. The estimated requirement for space and related services in GSA facilities based on rates supplied by GSA is $4,710,000 in this activity.

(8) Annualization of October 1973 Pay Raise $1,054,000 0 Pos.

This proposed increase is required to annualize the October, 1973 pay raise for civilian classified employees in this activity.

32-043 O - 74 - 32

Program of Continuing Work

The Resource Management, Conservation and Protection activity provides for the multiple use management of the National Resource Lands including management of energy and mineral, timber, soil and water, livestock forage, fish and wildlife and recreation resources. These direct resource programs are supported by technical functions such as cadastral survey, fire protection, facility and road construction and maintenance, that are funded by other activities and appropriations.

Accelerated public use and demand for resources have intensified management requirements and are adding to continuing workloads in traditional Bureau programs. This workload is administered by natural resource managers who are assisted by technical specialists (wildlife biologists, mining engineers, realty specialists, etc.) and support personnel who plan, develop and implement action programs derived from coordinated multi-resource plans.

The specific programs of continuing work are discussed below:

Lands & Records Management: This program provides for: maintaining public land records in the land offices; providing public land status and information on public land laws and regulations; processing lands and minerals applications for other Federal agencies, state and local governments, and private individuals and accomplishing Bureau-motion realty transactions such as exchanges. Activities include field examination, adjudication, and issuance of various types of leases, and permits.



PROVIDING RIGHTS-OF-WAY IS AN IMPORTANT ASPECT OF BUREAU REALTY ACTIVITIES

An increasingly important aspect of the lands program is processing right-of-way applications for utility features, new and expanding power generating facilities to meet rapidly escalating power demands in the West often require construction of transmission lines across many miles of National Resource Lands. Processing these right-of-way applications in accordance with the National Environmental Policy Act and sound land use planning to minimize environmental impacts is becoming an enormous task. Efforts are being expanded to identify common utility corridors but lack of information on compatibility of various types of transmission systems and other factors make planning difficult. Workload on pipeline rights-of-way is also increasing.

A large portion of the Bureau's realty activities are concentrated in Alaska. The Alaska Statehood Act and other Acts provided for selection of over 104 million acres by the State of Alaska. The Alaska Native Claims Settlement Act (ANCSA) of 1971 provided the Native Villages and regional corporations with 40 million acres of selection rights. Additionally, ANCSA provided for other Federal agencies to withdraw up to 80 million acres for areas of National interest.

During Fiscal Year 1974 an estimated 16,000 lands cases will be closed. Fiscal Year 1975 efforts are planned to process 16,500 cases; the accelerated activity is primarily attributed to the ANCSA. At this time, there are over 98 million acres of unsatisfied State Selection Grants in Alaska and over 473,000 acres remaining to be selected by other western States.

Land records improvement work will continue in FY 1975. This includes construction of new land status records in each State Office for replacing original documents as well as preservation of field survey notes.

Minerals Management: The Bureau's mineral program is oriented toward orderly and timely development of non-renewable mineral resources on the National Resource Lands, other lands in Federal ownership and the Outer Continental Shelf. To meet accelerated energy requirements necessitated by the current fuel shortage, the Bureau has expanded efforts to increase domestic production. This program, accompanied by sound land use plans and environmental protection, involves the allocation and disposal of mineral resources by patents, leases, and material sales.

In addition to traditional exploration, mining, and drilling operations for oil and gas on the public lands and Outer Continental Shelf, increased emphasis and activity has been given to the orderly development of oil shale, coal, and geothermal steam.

During FY 1974, three additional OCS offices were established to conduct analyses, and prepare for possible off-shore leases and sales in the Alaska Gulf, the Pacific coast and in the Atlantic. These new OCS offices complement the New Orleans OCS office which is responsible for oil and gas leasing and development in the Gulf of Mexico.

Six prototype oil shale lease sales are scheduled in FY 1974 (two each in Colorado, Utah and Wyoming) to encourage and stimulate the expeditions development of this energy source by private enterprise. The first lease sale was held January 8, 1974, and attracted seven bidders with a high bid of over $210 million dollars.

Current expanded efforts in coal and geothermal steam provide for the development of energy sources consistent with environmental protection requirements. Since 85% of the Nation's low sulfur coal is on Federal Land and represents one of the most abundant energy resources, the Bureau must manage a coal leasing program to provide for orderly and timely development. Early in FY 1975 it is anticipated that a coal leasing schedule will be issued to guide an effective Bureau-motion leasing program. The Bureau is also participating with other agencies in the Northern Great Plains Resource Program to guide sound decisions considering economic and environmental factors regarding coal and other aspects of energy development in the Northern Great Plains area.

The geothermal steam program is based on continued emphasis of the adjudication of "Grandfather" right applications, preparing environmental analyses, making technical examinations on areas under application, and developing environmental impact statements for sales in Nevada, Oregon,Utah, and California in the near future.

The following table shows the number of mineral leases currently in effect on public land, and the acreage and production by type of lease:

Type of Lease	Number	Acres	Est. Production 1/
Onshore Oil & Gas	93,258	62,961,700	180 million BBL's 2/ 1 trillion cu ft
Offshore Oil & Gas	1,191	5,188,000	420 million BBL's 3.0 trillion cu ft
Coal	531	780,000 3/	12 million tons

1/ 1973 estimates
2/ Includes Federal & Indian Lands
3/ The 780,000 acres contains an estimated 15.1 billion tons based on 80% recovery by surface mining and 5.5 million tons based on 50% recovery by underground mining.

Alaska Pipeline Inspection

Legislation has been passed clearing the way for issuance of the construction permit for this 800 mile pipeline. The Secretary of Interior signed the permit on January 23, 1974. The State of Alaska anticipates issuing its permit about March 1 after which construction can be expected to begin immediately.

The Bureau has maintained a staff since 1969 when the permit application was received in order to carry out pre-construction requirements involving environmental and resource studies, the review of transportation routes, facility sites, gravel and timber needs, rights-of-ways, and monitoring all applicant activities.

In anticipation of imminent issuance of a permit, supplemental funding was provided for additional Federal personnel and costs for a 3rd party inspection contractor in FY 1974. The inspection contractor will review the permittee's designs and assure conformance to the technical and environmental stipulations.

Duties of the 3rd party contractor will include spot inspections of construction, review of plans and procedures for start-up, surveillance of start-up and review of contingency planning.

The Bureau workload involves activities incident to issuance of the right-of-way and associated permits; assisting the authorized officer in enforcing construction and operation guidelines and stipulations; spot checking the supervision of actual construction; coordinating activities of all participating Federal agencies; evaluating overall environmental effects of the pipeline and attendant facilities; and conducting environmental and resource impact studies as necessary.

The successful pipeline right-of-way applicant must reimburse the General Fund of the Treasury for those costs attributable to inspection and surveillance activities directly related to the pipeline.

Range Management

This program involves the application of intensive management to rangelands which comprise a substantial portion of the National Resource Lands. Activities of the program include domestic livestock grazing, wild horse and burro management, and rangeland weed, pest, and disease control.

A special program has been underway since 1965 to improve public range lands through the development of intensive grazing management plans (Allotment Management Plans) with individual ranchers. Planning and implementing AMP's is a cooperative effort between the Bureau and the rancher.

Major objectives of the AMP effort are to increase vegetative cover, increase meat and fiber production, improve soil stability and water quality, increase the production of desirable forage plants and enhance aesthetic and wildlife values on rangelands. This is accomplished through the control of livestock in such a way that their grazing habits are scientifically applied to improve rangeland conditions. The success of the AMP program is evidenced by the increasing rate that management objectives are being realized and the positive support of wildlife agencies, conservation groups and ranchers. There is a current backlog of 214 AMP's that have been designed but are unimplemented.

The major recurring workload in the range management program which includes maintaining use records, receiving, processing and issuing 22,000 grazing authorizations annually for approximately 12 million animal unit months, and supervising and maintaining existing AMP's limits the effort which can be devoted to developing and implementing new AMP's. Approximately 115 AMP's will be completed in FY 1974 but as few as 20 can be implemented. The table on the following page portrays the situation as of June 30, 1973:



ALLOTMENT MANAGEMENT PLANS PRODUCE RESULTS

Allotment Management Plan Status
(As of June 30, 1973)

Implemented		Completed-Not Implemented		Total Requirement	
Plans	Acres	Plans	Acres	Plans	Acres
1,015	25,300,000	214	6,000,000	8,300	133,000,000

Additional continuing work involves the implementation of P.L. 92-195 which provides for protection, management and control of wild free-roaming horses and burros on National Resource Lands. Current efforts are underway to complete the claiming of private animals presently on rangelands without authorization. Some 1,600 private ownership claims have been filed on 17,000 horses and burros. These claims, many of which will be difficult and time-consuming, must be processed before a comprehensive horse and burro inventory can be completed. Upon completion, the inventory will provide the basis for an effective management program.

The continuing program of weeds, pests and diseases is one of inventory, evaluation and protection in cooperation with other local, State, and Federal agencies to alleviate livestock and wildlife damages and losses.

Forestry

This program includes a portion of the financing for forest management in western Oregon and for all the forest management and development of forest resources outside of western Oregon. The goal of the Bureau's forestry program is to provide for the multiple use and sustained yield of forest resources while protecting and enhancing aesthetic values. Environmental aspects of timber production are receiving greater consideration because of the rising and often critical values such as clean air, water production, wildlife habitat, recreational opportunities, aesthetic and other public uses.

The Bureau's forest programs are designed to support the Housing and Urban Development Act of 1968 and are carried out in accordance with the National Environmental Policy Act of 1969.



SUSTAINED YIELD OF FOREST PRODUCTS IS COMPATIBLE WITH PROTECTION OF THE ENVIRONMENT

Forest Management-Western Oregon: Funding in the activity together with funding from the O&C Grant Land appropriation enables the Bureau to undertake the most intensive Federal forest management program in the Nation in western Oregon.

Funding for this program within this appropriation will decrease by $1,425,000 in 1975, to finance an accelerated effort in forests outside western Oregon, but will be offset by an equivalent increase in the forest development, protection and management activity of the Oregon and California Grant Lands appropriation. Some 2.4 million acres are managed under the guidelines of a plan that was implemented by the Secretary on July 1, 1971. The plan is responsive to the need for restoring, maintaining and enhancing the quality of the environment as well as increasing yields from timber lands through intensive forest management practices. These intensive practices increase the amount of volume the forests are able to produce, thus, helping to meet the Nation's demand for timber products. With respect to the environment, the plan provides for recreational sites, wild and scenic rivers, streamside protection, protection of critical watersheds and damage-prone sites, and provides for improved forage for wildlife and livestock.

The following table shows volumes, sales prices and receipts in Western Oregon for FY 1971 through FY 1973 and current estimates for FY 1974 and 1975. These include Oregon and California Grant Lands, Coos Bay Wagon Road Lands, and western Oregon Public Domain timber volumes:

	BLM Sales		Receipts	
FY	Million Board Feet	Sales Price a/	BLM	Forest Service
1971	1,235	$ 51,913,000	$ 60,350,000	$ 8,274,000
1972	1,179	65,559,000	72,357,000	8,844,000
1973	1,225	129,469,000	91,044,000	11,084,000
1974*	1,172	87,900,000	108,270,000	15,000,000
1975*	1,172	94,260,000	108,250,000	15,000,000

* Estimates

a/ Receipts vary because payments are made on cutting schedules, not at the time timber is purchased.

The following tabulation shows the source of timber sales receipts by type of lands:

FY	O&C Land a/	Coos Bay Wagon Road Land	Western Oregon Public Domain	Total
1971	$ 63,734,000	$2,616,000	$2,274,000	$ 68,624,000
1972	75,334,000	2,134,000	3,679,000	81,147,000
1973	94,382,000	3,845,000	3,901,000	102,128,000
1974*	115,000,000	3,920,000	4,350,000	123,270,000
1975*	115,000,000	3,865,000	4,385,000	123,250,000

* Estimates

a/ Includes Forest Service receipts.

Forest Management National Resource Lands outside Western Oregon: The forested National Resource Lands, outside western Oregon lands, include approximately 2 million acres of woodlands. Management of these lands has been largely custodial. There is a capacity for increased production, but only through more intensive management.

As a basis for an intensive management program scheduled to commence in FY 1976, a seven state reinventory is underway. Forest resource,

multiple use and environmental factors are studied, and new forest management plans developed for public review.

As a means of helping increase the Nation's domestic wood supply, sales totaling 150 million board feet will be offered in FY 1975. This represents an increase of 100 million board feet over the FY 1974 level. The increased production can be harvested without jeopardizing future sustained yield. Completion of the new inventory which is patterned after that applied to western Oregon will help determine an annual allowable cut for the public domain forest lands in FY 1975 and beyond.

Actual FY 1971 through FY 1973 and estimated FY 1974 and FY 1975 volumes, sales prices, and receipts for timber sold from National Resource Lands exclusive of western Oregon are as follows:

FY	Thousand Board Feet	Sales Price	Receipts
1971	72,000	$1,812,000	$2,500,000
1972	66,000	2,280,000	2,372,000
1973	28,200	1,907,000	2,515,000
1974*	50,000	2,500,000	2,530,000
1975*	150,000	7,500,000 **	2,950,000

* Volume to be offered and estimated prices and receipts.
** Reflects increase sales price of $1 million for base 50 MMBF.



HIGH-LEAD LOGGING IN WESTERN OREGON

Forest Development - National Resource Lands, Outside western Oregon: The immediate objective of this program is to restore producing capacity to forest lands where it has been reduced due to logging, insects, stagnation due to overstocking or other causes. Early establishment of cover protects watersheds, restores timber production and enhances physical appearance. This effort also suppresses growth of undesirable species of no economic value and reduces fire hazard. The FY 1975 program level will include 2,800 acres of reforestation, 40 acres of site improvement and about 1,600 acres of stand improvement.

Soil and Watershed Conservation: The Soil and Watershed program has three primary objectives: (1) to determine condition and potential of watersheds by using trained personnel and systematic evaluation methods; (2) to protect and improve productivity of watersheds on the National Resource Lands; and (3) to establish and maintain acceptable standards of watershed management to control soil erosion and water yield. This program provides technical data and capital investments in support of other resource management programs conducted on the National Resource Lands, and soil and watershed information for the Bureau's planning system.

Effective land management and treatment practices are dependent upon knowledge of soil stability, water quality and quantity, and environmental considerations in determining the proper location and design of roads, location of rights-of-way, provisions for exploration, extraction, and rehabilitation of mineral deposits, timber harvesting, recreation use and development, fish and wildlife habitat, and rehabilitation of watersheds damaged by fire, flood and other events. Support of these activities requires a watershed program which can:

(1) Determine need and use of a sufficient supply of usable water to permit the long term use, management and development of public land resources.

(2) Design and apply management practices to improve water quality, quantity and timing of yield to provide a controlled yield and quality for the user, and avoid pollution of water flowing through or from National Resource Lands.

(3) Provide technical data on soil and water resources to insure the selection of proper rehabilitation measures on potential energy mineral resource lands destined for development.

(4) Rehabilitate damaged watersheds to restore stability, productivity and proper hydrologic function.

In areas denuded of vegetation, artificial revegetation and other soil conserving practices are required to accomplish desired results. Control of gully, streambank, and streambed erosion often requires special stabilization structures, riprap, sloping and vegetating eroded banks.

The control of soil erosion and water productivity will continue with various practices such as water retention and detention dams, contour furrowing, vegetative manipulation, and weed and pest control practices that affect water quality and quantity.



DETENTION STRUCTURE TO PREVENT EROSION AND DOWNSTREAM SILTATION

Watershed conservation program accomplishments, needs and present erosion conditions are reflected in the Tables on the following pages:

CONSERVATION ACCOMPLISHMENTS AND NEEDS OF LANDS UNDER JURISDICTION
of the
BUREAU OF LAND MANAGEMENT

	Units	Inventory of Total Needs 1/	Accomplishments 2/ 1937-1973	Planned 1974	Planned 1975	Remaining Work
Water Control Structures...	Cu. Yds.	242,602,300	30,044,632	65,000	60,000	212,436,668
Other Conserv. Practices 3/	Acres	19,125,900	3,086,369	11,000	200	16,028,331
Undesirable Plant Control..	Acres	121,900	79,680	5,000	2,900	34,320
Revegetation.....	Acres	14,798,000	3,686,388	4,000	2,500	11,105,112
Water Developments.....	Number	85,200	47,647	1,200	1,200	35,153

1/ Inventory of total needs was completed by the Bureau during 1964 and reflected the total needs of the public lands as then identified. The inventory amounts include those listed under "Accomplishments".

2/ Includes all sources; Soil & Watershed, Range Improvements, Fire Rehabilitation, P.L. 566, and Private.

3/ Includes contour trenches, pitting, furrowing, waterspreading, streambank protection, gully control, dune control, and deep tillage.

PRESENT EROSION CONDITION - ACRES AS OF 12/26/73
WATERSHED INVENTORY 1/

	TOTAL STATE	ACRES INVENTORIED	%	STABLE ACRES	%	SLIGHT ACRES	%	MODERATE ACRES	%	CRITICAL ACRES	%	SEVERE ACRES
ARIZONA	11,000,000	6,627,787(60%)	4	263,663	46	3,078,522	40	2,619,596	9	600,732	1	65,274
CALIFORNIA	14,000,000	6,510,812(46%)	15	992,104	44	2,879,167	36	2,329,787	5	302,153	1	7,601
COLORADO	7,000,000	4,851,473(69%)	22	1,086,035	29	1,395,153	39	1,881,312	9	458,976	1	29,997
IDAHO	11,000,000	6,946,982(63%)	21	1,459,115	50	3,448,974	24	1,663,024	5	367,290	1	8,579
MONTANA	7,000,000	5,741,664(82%)	14	824,014	42	2,428,368	31	1,763,295	11	640,718	2	85,269
NEVADA	48,000,000	30,081,942(63%)	8	2,332,877	50	15,069,677	36	10,898,470	6	1,704,342	1	76,576
NEW MEXICO	12,000,000	7,791,716(65%)	6	455,879	30	2,313,633	41	3,195,481	21	1,667,705	2	159,018
OREGON	13,000,000	11,812,134(91%)	17	2,023,515	52	6,112,609	29	3,375,767	2	280,628	1	19,615
UTAH	23,000,000	14,384,688(63%)	6	783,974	41	5,946,584	36	5,096,763	17	2,464,284	1	93,083
WYOMING	16,000,000	10,169,455(64%)	6	625,931	38	3,832,063	42	4,312,093	12	1,219,041	2	180,327
BUREAU	162,000,000	104,918,653(65%)	10	10,847,107	44	46,504,750	35	37,135,588	10	9,705,869	1	725,339

1/ Definition of terms:

stable - only natural geologic erosion occurring.
slight - erosion not sufficient to significantly reduce vegetative productivity.
moderate - erosion which significantly alters vegetative productivity.
critical - erosion causing cessation of vegetative production.
severe - erosion which prevents any vegetative establishment.

Fire Protection: Effective fire protection is dependent upon the early detection and timeliness of the initial attack. This requires adequate equipment and sufficient well-trained manpower to effect control of the fire and reduce damages.

In the past, fire protection activities for 400 million acres of public lands have suffered from inadequate equipment, lack of manpower and shortages of supplies. Fire suppression has also demanded personnel from other programs thus inhibiting planned accomplishments. To correct these deficiencies, the Bureau has completed, and is implementing, initial Normal Year Fire Plans within the limits of available resources.

Fire protection and preparedness programs at the Boise Interagency Fire Center and at other locations throughout the West and in Alaska are financed by this activity. The Fire Center is a specialized joint training and operational unit of the Bureau of Land Management, U.S. Forest Service, and the U.S. Weather Service. The Fire Center arranges backup suppression support consisting of fireline manpower, fire control overhead, and equipment for the Bureau, other Interior Bureaus, the U.S. Forest Service, and certain State Governments on a reimbursable basis.

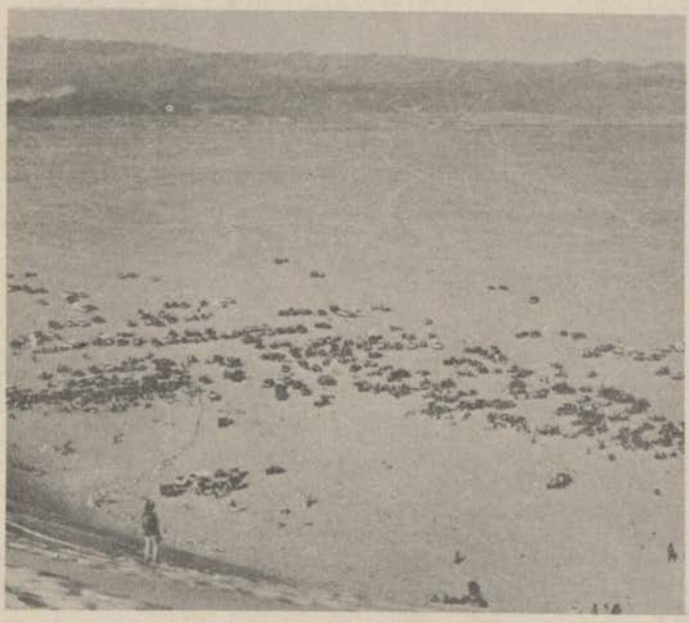
The Bureau is developing an active program to provide professionally trained personnel, an improved communications system and radio network, better fire control training, and modernized fire equipment. Operation of the Bureau's communications network is primarily financed by this program; however, other programs share in these costs in proportion to the benefits received.

Recreation Management: The Bureau's recreation program is based on planning for and managing the use of the recreation resource values of the National Resource Lands. Ever increasing numbers of visitors are using the National Resource Lands for a variety of recreation pursuits. Visitor use has increased from 9 million days in 1964 to 50 million days in 1973, and may reach 80 million days by 1980. Within a 40-mile radius of the 16 major population centers of the Western United States, the Bureau manages 6 million acres of land, much of which has high recreation potential. Within 3 hours drive, 66 million acres of public land are available to residents of major urban centers. Present energy shortages could create even more use near these heavily populated areas as driving to more distant outdoor recreational attractions becomes more restrained. A program to plan for and manage the orderly use of the recreation resource was initiated in FY 1974 and will continue in FY 1975. Significant recreation programs include providing opportunities in areas of national significance such as in the California-Nevada-Arizona desert, primitive areas, wild and scenic rivers, and protection and enhancement of

historical and cultural features. Also, under conditions of increasing use, added emphasis is given to visitor safety, and preservation and protection of impacted resources and environmental values.

More specifically, the recreation program includes inventory, investigation, development and management of National systems such as wild rivers, trails, and primitive areas. Field examination, data collection, access need determination, interpretive work and program direction for recreation planning are included.

Use supervision involving off-road vehicles and intensive use areas will continue to represent a significant workload. Recreation's input to the Bureau planning system and feasibility studies, impact studies, and preliminary site investigations are all important aspects of the continuing program of recreation management. Within the base level for this program in FY 1975 added emphasis will be given to management of off-road vehicles, the California Desert, National Rivers and Trails, and cultural sites to supplement the increases requested for these programs.



RECREATION ON NATIONAL RESOURCE LANDS

Wildlife Habitat Management: The Wildlife program in FY 1975 will continue to emphasize inventory and analysis preparatory to development of management framework plans. Of equal importance and continued emphasis will be consideration of wildlife habitat in priority energy development areas. Energy mineral development plans contain input from wildlife biologists who specify mitigation stipulations when necessary, and contribute to prescribing appropriate rehabilitation measures.

Habitat management plans are being developed wherever the wildlife resource is a significant consideration, and especially in areas where the habitat is in need of corrective measures such as in the case of rare and endangered species and raptors. A total of 168 terrestrial habitat plans and 11 aquatic plans will have been completed by the end of FY 1974. Development work such as spring development, construction of water catchments, guzzlers and reservoirs, cattle guards and antelope passes is an important part of the habitat management program.

Other continuing work includes cooperation with other agencies in establishing animal damage control areas, and conducting inventories to identify the habitat, migration routes, nesting areas and special problem areas involving fish, waterfowl, large and small game, upland birds, raptors and other species important to ecological balance and health.



WILDLIFE HABITAT MANAGEMENT PLANS BENEFIT PRONGHORN ANTELOPE

32-043 O - 74 - 33

2. Cadastral Survey

Analysis by Activity

FY 1973 Amount Available	1974 Amount Available	1975 Estimate	Increase (+) or Decrease (-) 1975 compared with 1974
$7,881,280	$8,624,000	$12,580,000	+$ 3,956,000

2. Cadastral Survey: FY 1974, $8,624,000; FY 1975 $12,580,000; an increase of $3,956,000. This increase consists of the following:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Position	Explanation
(1) +$3,265,000	+ 20	$4,519,000	54	To increase survey capability for meeting the requirements of the Alaska Native Claims Settlement Act.
(2) + 120,000	--	120,000	--	Annualization of October 1973 pay costs.
(3) + 571,000	--	571,000	--	To pay GSA space costs.
+$3,956,000	+ 20			

Cost Factors Involved in Increases

(1) Twenty permanent man-years at an average cost of $20,000 including Alaska differential $400,000; twenty temporary man-years at a average cost of $10,000, $200,000; travel and per diem costs for the additional personel $80,000; rent, communication, supplies, materials and equipment $45,000; contracts for cadastral surveys $2,540,000.

(2) Salaries and benefits, $120,000.

(3) Rent, $571,000.

Need for Increase:

(1) Alaska Native Claims, +$3,265,000 +20 Positions

An increase of $3,265,000 is proposed in FY 1975 for cadastral survey work required in the implementation of the Alaska Native Claims Settlement Act (ANCSA).

In Alaska, the land transfer requirements of the Alaska Native Claims Settlement and the Alaska Statehood Acts add up to a cadastral workload approaching 150 million acres - 40 million acres under ANCSA, 104 million acres under the Statehood Act, and the remainder under various existing laws. Although 10 million acres of state selected lands have been surveyed to date, the remaining workload is tremendous.

Most of the 62 million acres selected to date by the State has yet to be surveyed. Additional cadastral survey efforts are required to provide for the transfer of title under various land laws - including over 9,000 native allotments, townsites, trade and manufacturing sites and mineral patents. Expedient disposition as supported by cadastral survey location for these individual applications is critical to maintaining a total orderly land pattern in conjunction with the massive transfers to be made under ANCSA.

Native Claims rights under ANCSA will require the survey of 40 million acres in about 200,000 tracts. The Act proclaims that"... Settlement should be accomplished rapidly and with certainty, in conformity with the real economic and social needs of the Natives." The basic objective is to meet the requirements of the Act and "immediately patent" lands after selection. Since surveys are required prior to patent to give legal description and location to the land, the urgency to survey quickly becomes compelling. The cadastral survey goal is to be prepared in terms of manpower and equipment to conduct surveys once selections are made.

The Alaska climate, terrain and the extraordinary workload requires a special management approach, unique techniques and specialized equipment. A substantial program of contract surveys will be initiated in FY 1975 in order to react to the large workload under the short time frame of ANCSA and to better adjust to the major fluctuations caused by the seasonal aspects of cadastral survey work in Alaska. Organizational changes have already been implemented to provide the framework for capability needed to prepare contract specifications, monitor, supervise and check large scale survey contracts and to complete any office work necessary to finalize the survey. Survey priorities include village selections, state selections and individual dispositions under the land laws that encumber Native Claim Selections. The proposed increase will provide for accomplish-

ment of an estimated 3,800 miles of line and for the implementation of a contract survey program. Without this additional capability it will take about 35 years to complete the survey requirements of ANCSA.

(2) Annualization of October, 1973 Pay Raise, +$120,000 0 Positions

This portion of the total proposed increase is required to annualize the October, 1973 pay raise for civilian employees.

(3) GSA Space Costs, +$571,000 0 Positions

This portion of the requested increase will provide for payment to the General Services Administration for space and related services in FY 1975 in accordance with the Public Buildings Amendments Act of 1972 (P.L. 92-313). Based on rates supplied by GSA, which approximate commercial equivalent rates, the estimate requirement for space in this activity is $571,000.

Program of Continuing Work

Cadastral Survey:

Cadastral survey is basic to all major resource programs and is the unique responsibility of BLM on National Resource Lands and on public lands administered by the Bureau of Sports Fisheries and Wildlife, National Park Service, Forest Service, Defense Department, etc. The program is essential for land sales, exchanges and transfers, easement acquisitions, and resource product sales. The Forest Service remonumentation program and the identification of National Park and Indian Reservation boundaries are also requiring considerable effort. Reimbursable surveys are performed by a Portland basedfield office in the states of California, Oregon, Washington, Idaho and Nevada on a priority basis. The Denver Service Center, which has overall responsibility for reimbursable surveys for all states west of the Mississippi River excepting Alaska, performs surveys in the remaining western states. All cadastral surveys east of the Mississippi River are under the jurisdiction of the Bureau's Eastern States Office located in Silver Springs, Maryland.

Cadastral Survey in lower 48 states:

Continuing in FY 1975 will be efforts toward: completing an estimated 2.2 million acres of original and resurveys requested by other agencies; surveying or resurveying 10 million acres of National Resource Lands in support of resource management programs with the goal of providing survey support on a pipeline basis by FY 1979; and refining the formal corner search and evaluation program begun in FY 1973 in forested areas with cadastral survey followup to rehabilitate existing corner evidence or reestablish lost corners. Much of the original surveys were completed prior to 1910 and corner evidence is deteriorating. Continued effort will also be devoted to the accelerating need for oil and gas leasing maps on the Outer Continental Shelf, and surveys required for other energy resource areas.

The long-term potential survey workload necessary to support Bureau programs follows:

	Miles of Survey	Number of Monuments	Man-Years of Survey Effort
Known Survey Needs.....	313,700	619,400	22,953
Potential Additional Survey Requirements depending upon condition of existing surveys.....	210,000	413,000	15,415
Total Potential Needs.....	523,700	1,032,400	38,368

Benefits of the program include the resolution and prevention of trespasses, better public service, more efficient resource management and prevention of further revenue losses. Potential demand in the Cadastral program as shown above would require 100 years to complete at the present funding and manpower capability.

Alaska Cadastral Survey:

Two legislative actions have brought about a massive survey workload involving the more than 345 million acres of unsurveyed lands in Alaska. The Alaska Statehood Act granted the state 104 million acres through selection, and the Alaska Native Claims Settlement Act provides 40 million acres for native allotments and townsites, trade and manufacturing sites, etc.

Selected lands must be surveyed before patents can be issued, and special surveys must be made to provide for title transfer under various public land laws and ANCSA.

The current status of the State Selection survey program is as follows:

Acres patented	6.0 million
Acres on which survey plats are compiled and approved.	8.1 million
Acres field surveys completed	9.7 million
Acres requiring field survey	37.8 million
Total acres selected to date (12-31-73)	61.6 million

To augment the continuing program of Alaska surveys performed by BLM surveyors, our Alaska survey organization is being realigned during 1974 to develop, administer, and monitor an extensive program of contract surveys as discussed in the program increase section.

3. Firefighting and Rehabilitation

Analysis by Subactivities

	FY 1973 Amount Available	FY 1974 Amount Available	FY 1975 Estimate	Increase (+) Decrease (-) 1975 compared with 1974
(a) Firefighting...	$23,242,766	$4,800,000[a/]	$4,800,000	-----
(b) Rehabilitation.	599,357	1,600,000	600,000	-$1,000,000
Total.....	$23,842,123	$6,400,000	$5,400,000	-$1,000,000

a/ Does not include a request of $21,000,000 in supplemental funds to be transmitted separately.

3. Firefighting and Rehabilitation: FY 1974, $6,400,000; FY 1975, $5,400,000; a decrease of $1,000,000 of which consists of:



REHABILITATION ON FIRE-RAVAGED NATIONAL RESOURCE LANDS IN IDAHO

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(a)-$1,000,000	--	$600,000	--	Decrease equal to FY 1974 supplemental appropriation for fire rehabilitation due to unusually severe 1973 wildfire damages in the western states.

Program of Continuing Work

Firefighting: Funds will be used for emergency presuppression and suppression of fires originating on or jeopardizing the National Resource Lands, as well as other lands administered by agencies within the Department of the Interior. The Bureau cooperates closely with other agencies in its fire control efforts. Improved firefighting techniques, equipment and materials are constantly being tested for detention and mop-up: high altitude thunderstorm detection, air-drop of water and chemical fire retardants, and the use of smokejumpers, helitack crews, and aircraft are among the measures used to increase firefighting effectiveness.

Salaries of permanent employees used for fire suppression on an emergency basis during regular duty hours are budgeted in normal program work.

The number of fires in the 1973 fire season approximated 2,600 and compared to an historical average of 1,800 fires. In the conterminous western states an unusually wet spring followed by very dry conditions in the summer and fall made 1973 one of the worst fire years on record; in Alaska fire incidence was well below recent years.

Lower 48 states: Nearly 2,050 fires were reported in 1973; they burned approximately 600,000 acres, three times the last five-year's average. Idaho, Nevada, California, Arizona, and Oregon suffered above average losses.

Alaska: In 1973, there were a total of 450 fires which burned 50,000 acres. This compares with 1,040,000 and 800,000 acres burned in 1971 and 1972, respectively.

Fire Rehabilitation: In this effort, the Bureau conducts emergency rehabilitation work in burned areas to reduce resource and economic losses. Without adequate and timely rehabilitation following wildfires, exposed soil is vulnerable to wind and water erosion, and

streams are polluted by silt and debris.

Watersheds may be permanently damaged resulting in reduced water retention and production capability. Prompt protection of the soil mantle by restoration of the vegetal cover maintains productivity and retards invasion of undesirable vegetation.

The requested funding level of $600,000 is the same as has been requested annually since 1968. It represents an adequate program for a typical fire year, but if more extensive fire damage occurs, supplemental funding is required. However, the timing of the appropriations process does not permit the most effective implementation of rehabilitation practices to properly protect fire ravaged lands. Because of a particularly bad fire year in FY 1974, the regular fire rehabilitation appropriation was sufficient to cover only one-third of the identified need. A supplemental appropriation of $1,000,000 was provided. On the other hand, in the 1968 - 1971 seasons, the regular appropriation has been adequate to cover fire rehabilitation needs.

4. General Administration

Analysis by Activity

FY 1973 Amount Available	1974 Amount Available	FY 1975 Estimate	Increase (+) or Decrease (-) 1975 compared with 1974
$2,966,490	$3,423,000	$4,151,000	+ $728,000

4. General Administration: FY 1974, $3,423,000; FY 1975 $4,151,000; and increase of $728,000 which consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1) +$200,000	+ 5	$3,623,000	187	To meet increased administrative workload associated with increased program activity.
(2) +$452,000	-	452,000	-	To pay GSA space costs.
(3) +$ 76,000	-	76,000	-	Annualization of October pay raise.
$728,000	+ 5			

Cost Factors Involved in Increases

(1) Supplies, materials and equipment, $35,000; additional computer time and operating expenses, $100,000; five man-years @$13,000; $65,000.

(2) Rent, $452,000.

(3) Salaries and benefits, $76,000.

Need for Increase:

General Administration, +$728,000 +5 Positions

The proposed increase is required to enable Bureau administrative capability to keep pace with expanding resource programs, provide payment to GSA for space and related services and annualize costs of the October, 1973, pay raise for employees.

(a) Administrative Support, ($200,000)

Administrative support is crucial to effective utilization of other proposed increases in resource management programs. This added capability will provide financial, personnel and property management, automated data process, procurement and contracting support necessary to keep pace with administrative requirements of expanded resource programs. These requirements include: providing payroll input to the Bureau's automated payroll system for new employees required for other program increases; processing vouchers associated with an increased number of obligation and payment documents; preparing bid invitations and contracts resulting from expanded contracts related to energy, recreation, and cadastral survey programs, and added personnel services requirements.

(b) GSA Space Cost,($452,000)

This portion of the requested increase will provide for payment to the General Services Administration for space and related services in FY 1975 in accordance with the Public Buildings Amendments Act of 1972 (P.L. 92-313). Based on rates supplied by GSA, which approximate commercial equivalent rates, the estimated requirement for space in this activity, $452,000.

(c) Annualization of October Pay Raise,($76,000)

This portion of the total proposed increase is required to annualize the October, 1973, pay raise for civilian employees.

Program of Continuing Work:

The General Administration activity includes the executive direction and administrative support functions consisting of financial management, personnel management, management analysis, procurement, and property management.

Emphasis is placed upon the use of automated systems to accomplish repetitious and routine support work such as payroll, maintenance of ledgers, accounts and equipment inventories, preparing monthly

management reports, and maintaining current information on the progress of work programs and the status of operating budgets, and to provide management with necessary administrative support services. The objective is to provide adequate professional administrative support to all Bureau programs. Other appropriations which receive common services from general administration will continue to be charged at the rate of five percent to the benefiting activity.

Management of Lands and Resources
Personnel Summary

	1973 Actual	1974 Est.	1975 Est.
Total number of permanent positions	3,139	3,437	3,783
Full-time equivalent of other positions	1,812	957	1,077
Average number of all employees	4,793	4,196	4,634
Average GS grade	9.0	9.0	9.0
Average GS salary	$13,866	$14,527	$14,527

ITEMIZATION OF ESTIMATE

Management of Lands and Resources

	Actual 1973	Estimate 1974	Estimate 1975	Increase(+) Decrease(-)
Program & Financing:				
Total obligations...	$97,228,169	$97,061,204	$129,034,000	$ 31,972,796
Unobligated balance lapsing.....	190,471	----	----	----
Transferred to other accounts.....	284,379	424,000	----	- 424,000
Unobligated balance, beginning of year..	- 1,241,223	- 103,204	----	+ 103,204
Unobligated balance, end of year.....	103,204	----	----	----
Appropriation.....	96,565,000	97,382,000	129,034,000	+31,652,000
Obligation by Objects:				
11.0 Personnel compensation.....	56,763,000	55,462,000	64,002,000	+ 8,540,000
12.1 Personnel benefits: Civilian employees.....	6,452,000	6,682,000	7,760,000	+ 1,078,000
21.0 Travel and transportation of persons.....	4,168,000	5,165,000	6,210,000	+ 1,045,000
22.0 Transportation of things.....	2,586,000	2,391,000	3,186,000	+ 795,000
23.0 Rent, communications, & utilities.....	3,455,000	3,460,000	9,300,000	+ 5,840,000
24.0 Printing & reproduction...	506,000	500,000	718,000	+ 218,000
25.0 Other services.	12,443,000	14,282,000	27,166,000	+12,884,000
26.0 Supplies & materials.....	6,536,000	5,923,000	6,905,000	+ 982,000
31.0 Equipment.....	1,968,000	1,839,000	2,100,000	+ 261,000
32.0 Lands & structures.....	1,259,000	1,300,000	1,735,000	+ 435,000
41.0 Grants, subsidies, & contributions	2,000	2,000	2,000	----

42.0 Insurance claims & indemnities..	5,000	12,000	20,000	+ 8,000
Subtotal.....	96,143,000	97,018,000	129,104,000	+32,086,000
95.0 Quarters & subsistence charges	- 52,840	-60,000	-70,000	- 10,000
Total obligations...	96,090,160	96,958,000	129,034,000	+32,076,000

OCS LEASING PROVISIONS

Mr. YATES. I notice that on page 2 you stated:

> The Bureau has expanded lease sales to 3 million acres. Expedient assessment and development of the estimated 377 billion barrels of oil and 1,517 trillion cubic feet of gas under appropriate environmental criteria is essential.

What are the terms of the leases, and what does the Government get on the leases? What is the Government's return on the leases?

Mr. BERKLUND. In the OCS?

Mr. YATES. Yes.

Mr. BERKLUND. First we have the bonus and then we have the rentals and finally royalties that flow from the lease once it goes into production.

Mr. YATES. You don't know what the bonus is at this time because you have people bidding.

Mr. BERKLUND. That is correct.

Mr. YATES. What does the royalty provide?

Mr. BERKLUND. Sixteen and two-thirds percent.

OCS ROYALTY BIDDING

Mr. YATES. And has the Secretary decided yet whether to ask for a greater participation for the Government in these leases, or the royalties? He testified before our committee some time ago and said that he was trying to determine whether to lower the initial bid request and take more in the form of royalties. Has there been a statement of policy on that yet?

Mr. BERKLUND. The determination is, sir, that we will come up with one royalty bid sale, where they will bid the royalty instead of the bonus, in order that we can evaluate the two systems.

We have some real reservations about changing the system because as managers we are concerned about the complete utilization or the conservation of the resource and we feel that there could be some setbacks in royalty bidding. We don't want to move into it until we can assure ourselves that there are ways of taking care of it, such as decreasing royalties, depending on the depletion rate of the wells, and things like this. We are, however, planning right now for one royalty bid sale in the coming year.

Mr. BETTENBERG. It is classed as an experiment at this time.

Mr. YATES. But how can you accelerate your leasing program until you know which is better, whether the present system is better or the increased royalty system is better?

Mr. BETTENBERG. The current intention is to stay with the present system, but to attempt one experiment to see what does happen under those circumstances, but I don't think the Department is all that dissatisfied right now with the current system, frankly.

Mr. YATES. Shouldn't the Department have some questions and some concern about it because of the fact that the system requires a very large bid in order for any prospector to have a chance to get a lease, and this in great measure freezes out independents prospectors, doesn't it?

Mrs. HANSEN. An independent could get into the Outer Continental Shelf drilling, couldn't he?

Mr. YATES. I am talking about a corporation that isn't as large as Exxon. Are we saying that the only ones who can buy your leases are the very large companies?

Mr. BERKLUND. No; because there are small operators and if they have the capabilities either through expertise or equipment they have not had problems to our knowledge in the financial community. We find that there are a number of small but dependable operators operating on the Outer Continental Shelf.

Mr. YATES. Do you have any experience that you have worked up yet to determine whether the Government would make more money for the people of the country through a royalty type lease or a high initial bid lease and a smaller royalty?

Mr. BERKLUND. I don't think that we will be able to answer that until we have conducted the trial royalty bid sale and have had time to do some analysis on it. There are advantages in both, Congressman, definite advantages, but we see shortcomings and problems in both areas, so before you can really equate them we have to try it.

We have theories that one is better than the other but until we have a practice and we have tried it we really don't have the answers.

FOREIGN COUNTRY LEASING METHODS

Mr. YATES. Doesn't the present system differ from the types of leases in other countries? I know the conditions vary from country to country, but other countries which own the oil demand a larger take from the lease through royalties than initial bidding, don't they?

Mr. BERKLUND. Yes, I think it varies from country to country but I think they are witnessing some problems with their methods, too, and I think they are looking, as far as we know right now, to our method of leasing.

Mrs. HANSEN. There was a very interesting article in this morning's paper that said that the United States was the leader in the world in technology for offshore drilling. I thought it was interesting when you consider that America is subject to so much criticism.

I also noticed that India is now having some negotiations for offshore drilling with the United States.

Mr. TURCOTT. With the Republic of China, one of the exchange agreements is on this point also.

Mr. YATES. I asked the Secretary whether the Department had investigated what England was doing in respect to the North Sea drilling, what kind of a lease they were making. He said that they hadn't really looked into it. Have you looked into it to see what the British are doing with respect to a situation which seems to be very comparable to our Outer Continental Shelf kind of drilling?

Mrs. HANSEN. It was very interesting to read that whereas they had originally intended to nationalize, they have now changed their minds and are going to maximize the government returns.

Mr. YATES. That reason I think was explained by a commentator the previous day, to the effect if they nationalize anything they are going to lose Liberal support.

I wonder what kind of a deal they did make and I wonder whether the Department has looked into that question.

Mr. TURCOTT. I am not expert at it but I do know that the initial drilling of Great Britain was subsidized by the British Government. Because of the problem of capital in Great Britain they did not go very strongly at all to the cash bonus system and they had a mixed royalty-government subsidized effort. This was a prototype program for them so now they may be at the point of examining policies, but I wanted to explain another problem, and the Director started on it.

In fact there are two problems.

POTENTIAL PROBLEMS IN ROYALTY BIDDING

The State of California in leasing State lands off their coast went to a royalty bidding process as an experiment where they also had several leases under bonus bidding.

They ran into a problem there that would be duplicated if we go into royalty bidding in parts of the Gulf of Mexico. I know we are going to run into also in that there are other leases, drillings, and wells out there that are set up on another kind of a bid basis. With a new producing lease with wells on a royalty basis, the oil comes into feeder lines, into main trunklines. In the State of California there are just vicious problems and all kinds of lawsuits over trying to gage to see which oil came from one kind of lease setup and what came from a royalty lease.

So when the Government on the basis of the State of California's experience does determine which of these leases will be royalty bidding experiment, I am most hopeful that we offer it out someplace in a new area where we don't have this problem because I don't want to get into the same problem California did.

Mr. VEYSEY. May I ask a question?

Mrs. HANSEN. Yes.

Mr. VEYSEY. Are you saying that the difficulty in the California lease is related to just the physical problem of measurement of the amount of oil or is it chiseling on——

Mr. TURCOTT. All I know is that they had great difficulty determining and gaging even with very close supervision what oil came under one type of lease and what came under the other leases.

Mr. VEYSEY. Isn't it well within the grasp of our physical capability to measure the amount that comes out of any given well? Don't we do that all the time? I don't know what the problem is.

Mr. EDWARDS. There is a problem that if you have two tracts that are on the same structure and you have different types of leases with different royalty rates for the two, then you have a problem because they are on the same structure with oil coming out of the same pool.

Mr. VEYSEY. I understand that. That is a different problem than the one he outlined. He said they were coming out of the same pipeline or something.

Mr. TURCOTT. I went too fast.

The basic problem and what I thought was understood is the example Mr. Edwards just described.

Mr. VEYSEY. That problem always exists.

Mr. TURCOTT. Yes.

Mr. YATES. You are still looking into it? You don't know what the British system is?

Mr. TURCOTT. No. But we could attempt to find out and supply it for the record.

[The information follows:]

THE UNITED KINGDOM SYSTEM FOR LICENSING THE NORTH AND IRISH SEAS

Following is a summary of the OCS licensing system for the United Kingdom.

I. EXPLORATION LICENSES

These nonexclusive licenses, similar to the U.S. geophysical permits, forbid well drilling beyond a depth of 350 meters and prohibit the extraction of any oil or gas thus discovered. They are normally in force for a 3-year period.

II. PRODUCTION LICENSES—TRADITIONAL PROCEDURES

These authorizations grant exclusive rights for drilling and producing petroleum within one or more blocks or groups of blocks. (A block is 250 square kilometers or 98 square miles.) Traditionally, production licenses are issued at the discretion of the Secretary of State for Trade and Industry. The Secretary specifies the criteria he will consider in exercising that discretion when he publicly announces his readiness to accept production license applications. On the last occasion (1971), applicants were judged on the following basis:

(1) If the applicant is a foreign-owned company, to what extent is equitable reciprocal treatment accorded by that foreign country.

(2) How will the applicant's anticipated development plan further rapid extraction of the oil and gas resources in the United Kingdom Continental Shelf?

(3) What prior exploration activity has been conducted by or on behalf of the applicant?

(4) How effectively have those applicants already holding production license performed to date?

(5) What contribution has the applicant made or is planning to make to the United Kingdom's total economy?

These questions demonstrate the Government's desire to realize maximum development by engaging the participation of a large number of companies. Thus, if one company gets the most sought after block, another will probably get the next most attractive.

If the licensee executes his specified work program then his permit remains in force for up to 6 years with the option to retain up to half the designated area. Rental payments are £45 per square kilometer for the first 6 years with subsequent periodic increments. Royalty rates are set at 12½ percent. Licensees must be incorported in the United Kingdom for taxation purposes.

III. CASH BONUS AUCTION EXPERIMENT

In August 1971, 15 of the total 436 blocks offered were made available on a cash bonus auction basis. Applicants were not evaluated on the adequacy of a submitted work program. Instead, the highest bidder was awarded the block although the Secretary of State retained the right to disallow a license to a high bidder for a worthy reason. Consortium bidding was allowed. Though successful in generating considerable Government revenue, the outcome of this experiment has stirred considerable controversy and debate within the United Kingdom.

OCS REVENUES COMPARED TO PRODUCTION VALUE

Mr. BERKLUND The basic question I think wasn't asked, is that on the OCS the total recovery out there has been $13 billion. That is the recovered value of petroleum and other products, and out of that amount $9 billion to date has gone to the U.S. Treasury in receipts.

Mr. YATES. $13 billion has been recovered, did you say?

Mr. BERKLUND. Yes.

Mr. YATES. And of the $13 billion, $4 billion has gone to the lessees and $9 billion to the U.S. Government.

Mr. BERKLUND. To date that is the standing on the OCS, sir.

Mr. YATES. Is that because it is an initial takeaway of the oil, and in time that is liable to change, isn't it? Isn't the percentage likely to change?

Mr. BERKLUND. It will vary some. As we continue the program it will change in time but to date that is the relative standing.

Mr. YATES. How many years is that?

Mr. BERKLUND. Twenty years; since 1954.

Mr. HASTEY. For 20 years we have taken in $9 billion.

Mr. YATES. When did you start drilling the OCS? Twenty years ago?

Mr. HASTEY. 1954 was our first sale. Drilling would have occurred some time later.

Mr. EWARDS. The State actually did it before that time within the State's OCS jurisdiction.

Mr. YATES. And didn't pay you anything?

Mr. EDWARDS. Well, it was within their jurisdictional area.

Mr. YATES. You are talking about the tidelands now?

Mr. EDWARDS. Yes; within 3 miles of shore.

Mr. YATES. Thank you, Madam Chairman.

CONSTRUCTION AND MAINTENANCE COSTS

Mrs. HANSEN. On page 7 you have an item about construction and maintenance.

As you are well aware, the whole Department of the Interior is filled with examples of poor maintenance with increasing maintenance costs. You are often faced with the necessity of reconstruction because maintenance has not been performed on the buildings and facilities that the Department maintains.

Do you have in the Department a continuing evaluation as to the cutoff point on maintaining versus reconstruction?

Mr. BERKLUND. We do have such a problem. I think Ed Hastey will speak to that.

Mr. HASTEY. We have a program that points this up but we don't always get the necessary appropriations in order to replace some of these buildings. We have many very old structures that have probably reached the diminishing point because of very high maintenance costs. Some are structures built back in the three "C" days.

Mrs. HANSEN. Some of your maintenance costs are getting high on some of these facilities; they are not worth anything when you get through.

Mr. HASTEY. On the whole though, our annual building maintenance investment is about 57 cents a square foot, which I think, on the average is very low.

ADEQUACY OF THE DEPARTMENTAL OCS PROGRAM REQUEST

Mrs. HANSEN. For your Outer Continental Shelf leasing program, there is an additional $10.3 million requested, for a total program of $13,760,000. Does this request provide all the resources you need for the recent acceleration announced by the President in your leasing areas?

Mr. BERKLUND. No; it does not. This budget was prepared on the projected 3 million acres that we initially proposed to lease. The

administration has before it now for consideration an amendment to this budget in order to permit us to accelerate leasing to 10 million acres in the calendar year 1975.

Mrs. HANSEN. Well, are you going to have a supplemental budget, or what?

Mr. BERKLUND. Hopefully, it will be an amendment, Madam Chairman. We have presented it in hopes that it will arrive in time for consideration with our regular budget request.

Mrs. HANSEN. Would you kindly tell the Office of Management and Budget that they better get their paperwork done down there. Their supplemental and budget amendment items are still coming up here, one today, another tomorrow, and so on. It will take a computer two weeks to find out what they are finally going to end up with. I think it is absolutely outrageous that they can't keep their paperwork going.

Mr. BETTENBERG. Let me come to the defense of the Office of Management and Budget in this particular case.

The decision to accelerate leasing was made after the fiscal year 1975 budget numbers were put to bed.

Mrs. HANSEN. Let us get it. When were your budget numbers put to bed?

Mr. BETTENBERG. Those were all finalized in early January.

Mrs. HANSEN. But this energy crisis has been going on for months.

Mr. BETTENBERG. But the decision to expand the leasing program wasn't announced until late January. It wasn't recommended by the Department until early January.

Mrs. HANSEN. But this is March.

Mr. BETTENBERG. We have in hand and have submitted to the Office of Management and Budget a portion of the amendment that will be required—we have submitted the portion for the Bureau of Land Management. We have in hand now at the departmental level a request from the Geological Survey and the Solicitor's Office for the remaining portions. At this point in time we haven't yet been able to present to OMB our total picture on the accelerated leasing program.

We are hopeful that we will be able to have that there tomorrow night.

Mrs. HANSEN. You are not the only agency in this fix. We get budget requests that don't have justifications. We get statements changing somebody's mind about something. How on earth do you think an Appropriation Committee is going to operate if they don't get a coherent picture from OMB?

Mr. BETTENBERG. I think we are making it very difficult for you this year, particularly in this case. There has been the problem in getting the budget amendments together at the departmental level. The questions with regard to the geophysical knowledge that you need to maintain a 10 million acre leasing program is one aspect.

Mrs. HANSEN. You come back to my old point.

Long, long ago our natural resource budget should have had more attention. Outer Continental Shelf leasing has been with us since 1954.

Mr. BETTENBERG. I don't think that the Department would deny that.

But in the case of the Outer Continental Shelf I think we properly considered the Department to have adequate resources for the program levels, the leasing levels, that we have had in the past.

Where we have gotten into a problem now is that we have undertaken two major expansions in the space of 3 years and I think that we feel satisfied at the departmental level with the amounts that the administration has endorsed for those programs.

Our problem right now is simply understanding within the Department exactly what it takes to maintain this new acceleration. The questions involved in understanding that are very difficult and have been a matter of great debate both in the Geological Survey as well as elsewhere in the Department.

Mr. EVANS. Is it possible to hire and train enough personnel in the limited period of time?

Mr. BERKLUND. We believe that we can hire the required number of people and begin training in areas where this is necessary. We have already begun preliminary actions so that new people can be hired as soon as practical. The goal of leasing 10 million acres pertains not only to calendar year 1975 but may apply to the years following as well. People hired early in fiscal year 1975 to accommodate requirements of the expanded leasing goal for calendar year 1975 will be in an even stronger position to accomplish that or some other goal in 1976 and beyond.

FUNDING FOR NATURAL RESOURCES

Mrs. HANSEN. The Geological Survey has been well aware of its fiscal deficiencies. You have been making surveys for many years. How long have you been in that business?

Mr. BETTENBERG. For a very long time.

Mrs. HANSEN. What long time?

Mr. BERKLUND. Since 1785.

Mrs. HANSEN. You will be to 2085 at the rate you are going.

Mr. BETTENBERG. We have lively discussions with OMB every year on budget numbers, as you are aware. Within the total funds available to the Department, we felt other things needed the higher priority attention.

Mrs. HANSEN. But I am criticizing the overall budget perimeters given to the Department of the Interior. I think it is a perfectly legitimate criticism.

Mr. BETTENBERG. I think the Secretary has testified in accord with what you say.

CONTRACTS FOR MARINE STUDIES

Mrs. HANSEN. He is thoroughly in agreement but the problem is that the policymakers at the Office of Management and Budget change the system.

In your research on the marine environment, will you be doing this work yourself, or contracting it out?

Mr. BERKLUND. Most of the work that we expect to do, Madam Chairman, will be base line impact studies. They will be done by contract.

Mrs. HANSEN. With whom will you make those contracts?

Mr. BERKLUND. They are research projects and are put out in the form of a request for proposals.

Mrs. HANSEN. And they come in and submit the proposal. That is, you submit the total needs and then the proposal is made on the kind of ability they have to perform the function; is this correct?

Mr. BERKLUND. That is correct. Usually in the cases of these base line studies it is a university or some private institution that comes in with a project proposal. We then negotiate prices for the better ones.

Mrs. HANSEN. Do you want to give us a list for the record of some of the contracts that you have made in the last couple of years?

Mr. BERKLUND. Yes, ma'am, we would be delighted to do that.

[The information follows:]

OUTER CONTINENTAL SHELF CONTRACTS AWARDED FISCAL YEARS 1973 AND 1974

Seven contracts have been awarded during the last 2 years to provide information on the Outer Continental Shelf. A description of the contracts follows:

Contract	Contractor	Amount	Fiscal year
Environmental and socioeconomic study of mineral leasing on the OCS in the North Atlantic from Bay of Fundy to Sandy Hook, N.J.	Research Institute of the Gulf of Maine	$163,000	1973
Environmental and socioeconomic study of mineral leasing on the OCS in the mid-Atlantic from Sandy Hook, N.J., to Cape Hatteras, N.C.	College of Marine Studies, University of Delaware.	39,000	1973
Gulf of Alaska OCS study in parts of Cook Inlet and the Aleutian Chain to Unimak Island.	Arctic Environmental and Data Center, University of Alaska.	66,000	1973
Development of an oil transportation computer model	Stanford Research Institute, Menlo Park.	52,000	1973
Southern California offshore continental borderland area study (socioeconomic aspects of OCS leasing).	Southern California Studies Conservation.	117,000	1974
Flower garden reefs location survey	John E. Chance Associates	4,000	1974
South Atlantic data inventory	Virginia Institute of Marine Sciences	125,000	1974

OUTER CONTINENTAL SHELF ENVIRONMENTAL ASSESSMENT TEAMS

Mrs. HANSEN. Please explain the work of your environmental assessment teams.

Mr. BERKLUND. As you know, Madam Chairman, we have opened three new offices for Outer Continental Shelf environmental assessment, one in Alaska, one on the Pacific coast in Los Angeles, and one on the east coast in New York. We are presently working with the Council on Environmental Quality and others in developing the information needed. We will be expanding those offices in order to round out the expertise in each office. They will gather available resource and socioeconomic information and combine it with the contract studies that will be required to fill data gaps so that we will be in a position at the earliest possible date to make and carry through decisions about leasing in these areas.

Mr. EVANS. To what extent are environmental assessment teams tied to the leasing program?

Mr. BERKLUND. The environmental assessment teams are directly tied to our leasing program. One of the Bureau goals regarding Outer Continental Shelf leasing is extensive prelease knowledge of environmental conditions. This information is gathered and assessed by the teams and serves as the basis for the environmental impact statements which must be prepared prior to each lease sale. The proposed fiscal year 1975 increase for environmental assessment teams will round out staffing to approximately 13 to 14 members per team in the Gulf of Mexico, Alaska, Atlantic, and Pacific. In addition to oil and gas leas-

ing, there is an increasing interest in development of hard minerals on the Atlantic Outer Continental Shelf which will also be evaluated for environmental impact by the Atlantic assessment team.

ATLANTIC OUTER CONTINENTAL SHELF ACTIVITIES

Mrs. HANSEN. You have an Outer Continental Shelf office on the east coast?

Mr. BERKLUND. Yes, ma'am; New York.

Mrs. HANSEN. You have several States in the East which have restrictions laid down on anything that will cause any disturbance to the environment. What kind of discussions have you had with the States and what kind of problems are you going to encounter?

The East is a great user of oil and gas but they want it all to come from someplace else. Senator Mansfield has said that he didn't think that the West should be destroyed to provide the East with power and fuel.

So I am wondering what kind of discussions you have had. What are you doing to make sure that if there is to be offshore leasing, there is adequate protection for the environment? What are you going to do about proposed pipelines and safety on your rigs? What do you propose to do about tanker loadings or unloadings, and so on?

New Hampshire has just turned down a refinery. Maryland, I think, has a refinery that is in dispute.

Mr. LONG. It has been turned down, definitely withdrawn.

Mr. EDWARDS. Madam Chairman, I might try to respond to that rather comprehensive question.

What we have in our New York office is the start of an environmental assessment team. It is now a team of about five people. With our proposed increase, it will consist primarily of oceanographers, wildlife-fisheries biologists, urban and regional planners, economists, and support personnel. They are and will continue gathering basic data that is available at this time through published material already on hand and through information that is collected through contracts. It will be used to describe what is the environmental situation in those Atlantic areas.

While they are doing that, they are also making contacts with all of the States along the coast, contacting their resources divisions, the State divisions of resources management. They are working with the people who are involved with planning and resource management as far as the States are concerned. They have been in contact with representatives of each of the Governors offices and talked to them in terms of the environmental studies and assessment they are doing and potential that might be there in the way of development in the future.

The Council of Environmental Quality has done the same thing with their studies, developing communications with all of the State governments and looking into what the potential might be and what might be the State attitudes in the various coastal area.

As you indicated, the attitudes of the States a year ago were quite strongly opposed to leasing. I am not sure that that attitude has changed a great deal except that we do see in some States the possibility of tempering. They are in kind of a wait-and-see proposition.

They haven't exhibited strong opposition lately, but they haven't strongly supported us either. So they are in a kind of wait-and-see posture. They have, however, volunteered to cooperate with us and to help with the collection of data in these studies.

SOURCES OF OIL SPILLS

Mrs. HANSEN. Please place in the record, the percent of oil spilled from tankers versus drilling and other spills.

Mr. EDWARDS. Yes. We have a table and will be glad to insert that in the record.

[The information follows:]

The following U.S. Coast Guard statistics depict sources of polluting spills in U.S. waters.

POLLUTING SPILLS IN U.S. WATERS, 1972

Sources	Volume in gallons	Percent of total
Onshore facilities	10,301,542	54.8
Vessels	6,503,298	34.5
Pipelines	1,237,227	6.6
Offshore facilities	237,063	1.3
Land vehicles	172,519	.9
Miscellaneous and unknown	354,083	1.9
Total	18,805,732	100.0

It is significant to note that offshore facilities account for less than 2 percent of total spills in 1972.

SECONDARY CONSIDERATIONS OF OCS LEASING

Mrs. HANSEN. Mr. Turcott.

Mr. TURCOTT. Just because it was a long question, one point that was not emphasized is the fact that under the new CEQ guidelines, and this is particularly pertinent in what we call frontier areas such as the Atlantic, Gulf of Alaska, and the west coast, we must take into consideration in our environmental assessment work, what are called secondary effects; secondary only because they are not directly related to marine operations. This covers your point about pipelines, refineries, tank farms, labor pools, schools, and so on.

The whole onshore situation changes if refining capacity isn't available, the pipelines aren't available, and they aren't in the frontier areas, so this is a very involved thing that we are working on with the State governments, the State institutions and private groups. They help with data, feasibility, alternatives; and as Mr. Edwards said, the willingness to help, irrespective of what any final conclusion might be, has been much better this year.

CORAL REEF MANAGEMENT

Mrs. HANSEN. On your pipeline and coral reef management, is that coral reef management off Florida?

Mr. BERKLUND. Yes. It goes beyond that. We are analyzing studies of the various coral reefs themselves for the development of lease stipulations. We will have to improve our operations in order to get development in the reef areas, and it involves such things as basic and ap-

plied research, improved stipulations, and more careful tract selections.

We have another major reef off Texas, too.

Mr. EVANS. How much do you know about the impact of drilling activities on coral reefs?

Mr. BERKLUND. We do not currently have a great deal of information on the specific impacts of oil and gas development on coral reefs because to date little activity has taken place near such reefs. Based on existing and future studies of coral reefs, however, we can better anticipate possible impacts and can then include appropriate stipulations in the leases to prevent or mitigate these impacts or delete potential tracks from leasing where damages to reef communities would be excessive.

Mr. EVANS. What effect has this had on leasing in those areas?

Mr. BERKLUND. To date it has had little effect. We are starting up studies in areas leased in our December 1973 sales off Mississippi, Alabama, and Florida which contain coral reef communities. We are documenting the exisitng situation to serve as a base against which to measure the impact of development when it occurs. This comparison will influence our future decisions on leasing in areas containing coral reefs.

Mr. EVANS. Are leases being held up until more is known?

Mr. BERKLUND. Not at this time. We believe that the present stipulations contained in the leases followed up by careful monitoring will, as far as we can tell, protect to a great extent the reefs from adverse impacts as a result of oil and gas development.

RESEARCH ON MARINE ENVIRONMENTAL IMPACTS

Mr. EVANS. Do you know where the greatest impact on marine environment will be and are most of your funds budgeted in that area?

Mr. BERKLUND. Elimination of basic uncertainties about the impact of OCS operations on the marine environment is one objective of our fiscal year 1975 program. We are proposing a substantial increase to conduct studies off Mississippi, Alabama, and Florida, southern California, south Texas, and other frontier areas to establish a base of data describing existing conditions. This base data will be used for comparison with conditions resulting from development to measure environmental impact. Approximately 35 percent of our base funds are also being expended to gather data and assess environmental impact of proposed leasing.

Mr. EVANS. Is research tied to the leasing program and does it have any effect on that program?

Mr. BERKLUND. Yes, our research efforts are directly tied to our leasing program. Our contract research studies in the base program are directed toward gathering data necessary to evaluate future proposed sales. In addition, our fiscal year 1975 program proposes research on the marine environment with special emphasis in frontier leasing areas as I discussed before. All of these studies are directly tied to facilitating leasing operations including new lease stipulations which might be required.

ENERGY RELATED INVENTORY AND PLANNING

Mrs. HANSEN. For your Inventory and Planning for Energy Areas, you have an increase requested of $1,050,000 for a total of $6,590,000. Do you want to explain that?

Mr. BERKLUND. The inventory and planning we are talking about here is in our uplands area.

Mrs. HANSEN. Obviously you haven't been in the Outer Continental Shelf.

Mr. BERKLUND. Really we should be. I have to admit that probably we haven't done the amount of planning on the Shelf that we should but we are proceeding now with pipeline planning on the Outer Continental Shelf.

What we are talking about on shore is acceleration of an additional 11 MFP's, or management framework plans in the coal areas of Montana, North Dakota, Wyoming, and Utah, as well as two potential geothermal leasing areas in California and Nevada.

COAL EXPORTS TO JAPAN

Mrs. HANSEN. I want to bring up a subject that I brought up the other day with the Bureau of Mines. In discussing coal production from Montana and North Dakota, you say:

"Reports have predicted that new powerplants alone could create over 25,000 jobs in eastern Montana."

At the same time I see that there are some negotiation under way relative to the sale of the Glasgow Air Base to Japan for the purpose of digging coal and exporting it to Japan. What kind of planning is involved? Do you know anything about that?

Mr. TURCOTT. I read about it in the paper. That is all I know.

Mrs. HANSEN. You better dig into it, if you propose to have Japan come in and buy the Glasgow Air Base site.

Mr. TURCOTT. We don't propose it.

Mrs. HANSEN. We better begin to weigh everything and keep our options open. I presume they are going to haul the coal on American railroads and use American ports.

Mr. TURCOTT. When we get to the coal leasing portion of the appropriation requests, we will talk about our coal leasing and allocation program, a system of determining coal allocations, and a lot of this must be in response, of course, to supply and demand.

If the Japanese come in with this kind of thing it will be put right into our planning and leasing program process.

Mrs. HANSEN. It doesn't make sense if you are trying to develop energy for the United States and at the same time selling part of Montana to Japan.

ENVIRONMENTAL ANALYSIS PROGRAM

For Environmental Analysis for Energy Actions, an increase of $2.3 million is requested, for a total of $4.305 million. Will this do the job?

Mr. BERKLUND. Yes, Madam Chairman. At least it was adequate at the time we prepared our budget request.

We will have to continue to use all the expertise we have in our line programs but with the added right of way applications and off-

site applications that we are now receiving from industry the adequacy to take care of those needs is now in question.

Mrs. HANSEN. How come it takes the Forest Service $28 million to do their environmental assessments? You have more land than they have.

Mr. HASTEY. This is on the environmental workload related strictly to energy actions. We have additional funds over and above this that would be related to other things.

Mrs. HANSEN. What is your grand total for environmental work?

Mr. BERKLUND. It will be about $8 million in fiscal year 1974, Madam Chairman, exclusive of the OCS.

UPLAND ENERGY MINERALS MANAGEMENT

Mrs. HANSEN. In your upland energy minerals management you have requested an increase of $1.330 million for a total of $3.415 million.

Mr. TURCOTT. This is a category that covers three resources—coal, oil shale, and geothermal steam. The coal increase comes to $1.050 million, the oil shale $100,000, and geothermal steam, $180,000.

Now, it is significant that 85 percent of the Nation's known supply of low-sulphur coal occurs in the public lands administered by the Bureau. We are now in the beginning of an overwhelming demand for this coal, as the Director pointed out. Private coal sources or current Government coal leases have produced plans for new railroads, transmission lines, haul roads, and all the rest of it, to develop this coal.

ENERGY CONSERVATION AND RESEARCH

Mr. EVANS. Is it one of the principal goals of your leasing program to use the public lands and resources to achieve a level of supply and to sustain the American way of life, unchanged from what it is today? Would not programs of energy conservation be more beneficial?

Mr. BERKLUND. The BLM certainly supports energy conservation efforts. At the same time, we believe that energy needs based on even conservative use estimates of energy are growing, and that the public land resources should contribute to meeting these needs.

Mr. EVANS. Might it not be wiser to develop our resources more slowly, using additional funds for research to determine the most efficient use of fuels, as well as the least environmentally damaging manner of mining these resources on the public lands?

Mr. BERKLUND. With regard to the second part of your question, the BLM program for fiscal year 1975 recognizes the need for such research. We are proposing $1.4 million for reclamation data gathering and analyses on potential coal and oil shale areas. This will allow prediction of reclamation effectiveness and aid in making land use decisions to avoid areas where mining would not be acceptable. Of course, we are also proposing $9.7 million for data collection and studies in frontier OCS leasing areas. While realizing the need for research, we also recognize the need to increase the supply of energy resources. Environmental analyses and statements, if necessary, are prepared prior to issuance of leases and surface protection stipulations are included in the leases. We are striving to present a balanced

program responsive to both needs. I believe the budget for both AEC and the Department contain substantial increases for more efficient fuel uses.

COORDINATION OF COAL PROGRAM WITH USGS

Mr. EVANS. I have a question about cooperative programs with USGS. On page 34 you list a number of programs that seem to be similar to efforts of USGS, including inventorying federally owned coal and projections of the demands for coal. To what extent do you cooperate with them in these matters?

Mr. BERKLUND. BLM is working closely with the USGS in the preparation of coal potential development maps and in ranking coal reserves. The two agencies are holding weekly or bi-weekly meetings in order to prevent any overlap of effort in these areas. BLM is currently developing presale evaluation procedures which, when completed, are expected to be adopted by the USGS. BLM is also working with the Bureau of Mines in developing projections of coal demand.

Mrs. HANSEN. The committee will recess until 1 o'clock.

AFTERNOON SESSION

UPLAND ENERGY MINERALS MANAGEMENT

The committee will come to order.

Please give us a general picture of the upland minerals managerial responsibilities you have and your capability to perform them.

COAL LEASING

Mr. TURCOTT. Let's real briefly talk about the coal leasing under the 1920 Mineral Leasing Act. We have about 534 existing coal leases. There hasn't been a new large-scale coal lease issued for 2 years.

There have been four small leases issued with respect to the Secretary of Interior's short-term leasing policy which I will get to in a moment.

In the past, coal leases have been issued three ways: First, by someone just applying for a coal lease and in an area that is not certified to us by USGS as a known coal leasing area. That is a noncompetitive lease.

Secondly, the Mineral Leasing Act provides for a person's right to a prospecting permit. An applicant applies to the BLM for such a permit.

Mrs. HANSEN. What puts it in a noncompetitive status, certification to you by USGS?

Mr. TURCOTT. Yes. A prospecting lease is an old incentive of the 1920 Mineral Leasing Act wherein an applicant can explore and drill to find coal in an area that USGS certifies is not known for its coal deposit. If he finds it, again with USGS certification, has found a workable economically feasible deposit, then a permanent-type lease is issued and all he does is pay the rental and royalty.

The third type is a competitive lease in which applications are secured, or the Bureau at its own motion may put up areas for coal leasing in a known coal area. A competitive lease is issued, based on a front end cash bonus bid followed by a rental and royalty.

STATUS OF EXISTING COAL LEASES

I have an age analysis of the 534 leases that shows 110 of these leases are 20 years old or older.

Mrs. HANSEN. How long do they run?

Mr. TURCOTT. They are an indefinite term, to the extent that if somebody develops them, they have the right to mine the full economic resource of coal that is there. But there is a key provision in all of the leases that at the end of each 20-year period the lease is up for renewal, and at that time new mining plans, new terms and specifications, new environmental or conservation factors, new rentals and royalties can be added.

Mrs. HANSEN. How many of these are up for renewal?

Mr. TURCOTT. That is the point I am getting at. Four hundred and twenty-four of these have at least 10 years to go, some of them more. One hundred and ten of them are older than that and they will be coming up for renewal.

IMPLEMENTATION OF A COAL LEASING POLICY

I will get to the point of old leases in a moment if I may, ma'am.

Now with the tremendous interest in coal in the last few years especially in the northern Great Plains and the more southern Rocky Mountain States and with this many leases on hand, just Federal leases, not including additional Indian land leases, private leases or State leases, we have to reappraise the leasing program.

Mrs. HANSEN. Who monitors the Indian land leases?

Mr. TURCOTT. USGS does it normally for the Indian tribes on a contract basis.

With this much leasing already in existence, with the need for water, the dawning of the environmental era and the land use planning era, the Secretary said, "First I am going to place a moratorium on the issuance of any more prospecting permits. I will honor those in existence if they in effect prove up on them and find a workable deposit."

But he feels, and he is so right, that there is no single entity of government, local, State, or Federal or the private sector, that has sufficient authority unilaterally to go into a opportunistic-oriented, coal-developed, coal-oriented policy any longer. So he initiated an interagency study, EPA, Department of Agriculture, and various bureaus of the Department of the Interior to make up what is called the northern Great Plains study. It is an effort to try to get at what are some of the major environmental factors of concern, what are some of the future needs for coal, what is the socioeconomic secondary effect with respect to coal development in the northern Great Plains.

At the same time he said that the Department of the Interior, to meet the requirements of the National Environmental Policy Act, must develop what is called a programmatic environmental impact statement. This statement would not be used necessarily for any one single coal leasing sale but it is an overall umbrella to try to describe the entire coal leasing program in terms of where it has been, the traditional approach, to describe the coal resources both to the kind of coal and where it is located including the Eastern United States be-

cause the Bureau of Land Management has rather sizable mineral estates in the East.

In addition to that, the surface environment in terms of biotic zones, the middle Rocky Mountains, the northern Great Plains, the Northwest, and Alaska are described. The technology of coal mining, both surface mining and underground mining is described.

All of this comes up in a very general way with some of the potential environmental effects that comes from coal leasing, from the socioeconomic factors and the mitigating measures.

In addition to this programmatic statement, the real proposed action is a leasing program procedure called EMARS. This energy minerals allocation recommendation system, will apply to a future long range leasing program in which preliminary leasing goals are established through an allocation process. Working through tentative leasing targets and through our land use planning system, certain possible leasing areas will be identified by our district managers and aggregated through the State director to the Director and on to the Secretary of the Interior. The results of this process will aid in finalizing leasing goals in each BLM field office.

Working with the Department of the Interior, a tract selection process will help develop at least a 1 year site specific leasing schedule with perhaps more general areas for a 3- to 5-year period.

Then, of course, this would be followed by the general leasing process.

Now in implementing this coal leasing program, EMARS, several things are done. We analyze existing coal leaseholds. We are accelerating the preparation of mineral ownership programs. We are gathering all of the existing geologic data with USGS help to fill in the data gaps and there are many. We are trying to complete the mapping of coal development over some 70 areas in the West.

And, of course, as I said, we go through our multiple use planning process in the field, right out there in the little red schoolhouse, where we go public with the possible coal leasing proposals.

We just had legislative hearings on this whole matter yesterday and the Department people testified that first we are going to finish the first interim Northern Great Plains resource program report, which should be due about the first of June.

Secondly, the coal programmatic environmental impact statement will finally be received about the first of September. A formal draft will be published this month, probably next week, for comments.

In addition to that, we are to continue working, perfecting and upgrading the data that is used in this EMARS analytical process. And then subsequent to the first of September, the Secretary of the Interior will work with FEO people, and with the Office of Management and Budget, to determine what if any leasing schedule will be issued this year, how target allocations or target goals for coal leasing will be presented to the public, and how we will carry on with this program.

Mr. EVANS. I have some questions on your EMARS system. As I understand the size, timing, and location of coal lease sales are determined through a system that relates coal reserves to energy needs by computer modeling techniques. What is the state of development of this system?

Mr. BERKLUND. The computerized allocation model is expected to be operative by fiscal year 1976.

Mr. EVANS. What data do you feed into this system to determine energy needs?

Mr. BERKLUND. Four types of data are fed into the allocation model to determine target allocations for the States. These include the capability of existing and proposed industry, national and regional energy and coal demands, coal ownership data, and other resource data. The allocations produced by the model will be reviewed and if necessary, adjusted to reflect policy decisions.

Mr. EVANS. On page 25 you state "Ways must be found to approximately double energy supplies again in the next 11 years to sustain the American economy and way of life?" Does the estimate of energy needs that you feed into the allocation model determine how much leasing there must be?

Mr. BERKLUND. The quotation you cited refers to all forms of energy. Initially, EMARS will relate only to coal. The State allocations will be only a minimum coal leasing goal and will be subject to change based on such things as unusual demand or policy considerations.

Mr. EVANS. Is not this a rather extreme estimate of energy needs by 1985?

Mr. BERKLUND. We do not believe that it is extreme. While the per capita consumption of energy may decrease through the practice of energy conservation measures, overall energy consumption will increase as a result of growth in population. In addition, as we move toward the national goal of energy self-sufficiency by the 1980's, we must increase domestic energy production. The President has announced his desire to increase the use of coal from its current level of approximately 17 percent of the energy supply to around 45 percent. Two-thirds of the coal under Federal lease, covering approximately 15 billion tons, is already committed under contract from the lessee to utility companies and other major coal users. The National Petroleum Council estimates that unless we increase production, we will be importing 53 percent of our petroleum requirements by 1985 which can have serious balance of trade and national security implications. These examples and similar needs for other energy resources lead us to believe our projections are reasonable.

INCENTIVES FOR DEVELOPMENT OF EXISTING LEASES

Mr. EVANS. I understand that in 1973, 600 million tons of coals were consumed and that of this only 2 percent came from Federal land. I believe that about 15 billion tons of coal are presently under lease. On page 33–34 you discuss accelerated leasing and Federal-motion leasing. But in light of the above figures, is accelerated leasing necessary, or even desireable?

Mr. BERKLUND. Yes, again we believe that accelerated leasing is necessary in order to meet the national goal of energy self-sufficiency. In light of the existing oil shortages, greater emphasis is going to be placed on coal, and coal consumption will increase many fold, particularly the low sulfur coal we administer. We cannot rely on coal already under lease to accommodate this increased consumption as I said before, much of it is already committed under contract. In addition, most of our coal leases have been issued since 1960 and are not subject to review for 20 years. These leases allow payment of escalated rental in lieu of production. The Department currently is investigating

legal means of stimulating production on these existing leases. In order to respond to the growing coal demands in a timely manner in the light of these factors, we believe accelerated leasing is necessary.

Mr. TURCOTT. A very key point in this whole thing, and I know you want to get to it, is what are we going to do with all of these existing leases that do in gross terms have 15 billion tons of recoverable resource involved. Of this amount about 10 billion tons are committed now in terms of long-term contracts with utility companies and other users. So they have about a 5-billion-ton uncommitted reserve on these existing leaseholds.

In last year's testimony, based on the Solicitor's advice, I said there was very little we could do other than at this 20-year lease renewal period to encourage or provide an incentive for development. But the Solicitor's Office now is developing a theory of law that may be utilized in the basic policy decisions that are coming up late this summer. That is that we can move into these leases at other than the 20-year renewal period if the leasee is using a provision in his lease whereby he pays advance royalties in lieu of production. Traditionally these people that hold all of these leases that are not in production come in with the rather straight simple statement "Due to economic reasons or transportation problems or mining technology or lack of equipment I cannot develop coal this year." So he pays his advance royalty and we let him off for a year and this process gets repeated every year.

The lawyers have told us up to this point that there is a savings clause in the lease in that you can't break in and require development. But they now feel there may be an area in the law where we can, under the clause that provides the Secretary discretion, not allow them to just pay the advance royalty but will also require reasonable development and production on the lease within a certain period of time pursuant to a mining plan and all of the rest of it.

So this may be a major breakthrough. I can't say it is the final fact. But if the attorneys in the Department do say that this is firm, it will have a significant effect on any decisions for new long-term leasing in the future.

MINERAL RIGHTS ON RAILROAD LANDS

Mrs. HANSEN. Can you tell me to what extent the railroad lands which were granted carried the mineral rights with them, and what percent of those lands if they did have mineral rights are under production or exploration?

Mr. TURCOTT. I can answer the first question, ma'am. On any of the grant lands to the Northern Pacific they got fee title to both the surface and mineral estate. As to the production off the railroad grant lands in whatever ownership they are in now, I couldn't give it to you.

Mrs. HANSEN. As you are well aware, that right-of-way goes through some of the richest coal regions in the midcontinent and in the West. They had a sizable chunk of land given them.

Mr. TURCOTT. We happen to have a picture here of the railroad land grant area in northern Montana involving the Northern Pacific. The green is national forests, the salmon colored land is Indian reservation, I believe the Cheyenne. This yellow with the hatchers denote the pure unreserved public domain where the Bureau of Land Management manages both the surface and minerals estate.

SURFACE AND SUBSURFACE OWNERSHIPS

These gray areas with hatchers are very significant. In one case it shows that the mineral estate is owned by the Federal Government in whole and in the other case, I believe it is designated by the slanted hatcher, is owned in part. So you can see it is very complicated.

When I say in part, it could be anything from a one-sixth future interest of just the oil and gas or it might be the oil and gas only in that the coal went with the fee surface owner and so forth.

The white is the former or maybe still currently in Northern Pacific ownership. The checkerboard land results from their land grant which the railroad or any successor in interest has fee to the surface and the mineral estate.

All of this hatchered gray shows that the surface is private. It was probably patented to some homesteader subsequent to 1920 under the 1920 Stockraising Homestead Act where they got a full section but the Federal Government kept the mineral estate. So you can see in terms of proper land use planning, proper development of any one mine on any one of these ownerships, consideration of environmental effects, and the conservation of the nonremovable resource itself, we have to be heavily involved.

Mrs. HANSEN. There is a lot of checkerboarding.

Mr. TURCOTT. Yes, it is. Although I admire the man tremendously, I don't believe Senator Metcalf saw a map of this kind, because the effect of the amendment he entered on the floor last year to the surface mining bill would force the coal mining onto the national forests or the BLM administered lands.

Mr. WYATT. I would like to ask Mr. Turcott, if the Mansfield type amendment is adopted, where is the coal going to come from for the MHD process in Montana?

Mr. TURCOTT. It will have to come from areas as I mentioned, the national forest or areas of solid ownership of public land in fee, or areas where it is solid State or private or Indian reservations. There are existing coal leases or prospecting permits on the Cheyenne lands. There are existing permits on the Crow just to the left and each are now being negotiated at new terms.

Mrs. HANSEN. The Northern Cheyennes are working right now on some kind of a program, aren't they?

Mr. TURCOTT. Yes; and the Crow Indians are attempting to get their contracts renegotiated as to royalty.

Mr. WYATT. The MHD process, if perfected and put to use, will require huge quantities of coal to justify the investment we have made.

Mr. TURCOTT. And water.

SURFACE REHABILITATION AND PROTECTION

Mrs. HANSEN. For Surface Rehabilitation and Protection you are requesting an increase of $2,050,000 for a total of $3,100,000.

Mr. BERKLUND. This is to provide for the protection and rehabilitation of onshore energy mineral areas. It covers the initial development planning on through the production and reclamation phases.

In the area of reclamation we have a new request for $1.4 million. It is essentially an applied research and data collection program.

32-043 O - 74 - 35

Mrs. HANSEN. Will this apply to all of the public land areas?

Mr. BERKLUND. What it is, Madam Chairman, is a program where we will analyze the soil and the water characteristics in potential leasing areas. We are working very closely with the Forest Service SEAM program. They will be giving us the benefits of that study and we evaluate it and apply it to our own data to see what lands should be leased, revegetated and how they can best be rehabilitated. We have found out that different subsurface horizons of soils are probably superior to the surface soils, and in this program we are working to get the best type of reclamation we possibly can.

OIL COMPANY INTEREST IN GEOTHERMAL STEAM

Mrs. HANSEN. On your geothermal leasing, have you any indication as to whether companies who own other sources of energy such as coal and oil are bidding on the geothermal lands?

Mr. BERKLUND. Yes. I think Frank can speak to the bidding pattern. There has been interest from both utilities and companies that hold other energy sources.

Mr. VEYSEY. May we have in the record at this point what the bids turned out to be?

Mr. BERKLUND. We have an analysis here as to who has been the successful bidders by tracts in our first California sales and we can supply it for the record.

Mrs. HANSEN. We will place it in the record at this point.

[The information follows:]

TRACT ANALYSIS OF GEOTHERMAL STEAM LEASE SALE HELD IN CALIFORNIA ON JAN. 22, 1974

DETAILS ON A TRACT-BY-TRACT BASIS, THE NAMES OF BIDDERS, AMOUNTS BID, AND LEASES AWARDED

KGRA [1]	Tract No.	Names of bidder	Amount of bid
Geysers	1	Shell Oil Co.[2]	$3,200,000.00
Do	1	Signal Oil & Gas Co., et al	1,516,660.00
Do	1	Union Oil Co. of California	774,867.60
Do	1	Thermogenics, Inc	264,420.00
Do	1	Geothermal Resources Intern., Inc	50,333.40
Do	1	Chevron Oil Co	35,755.20
Do	1	Northern California Power Agency	23,400.00
Do	2	Shell Oil Co.[2]	1,300,000.00
Do	2	Union Oil Co. of California	1,163,953.18
Do	2	Natomes Co	451,000.00
Do	2	Thermogenics, Inc	193,284.00
Do	2	Dow Chemical Co	38,516.87
Do	2	Northern California Power Agency	15,340.00
Do	3	Thermogenics, Inc.[2]	22,050.00
Do	3	Cecil Folmar	11,450.00
Do	3	California Geothermal, Inc	4,749.50
Do	3	Union Oil Co. of California	4,707.50
Do	4	____do[2]	48,314.36
Do	4	Signal Oil & Gas Co	28,381.00
Do	4	California Geothermal, Inc	2,740.13
Do	5	Union Oil Co. of California [2]	80,842.84
Do	5	Ronald R. Shoen	10,369.84
Do	5	Edward B. Towne	211.79
Do	6	Union Oil Co. of California [2]	12,243.55
Do	6	Edward B. Towne	2,346.35
Do	6	____do	150.08
Do	[2] 7	Union Oil Co. of California	318,120.68
Do	7	Signal Oil Co	180,288.00
Do	8	____do[2]	75,600.00
Do	8	Union Oil Co	57,045.00
Do	[2] 9	Occidental Petroleum Corp	163,360.00
Do	9	Union Oil Co. of California	129,161.60
Do	9	Signal Oil & Gas Co	32,480.00
Do	10	Occidental Petroleum Corp.[2]	226,662.00

See footnotes at end of table.

TRACT ANALYSIS OF GEOTHERMAL STEAM LEASE SALE HELD IN CALIFORNIA ON JAN. 22, 1974

DETAILS ON A TRACT-BY-TRACT BASIS, THE NAMES OF BIDDERS, AMOUNTS BID, AND LEASES AWARDED

KGRA [1]	Tract No.	Names of bidder	Amount of bid
Do	10	Signal Oil & Gas Co	$78,588.00
Do	10	Union Oil Co. of California	67,634.52
Do	10	Thermogenics, Inc	27,972.00
Do	11	Union Oil Co. of California [3]	22,868.10
Do	11	Signal Oil & Gas Co	4,770.00
Do	12	do [3]	56,666.00
Do	12	Union Oil Co. of California	18,631.30
Do	12	Michael Bolzer	697.06
Mono-Long Valley	1	Chevron Oil Co.[3]	18,459.36
Do	1	Geothermal Resources Int	9,080.00
Do	2	Getty Oil Co., et al.[3]	98,592.00
Do	2	Chevron Oil Co	25,073.63
Do	2	Geothermal Resources Int	9,480.00
Do	3	Republic Geothermal, Inc.[3]	515,767.07
Do	3	Union Oil Co. of California	281,504.76
Do	3	Getty Oil Co., et al	92,196.00
Do	3	California Geothermal	52,507.37
Do	3	Chevron Oil Co	27,069.13
Do	4	No bid	
Do	5	do	
Do	6	do	
Do	7	do	
East Mesa	1	do	
Do	2	do	
Do	3	Magna Power Co.[3]	4,203.00
Do	4	No bid	
Do	5	do	
Do	6	do	
Do	7	do	
Do	8	Magna Power Co.[3]	3,235.50
Do	9	Republic Geothermal, Inc.[3]	432,810.01
Do	10	No bid	
Do	11	Republic Geothermal, Inc.[3]	208,925.31
Do	12	Magna Power Co.[3]	3,960.00
Do	13	No bid	
Do	14	do	

[1] Known geothermal resource area.
[2] High bid not accepted on the tract; bid less than presale evaluation.
Note: Summary—Tracts offered, 33; tracts on which bids sumitted, 20; bids rejected, 2; tracts leased, 18. High bid for single lease, $3,200,000 by Shell Oil Co. on 2,340 acres (Geyser KGRA tract No. 1). Total high bids accepted was $6,331,080.
[3] High bidders by tract.

Mr. VEYSEY. Is it not true that many of the oil companies are becoming general energy companies; you might say entering the field of coal, geothermal, and so forth. In fact I think Standard Oil Co. of California is going into minerals all around the world.

Mr. EVANS. Will the gentleman yield?

Mr. VEYSEY. Yes.

MONOPOLISTIC TENDENCIES IN ENERGY PRODUCTION

Mr. EVANS. On that question, do you at your level or does the Secretary at his level have the legal authority to develop policy which would be designed to prevent this concentration of the ownership of sources of energy by one or more companies?

Mr. BERKLUND. We are looking into it right now. I don't think there is a conclusion.

Mr. EDWARDS. Under the Mineral Leasing Act of 1920 there is a provision under section 30 where we have the authority to taken action to prevent monopolistic practices. And that is included in each of our leases that are issued under that particular act. So we do have that authority for most leaseable minerals.

In terms of recent looking into this situation, we haven't gone into it in detail.

Mr. EVANS. Why is that?

Mr. EDWARDS. We haven't seen any evidence, clear-cut evidence that any particular company is trying to monopolize by limiting their sales and distribution.

Mrs. HANSEN. There may not be a clear-cut legal evidence at this point, but you may be seeing a tendency to develop this kind of concentration as we have seen with other sectors of the energy area.

Mr. WYATT. I am not sure we are talking about the same thing. When you are talking about the authority you cited, was that just to prevent monopolistic practices within a given energy field such as geothermal or coal or oil? You are not talking about the possible monopoly in the entire energy field are you?

Mr. EDWARDS. No. It would have to do with the commodities we would dispose of under thhe Minerals Leasing Act of 1920. I wish to point out that there is no such antimonopolistic provisions in the Geothermal Steam Act.

Mr. WYATT. I think perhaps that this committee is not as much worried about the development of a monopoly in a specific area of energy source, as we are concerned about the developing of a monopoly in the overall industry.

Mrs. HANSEN. Exactly.

Mr. WYATT. In other words, oil companies getting a further strangle hold on say coal, on geothermal, on nuclear sources, and so forth. That very much concerns me.

Mr. VEYSEY. On the recent geothermal leases in California I believe the information you have entered into the record will show the oil companies did indeed take up major leases out there. There were a number taken up by small geothermal companies exploring on their own and some in conjunction with utility companies or in behalf of utility companies. But the oil companies did predominate in the leasing.

Mr. WYATT. If I may ask further, Madam Chairman, has your Department or anybody in your Department—and anyone can answer the question who feels he can. Perhaps, Mr. Director, you would be the proper one. Has anybody in the Interior Department discussed this overall energy monopoly problem with anybody in antitrust in the Department of Justice?

Mr. BERKLUND. I can't answer that question. I think we have to check with the Solicitor's Office. I know there has been discussion on it. How far it has proceeded I don't know.

I might tell you there is a new trend developing. We are getting inquiries now from other industries for sources of energy resource materials. There is a new trend developing whereby nonenergy industries want to develop a lot of their own energy resources.

Mr. WYATT. That is a good trend as far as I am concerned. If I were going to be back, I would be asking you next year whether people in your Department and your solicitor had talked to the Antitrust Division of the Department of Justice. In my absence next year I would hope some of the younger members on the committee would proceed with the question next year.

Mr. EVANS. Will the gentleman yield?

Mr. WYATT. Yes.

Mr. EVANS. I hope I am here, and if here, will be happy to join with others asking that question. It would seem to me whether the law

places a primary responsibility on you for taking positive action against monopolistic tendencies or not, we do have antimonopoly laws and antitrust laws and it would seem to me that being in the position you are in it would be incumbent upon you to develop affirmative action policy to make sure we don't suddenly find this has happened and be in a position where we simply shrug our shoulders and say that that wasn't our job. I think you do have some responsibility.

Mr. WYATT. It would be a national tragedy if one company or one industry got a choke hold on the entire supply of energy in this country. That is what we are talking about. Because they could then manipulate the one source against another.

Mrs. HANSEN. It would also get into a manipulation of one segment of the country versus another segment. You have no idea where it would all end.

Mr. WYATT. It is a real problem because I think we must recognize as a reality of life that a lot of the big capital rests with large oil companies and a lot of potential for developing these additional sources lies with these companies. Yet as a national policy I sure don't think it is a healthy thing to be permitted.

Mr. VEYSEY. Further on that point with relation to geothermal development, the techniques for locating and identifying geothermal resources and tapping them are the exact same techniques that oil companies use. So it is logical to expect they would be interested and adept at doing this. In the case of oil shale or even coal, to the degree that can be converted into liquid fuel it is logical the oil companies know how to handle that. So there is much logic in having them involved in this development but you don't want a monopoly situation.

NONCOMPETITIVE GEOTHERMAL FILINGS

Mr. BERKLUND. On the subject of geothermal, we have had filed with us since BLM land has been opened for noncompetitive leasing outside of the KGRA's, 3,500 applications for geothermal leases. This has occurred within the last 2 months.

Mr. VEYSEY. Quite a land rush.

Mr. BERKLUND. We expect to probably end up with around 12,000 by the end of fiscal year 1975. This workload is not fully reflected in this budget proposal.

Mrs. HANSEN. Why not?

Mr. BERKLUND. These are very recent developments and are not reflected in our program.

Mr. EDWARDS. Our first opening of the simultaneous period for filing of applications for geothermal steam was at the end of January. That was the first time we knew we had that many applications. We weren't allowed to open results of the first filing period in December until that.

Mr. BERKLUND. It was 2,500 then and as of the end of February we are at 3,500 applications.

Mrs. HANSEN. How is OMB reflecting this upsurge? You know you are going to have to examine and take care of the leasing program in a sensible, careful manner, otherwise you will end up with many legal problems.

Are those rights mineral rights or water rights? What kind of rights are they?

Mr. EDWARDS. We wish we knew.

Mr. BERKLUND. If the applications are overlapping, we are establishing new KGRA's and we are talking about additional new competitive leasing. There are a tremendous number of problems before we get to leasing in this noncompetitive situation.

Mr. VEYSEY. I have to remind the gentlemen that all last year while I was pressing them to get on with the job of implementing the law and making the leases, they reported they were fully manned and equipped to handle the job. I don't think you quite contemplated the volume you were going to get and I didn't either.

Mr. BERKLUND. No, sir; we did not.

OTHER UNFORESEEN ENERGY RELATED WORK

Mr. WYATT. You didn't contemplate the price of oil doubling?

Mr. VEYSEY. No; that was an incentive.

Mr. BERKLUND. There are several areas that because the price of energy is rising our workload will be expanded tremendously and much of the future work may not be reflected in this budget.

Mrs. HANSEN. What is pending over at OMB to reflect the problem?

Mr. BERKLUND. We have an amendment before them for consideration at this time.

Mrs. HANSEN. They must be snowed under with amendments.

Mr. BETTENBERG. They are, Madam Chairman. We have an amendment over there under active discussion right now that covers several different areas.

Mrs. HANSEN. What proposals do you have over there?

Mr. BETTENBERG. We have a proposal at OMB to cover the workload that we have discovered simply in the last 2 months with regard to geothermal leasing, with regard to private requests for permits, and rights-of-way, and several other items.

Frankly the Department has been flooded with requests in the last several months both in the geothermal and other areas. It has developed way beyond our expectations.

Mrs. HANSEN. How long is it going to take them to make up their minds?

Mr. BETTENBERG. I can't really respond to that, Madam Chairman.

Mrs. HANSEN. You might call them and tell them you have had several harassing questions up here.

Mr. VEYSEY. I will ask that question of the other committee when we review their budget.

Mrs. HANSEN. That is an excellent idea. You are on that committee.

Mr. WYATT. Madam Chairman.

Mrs. HANSEN. Mr. Wyatt.

GEOTHERMAL STEAM POTENTIAL

Mr. WYATT. Up until last year I think the conventional thinking on the geothermal steam problem was that the potential for geothermal steam was very limited as far as supplying a percentage of the whole energy requirements of the United States. In view of the rise in cost of other energy, particularly oil, do you have any change of view, or what are your views as to the potential of geothermal steam as a

percentage of our overall energy requirements? Do you want to take a stab at that?

Mr. BERKLUND. We still think that geothermal will be a minor energy resource nationally. Regionally we think it could have a tremendous impact. For instance in the San Francisco area we think there is enough geothermal resource there to completely satisfy the entire bay area's electric needs.

Mrs. HANSEN. When there is a major impact in a region you lessen that region's dependence on oil or coal or hydro. Isn't that true?

Mr. BERKLUND. Right.

Mrs. HANSEN. So you have a little more flexibility within the region, and then that region can supply some other region. That is what you call the national picture isn't it?

Mr. BERKLUND. I was going to try to bring it around using San Francisco as an example and then equate it. We think it will supply about 2 percent of the national need. In terms of megawatts that is what we are now supplying with hydro, and everyone knows how critical the hydro resource is in the Northwestern States. It is significant to that entire area, which releases other supplies to the other areas of the United States and reflects back the same way.

Mr. WYATT. Is the 2 percent higher than it was a year or two ago?

Mr. BERKLUND. There have been figures knocked around. We have heard figures anywhere as high as 10 percent to 20 percent. I think the Bureau has stayed with 2 percent all the way through. We have not deviated and still think it will amount to 2 percent. We think to equate it with hydro is a pretty good parallel.

Mr. VEYSEY. To give you an example of specifically how that works, some of the lands on East Mesa in Imperial County were taken for geothermal in behalf of the city of Burbank utilities. They intend to develop that, produce power there, deliver that power to Imperial Irrigation District, which in turn will release its demand on Boulder Dam and Colorado River power and that will be diverted the other way to the city of Burbank, relieving their demand for oil for their generating capacity. So it works around the circle.

REHABILITATION AND PROTECTION ACREAGE

Mrs. HANSEN. How many acres are involved in your rehabilitation and protection program?

Mr. BERKLUND. We think that presently we have enough right now in this request, Madam Chairman, to take care of the critical commitments that we have, which would include the active coal and oil shale lands.

Mrs. HANSEN. How many acres and how many leases?

Mr. BERKLUND. Presently Bureau of Land Management has a little better than 96,000 permits and leases covering about 70 million acres. There will be 30,000 acres leased in oil shale and 30,000 acres of geothermal leases. At present coal amounts to 780,000 acres of which roughly 8,000 acres are being strip mined. In this program, we would cover about 16 million acres in 1975.

Mrs. HANSEN. The cost would be about 20 cents an acre.

Mr. BERKLUND. That is not the cost of actual rehabilitation. That is our input on the active or potentially active areas. Excluding the $1.4 million study, basic administration of the 16 million acre coverage amounts to about 10 cents an acre.

Mrs. HANSEN. I understand. But sometimes it is your input that is going to determine the quality of the rehabilitation. Your guidelines and your directives can either save or destroy.

Mr. BERKLUND. That is right. The research that goes into the preparation of the lease stipulations, the review of mining plans, monitoring, and enforcement of those stipulations give the end result we all desire.

REHABILITATION COSTS

Mr. TURCOTT. We believe if we get into the new coal leasing program as typlified by the Northern Great Plains, strip mine stipulations are going to cost the company anywhere from $400 to $4,000 an acre to rehabilitate and reclaim the land with an average of $1,000 an acre. They will have to be supervised. I most certainly agree. Maybe monitored is a better word.

Mrs. HANSEN. Yes; the monitoring.

Who is working on the economic question in this whole business of rehabilitation and surface protection?

Mr. TURCOTT. I forget the figures on coal. If we are talking about a 90 to 100 foot seam of coal in Montana or Wyoming, it goes up to $1½ million an acre gross that coal is worth. So within reasonable land management professionalism we don't bat an eye at asking for up to $4,000 an acre in rehabilitation costs. That is the way we feel about it.

INTERAGENCY COORDINATION IN ENERGY DEVELOPMENT

Mrs. HANSEN. Some of your coal is in water short areas. What kind of work is going on with you and the Geological Survey and the Office of Water Resources Research?

Mr. BERKLUND. We are all working together.

Mrs. HANSEN. I would like to know what they are doing.

Mr. BERKLUND. In our reclamation program, we have the Office of Saline Water and the Bureau of Reclamation working with us. The Office of Water Resources, Geological Survey, and Forest Service coming in with their SEAM program, are also working with us as well as the Office of Land Use Planning. We are trying through our EMARS Process to identify the areas that we can open to leasing with the least amount of disturbance and the areas we can best rehabilitate.

Mrs. HANSEN. It has been a tradition in Government agencies that one hand doesn't know what the other is doing. But these offices like OWRR and Office of Saline Water were created to facilitate the judgments made by Bureau of Land Management and Geological Survey. Isn't that correct?

Mr. BERKLUND. Yes; they play an important role. Rather than a review process, we have a working relationship with these people through a committee approach so they have an early input rather than there just taking an analytical look at what we have already done.

BUDGET REDUCTION FOR OFFICE OF WATER RESOURCES RESEARCH

Mrs. HANSEN. As a matter of curiosity, since water is such an important part of this whole energy problem, why did they cut the budget for the Office of Water Resources Research this year?

Mr. BERKLUND. I don't think that is a question Bureau of Land Management can answer, ma'am.

Mrs. HANSEN. I thought you might know.

Mr. BETTENBERG. The portion of the program that was reduced, Madam Chairman, is the portion of grant support to State institutions throughout the country.

Mrs. HANSEN. I know, but they are supposedly developing very useful material.

Mr. BETTENBERG. The Secretary has testified that it is his strong feeling we should be concentrating our water resources research funding on specific problems, specific projects, rather than simple institutional support.

Mr. WYATT. Who testified to that?

Mr. BETTENBERG. Secretary Morton.

Mr. EVANS. Have you made such a budget proposal in this year's budget?

I know they have made decisions in regard to these State funds, but have they collected these funds together in any one pot and designed them for any one specific use?

Mr. BETTENBERG. I would have to take a look at that. I don't have at my fingertips the amount that has gone into specific projects.

TRANS-ALASKA PIPELINE PROGRAM

Mrs. HANSEN. For the Alaska Pipeline Inspection program, you request an increase of $1,500,000 for a total of $8,714,000. What part of this are the oil companies going to pay for?

Mr. BERKLUND. The requested increase of $1,500,000 amounts to a total of $8,741,000, which will fund 44 positions in the Bureau of Land Management at a cost of $1.6 million. The remaining $7.1 million covers a full year's cost of the third party surveillance agreement. The entire amount is related to surveillance of the pipeline environmental stipulations and inspection of the construction work itself, and the entire amount is reimbursable by the company.

Mrs. HANSEN. Now the third party supervision contractor has been chosen. Is that correct?

Mr. BERKLUND. It is Mechanics Research Incorporated.

Mrs. HANSEN. Please supply a copy of the contract for the committee.

Mr. BERKLAND. We will do that.

[Note: The information was supplied to the committee.]

Mrs. HANSEN. The entire amount is reimbursable?

Mr. BERKLUND. It is being reimbursed now on a quarterly basis.

Mrs. HANSEN. So the $8 million is, in effect, a loan?

Mr. BERKLUND. It goes back to the Treasury after being expended through BLM and the company pays the billing.

Mrs. HANSEN. Do you anticipate any unusual problems that will arise in the various areas?

Mr. BERKLUND. I think we have identified those areas of greatest concern through the environmental impact statement. We think we have adequately taken care of them such as the permafrost question and the surveillance that will take place during construction through that area. There is some question about how much time would be needed for surveillance and inspection at the intermediate and the terminal sites. I think these are probably the areas of greatest concern right now.

BENEFITS OF THIRD PARTY CONTRACT

Mrs. HANSEN. Can you again explain the benefits of the third-party contract?

Mr. BERKLUND. One of the overriding benefits is the ability to react quickly and to get the people on the job as quick as possible. We would avoid carrying continuing liability for Federal employees at the completion of the project and are better able to adjust the number of surveillance people according to workload.

Mrs. HANSEN. How long is the contract for?

Mr. BERKLUND. Four years.

Mrs. HANSEN. Do you have a provision for termination in the event you don't regard their performance as satisfactory?

Mr. BERKLUND. Yes. We also have the power to stop construction, to hold it up until anything is corrected, or if it is not corrected under conditions that were set forth in the permit, they would not be able to reopen the construction.

Mrs. HANSEN. How about your conditions in the third-party contract itself? Do you have the ability to terminate that?

Mr. BERKLUND. Yes. They have agreed to certain stipulations of performance the same as any other party that would enter into a contract. There is a provision for terminating that contract for failure to perform.

TIME FRAME FOR PIPELINE CONSTRUCTION

Mrs. HANSEN. What do you estimate will be the time frame for completing the design, beginning the construction and completion of construction?

Mr. BERKLUND. I understand that the construction will start simultaneously at several points along the line. I don't have the exact number of spreads they have proposed for the initial startup, but materials and equipment are moving right now in preparation of the forthcoming construction season.

Mrs. HANSEN. Did the kind of winter they had up there delay the start?

Mr. BERKLUND. There were some delays up there because of the late snowfall in Alaska this year. We had questions on the validity of the Old Hickel Highway. So there have been some minor delays, but nothing that we could point to at this time that will materially delay construction, only some of the preparation for spring work.

Mrs. HANSEN. What is the anticipated date of completion?

Mr. BERKLUND. We expect there will be oil flowing through the pipeline in mid-1977.

ACTIVITIES AT THE PORT OF VALDEZ

Mrs. HANSEN. Is the Port of Valdez gearing up for their tanker operations?

Mr. BERKLUND. Madam Chairman, I cannot answer that question. I understand that there is some activity there, but I am not in a position to respond to that.

Mrs. HANSEN. Does Valdez itself have any role in the third-party contract?

Mr. BERKLUND. The terminus and their oil facility plans is part of the contract itself.

Mrs. HANSEN. You have a problem of environmental impact in Valdez, don't you?

Mr. BERKLUND. Yes. I was considering the port facilities.

Mrs. HANSEN. Port facilities are part of it. You have to monitor tanker loadings so that you have no environmental problems; don't you?

Mr. BERKLUND. Yes, ma'am. I was considering the movement of tankers in and out of the Port of Valdez. But as far as the construction at the terminal site itself, yes, it is included in the contract and is part of our responsibility for surveillance.

OFFROAD VEHICLE MANAGEMENT

Mrs. HANSEN. For offroad vehicles, you have requested an increase of $260,000 for a total of $610,000.

Mr. BERKLUND. Yes, ma'am, we are trying to accelerate our efforts to plan and manage the use of ORV's in order to protect the public land and resources, promote the safety of all of the users, minimize the conflicts between them, and to provide for an organized, managed ORV program.

Mrs. HANSEN. You state here several factors. Recreation has grown from 9 million to 49 million visitor-days. You have 6 million acres within 40 miles of your major urban areas. You are kind of squeezed in the middle in that because only 18 full-time visitor management personnel are available on 172 million acres.

Mr. BERKLUND. That is correct.

Mrs. HANSEN. Then you state that your archeological and historic features are being destroyed at an estimated rate of two per day in the California desert alone.

Mr. LONG. Funds are requested in the amount of $610,000 for management of offroad vehicles on public lands. Given the 20 million visitor-days of ORV use cited by BLM on page 40, please explain how a tiny $610,000 program can be expected to prevent the "irreparable damage" which BLM claims could result from ORV use?

Mr. BERKLUND. ORV activity is a problem. Intensive ORV use concentrated around large population centers causes the greatest impacts on the land and environment and this is where our efforts will first be directed to try to keep the most critical areas under control.

In addition to the $610,000 shown specifically for Bureauwide ORV management, we have the ongoing California desert program where

some of the most heavily concentrated use is now being experienced, in southern California. Use there accounts for 16 of the 20 million ORV related visitor-days.

The California desert program which includes ORV management is proposed for about $2 million.

We feel the desert program has to take a higher priority than it has in the past. We are proposing to accelerate it here in the budget proposal because we feel the resource losses in the desert are greater than they have ever been. We are hoping to staff up sufficient number of desert rangers in order that we can protect the resource values and provide visitor guidance for the entire area.

Mr. LONG. What penalties are administered to those who violate the guidelines for ORV use on public lands?

Mr. BERKLUND. This is the greatest problem the BLM faces in our ORV program. Presently we do not have existing authority to properly enforce and administer guidelines for ORV use on public lands. Now our only course of action is to pursue trespass charges when it is determined the violators caused damage to the resources on public lands. Of course in instances where public lands administered by BLM are within the boundaries of local zoning ordinances we would work through the local enforcement authorities and when vandalism to Government property is involved we work with the FBI. BLM's Organic Act would give us authority to properly administer and enforce the ORV guidelines.

Mrs. HANSEN. You have events noted here in which there are 200 to 2,000 participants. Do you have some races down there?

Mr. BERKLUND. Yes, in areas we have identified for this use. They used to use the entire desert for such events, but we were unable to police and protect them. Now we are issuing permits for events and they are using those areas that we have identified for this particular use. We think it is a legitimate use of the desert, but it should be restricted to certain areas in order to protect the other resource values.

LAND CLEANUP

Mrs. HANSEN. What is BLM spending per year to clean up the litter on our public lands?

Mr. BERKLUND. We are spending about $400,000 on our cleanup program.

Mrs. HANSEN. How do you keep 172 million acres clean with that amount?

Mr. BERKLUND. Not too well, Madam Chairman. We feel our program has improved. Through educational means we are trying to get cooperation from the public in order to help us in this effort because there is no way that BLM with limited manpower and funds can do it without complete public cooperation and participation.

Mrs. HANSEN. How well is the public participation going?

Mr. TURCOTT. If we didn't have volunteer groups, Boy Scouts, Girl Scouts, and offroad vehicle groups working under the Johnny Horizon program or under various county, State, or local programs where we act as cooperator, we couldn't begin to do it. There is no question about it that some of the areas of public land, especially those close to smaller towns, get pretty drastic. When the wheel gets squeaky, we instigate volunteer effort programs to get them cleared up.

PROTECTION OF CULTURAL VALUES

Mrs. HANSEN. In your protection of natural environment, you have requested an increase of $300,000 for a total of $400,000. How many acres are you going to investigate? You have 400,000 archeological and historic sites existing on natural resource lands. You have pony express stations, mining towns, military forts, ruins, Indian picture writings, et cetera.

Mr. BERKLUND. We are going to endeavor to expand our program to identify and protect these areas that you have mentioned, Madam Chairman.

Mr. LONG. On page 5, BLM identifies a cultural inventory program to identify important cultural features that are in danger of being lost or damaged. However, only 5 percent of the inventory will be completed in fiscal year 1975. On such a slow timetable, isn't it likely that by the time the inventory is completed, some of these cultural features will be lost or destroyed?

Mr. BERKLUND. This is a problem, and many features are now being lost and destroyed. Presently it is estimated that there are only about 20 to 30 percent of the potential cultural sites that are known. Immediate effort will be directed to areas on a priority basis, based on those most significant and those most susceptible. I admit it isn't as fast as we'd like, but it is a start. Perhaps Mr. Turcott could also speak to this area.

Mr. TURCOTT. The estimated 5 percent of our land area, and I don't think it would be quite possible to get an actual acreage figure on it—but 5 percent of the area where much of the most significant estimated 400,000 archeological sites are, will be inventoried, confirmation of historic values will be secured and protective measures instituted. We feel over the next 5 years we will have somewhere between 15 and 25 percent of this entire area, with particular reference to the historic sites, inventoried, evaluated and brought to the attention of the National Park Service, State entities and, where appropriate, the Smithsonian.

Mrs. HANSEN. You bring it to the attention of the Bureau of Reclamation too, because I remember some Indian picture writing on the John Day Dam. They turned the water on before they could get even the research work done on the picture writing. It was some of the earliest and most interesting in the Columbia area.

Mr. TURCOTT. On that note, our Colorado State director was in to see us about 3 weeks ago and through a little study he got voluntarily from the State, they now feel the heart of what is called the Anasazi culture is not in the Mesa Verde National Park, it is right out there on the public lands north of the park. Furthermore, the Mesa Verde National Park ruins, all the artifacts and archeology, is probably 5,000 years younger than those on BLM near Cortez in the Dean Field. So we have an immense wealth there that has to be evaluated and studied and something done in terms of intensive management to take care of it. This will be in forthcoming years.

FINANCIAL ASSISTANCE FOR INDIAN TRIBES

Mr. EVANS. I am not sure this is your responsibility and I am not sure whether you can be of help. But the Ute Mountain Indian

Tribe has its reservation right close to Mesa Verde. They have cliff dwellings which some say are even more remarkable than those that are shown that exist in Mesa Verde. True, the tribe with the help of the EDA have been trying to work this area up so it can be a tourist attraction, the idea being that the Indians can run it for the Indians by the Indians operating the businesses there and handling the tourist traffic as a means of income which they desperately need.

EDA is being phased out and they haven't completed the work in these ruins on the Ute Reservation. Under this circumstance and with the funds disappearing, would your office have any funds that would be available that could be used for a continuation of this preservation and development?

Mr. TURCOTT. No, sir. I believe that would have to come either through the Bureau of Indian Affairs appropriation or the tribe itself, or there may be other cultural grant-in-aid programs I don't know about. We couldn't do it under our authority.

Mr. BETTENBERG. The Bureau of Indian Affairs does have a technical program in helping tribes develop tourist programs.

Mrs. HANSEN. But you have tribes all over the United States that have taken a very great interest in this kind of thing. There is a tremendous surge of interest in preserving their culture. But these exciting things aren't going to be there if they are destroyed by increasing visitor use.

NEED TO PROTECT CULTURAL SITES

Mr. TURCOTT. This is one of the very great problems, Madam Chairman, and I am glad you have pinpointed it because unplanned, unmonitored development can destroy more than you add.

This is one of the reasons we want to know what we are doing. For instance, in the Anasazi culture area in southwestern Colorado we have been working with the Indian tribe there and rebuilt and restructured a major cultural area relating to the culture of these Indians. We have a road now leading into it, so this area may have more attraction even than some of the features of the Mesa Verde National Park. Thousands of people are coming in to see this one feature.

They get in there and we have no way to monitor or guide them. They are going all over the landscape and are digging up these bricks and artifacts so we have to know what we are doing and have surveillance capability before these sites are made public.

We have to have the proper kind of development and enough manpower at the time we open one so we can monitor it.

Mr. YATES. How are you going to do it with $400,000?

Mr. TURCOTT. We aren't.

Mr. YATES. How much with the $400,000 do you propose to take care of?

Mr. BERKLUND. Five percent, mostly in terms of contract inventories and evaluation.

Mr. YATES. How do you know which 5 percent to undertake?

Mr. BERKLUND. Those which have been identified from earlier broad-scale surveys. I think the main thing is not to publicize areas that you can't manage. If you do, you find the values are gone before you can get in to protect them. We find now they are even using power tools to chip features away and take the ruins with them. The

key, because of our manpower situation, is to try not to open these areas until such time as we are positive we can manage the area.

Mrs. HANSEN. You have a herd of people out there right now.

Mr. BERKLUND. That is right, so that becomes a problem when you start publicizing them ahead of your management program.

RIVERS AND TRAILS PROGRAM

Mrs. HANSEN. You are requesting an additional $640,000 for a total of $720,000 for Wild and Scenic Rivers, National Trails and Bicentennial Trails. Will you give us for the record the total miles on these trails?

[The information follows:]

SIGNIFICANT TRAILS ON BLM LANDS

The Bureau of Land Management has several thousands of miles of trails on lands under its administration. The more significant existing and potential trail routes are noted below with approximate mileages:

Trails	*Miles*
Pacific Crest Trail	154
Pony Express Trail	350
Oregon Trail	500
Escalante Trail	385
Mormon Trail	225
Mormon Battalion Trail	150
Lewis and Clark Trail	300
Continental Divide Trail	300
Santa Fe Trail	50
Gold Rush Trails (Alaska) Trail	1,300
Total	3,714

MANAGEMENT OF TRAILS

Mrs. HANSEN. What is your total mileage for trails?

Mr. BERKLUND. The national trail system managed by BLM amounts to 154 miles located in southern Oregon and throughout parts of California.

Mrs. HANSEN. You don't have any part in the Pacific Crest Trail?

Mr. BERKLUND. That is the Pacific Crest Trail.

Mr. TURCOTT. We are also moving into a bicentennial trail program where we will manage the Pony Express Trail, the Oregon Trail, and the Escalante Trail. These will add five or six times more to that mileage.

Mrs. HANSEN. What kind of regulations do you have on vehicular use of these trails? What about horses?

Mr. TURCOTT. Motorized vehicles are prohibited, but horses are normally allowed.

Mrs. HANSEN. They tell me that once in a while they get motorized use there.

Mr. TURCOTT. I will agree, they do.

Mrs. HANSEN. Horses are allowed?

Mr. TURCOTT. Normally they are. There may be future areas designated for nonhorse use.

Mrs. HANSEN. With horses and people along these trails, and then you get a motorized vehicle, you have some problems.

Mr. TURCOTT. You bet you have, especially in some of the more treacherous areas. But motorized vehicles are not allowed on these trails. If they are it is a violation of regulations, but of course we don't have our arrest authority yet.

Mrs. HANSEN. How do you police these trails?

Mr. TURCOTT. Right now we don't do much of it. Most of the time monitoring of abuses on the trails comes to us from second parties.

The Bicentennial Trails, which is a part of the program will involve special regulations, set up for the Bicentennial Trails. Part of the Oregon Trail and part of the Pony Express Trail are now a part of the old Highway 40 or old Highway 50. It is covered up with these roads but for those portions left we are taking the measures we can within our resources. For instance, out in the Snake River Plains in Idaho, and I am sure you have been across there, those old ruts are the original wagon ruts and they are going to be fenced off if necessary and posted to keep people off.

PUBLIC SAFETY ON RIVERS AND TRAILS

Mrs. HANSEN. Supposing there is a bad accident on your trail. What happens?

Mr. TURCOTT. Well, the only thing that we have of that kind yet is not with regard to trails. It is with regard to a river boating experience area that we have on the Green River in Utah. We have made arrangements with private contractors for helicopter service and good radio communications setup.

Sometimes we even have to bring the helicopter in there on standby.

Mrs. HANSEN. Do you have signs saying "Use this at your own risk"?

Mr. TURCOTT. Yes, we do. I will never forget a letter I got from a county sheriff down in San Juan County, Utah. He and a deputy were the police force for a very small population county and he informed me when we put out a certain recreation map and some brochures and drew several hundreds of people into a very rough, rugged part of southern Utah—this was only 3 or 4 years ago—of the burden we put on him in terms of not only police powers but search and rescue operations, and I learned a good lesson from that.

We are more careful when we advertise and exploit these areas for public use and consider what we are doing to the State or local authorities.

Mrs. HANSEN. Are you investigating the cooperative kind of police work that the Forest Service has?

Mr. TURCOTT. It is a major feature of our BLM Organic Act.

Mr. BERKLUND. We don't have the authority now, but under the Organic Act, Madam Chairman, that is what we proposed to do, to contract as much as we possibly can with the local authorities and only expand our own people into the areas that are remote, and not adaptable to cooperative agreements.

Mr. TURCOTT. We have had several instances, Madam Chairman, where our field personnel, our radio system and our four-wheel drive vehicles have been used in major search and rescue operations. Our people have saved other people's lives.

Mrs. HANSEN. Some of your trails are in pretty wild country.
Mr. TURCOTT. That is right.

CALIFORNIA DESERT MANAGEMENT

Mr. YATES. That is interesting about the California desert management. You must be under enormous pressure to open that up for population, aren't you, for settlement and development?
Mr. TURCOTT. Yes, sir; to some extent we are.
Earlier the chairman mentioned the 12 million visitor-days of use in the entire southern California desert last year. We expect it to go to 15 to 20 million within the very near future.
Mr. YATES. Do you have facilities for them?
Mr. TURCOTT. Not fully as yet. We do have one feature in for construction this year, one for fiscal year 1975 and hopefully in ensuing years. We have developed some areas previously.
Mr. BERKLUND. We don't propose any massive developments but we think we need certain basic developments in order to accommodate the visitor use that we have experienced.
Mrs. HANSEN. You are requesting an increase of $850,000 for the California desert management for a total of $2,082,000. You are not going to be able to do too much with that amount, are you?
Mr. BERKLUND. No, ma'am. It is not a large increase compared to the magnitude of the problem but we think that it is one that has to have priority because of the increased pressures. We have opened up 14 areas for ORV use covering 720,000 acres.
We restricted another 11 million acres. We closed off some 360,000 acres completely to ORU use. We also have other features of the interim plan in operation right now and are working toward the completion of the total multiple use desert plan and implementation program within 4 to 5 years.

FUND ADJUSTMENTS IN FORESTRY PROGRAM

Mrs. HANSEN. For your forestry program, you are requesting an additional $1,425,000 for a total of $3,711,000. This is what we discussed this morning?
Mr. BERKLUND. Yes, it is.
Mrs. HANSEN. Mr. Wyatt, do you want to make some contribution to this?
Mr. WYATT. Yes, Madam Chairman.
First, I am sorry I was not here this morning for the initial discussion on this subject. It came earlier than I anticipated and I was tied up in my other committee, the only member there, other than the chairman.
In effect, what you are doing is taking $1,425,000 from the O. & C. fund for making other BLM timberland investments; is that not correct?
Mr. VETTERICK. I could, maybe, put this thing in some perspective. We actually fund management in western Oregon through two sources, as you probably know. One is in management of lands and resources, or MLR account. The other is in the O. & C. grant land fund.

32-043 O - 74 - 36

What we are proposing in this budget to do is to transfer from western Oregon management to public domain forestry within the overall management of lands and resources appropriation, $1,425,000 to accelerate P.D. forest production.

That would presumably leave a shortfall in the management funds available for western Oregon of that same amount, $1,425,000.

Mr. WYATT. When you are talking about western Oregon are you using that term "western Oregon" synonymously with O. & C. funds?

Mr. VETTERICK. Not completely because these MLR moneys are also used for management of intermingled Coos Bay Wagon Road and public domain lands, all which exist in western Oregon.

Mr. WYATT. What percentage is O. & C. lands?

Mr. VETTERICK. Probably 95 or better, so it is essentially O. & C. land.

Mr. WYATT. Essentially synonymous?

Mr. VETTERICK. Yes; but there are other types of lands intermingled. Now, how do we make up now the shortfall in the MLR account that was up to that time going to western Oregon and is now going to public domain? Because the O. & C. grant land fund is on the rise and has been increasing due to increased receipts we are then making up that shortfall within the O. & C. grant land fund, the other fund, plowing an additional $1.4 million or more into management.

Mr. WYATT. Has this been discussed with the O. & C. county people?

Mr. HASTEY. It was discussed last week with the county commissioners in Oregon. The chief of the division of finance was out there and he discussed it with them. It was not discussed prior to that.

Mr. WYATT. Can you hear the screams back here following those discussions?

Mr. HASTEY. There was concern.

Mr. WYATT. I won't pursue this a lot longer because I will check the record when I see it but let me ask you this: When those receipts go down, assuming that they do some day in the future, what is going to happen at that time?

Mr. VETTERICK. We have two options; either to come back to this committee for additional appropriations into management of lands and resources on behalf of western Oregon, or we have the option to retransfer funds and switch them back out of the public domain into western Oregon.

Mr. WYATT. Was this idea of taking these funds and diverting them from the O. & C. purposes the idea of the Department of the Interior or Office of Management and Budget?

Mr. VETTERICK. This program was originally proposed as a net increase of management of lands and resources to accelerate the P.D. forest production. It was not in our initial proposal.

Mr. WYATT. Somewhere along the line it was suggested to you that you get the money from this source; is that right?

Mr. VETTERICK. That is right.

Mr. WYATT. I assume that is not within the Department of the Interior?

Mr. VETTERICK. No.

Mr. WYATT. That leaves one culprit then.

Did you or anybody in the Bureau of Land Management foresee this as an opening foot in the door to more of this sort of thing, increased efforts to tap these funds?

Mr. HASTEY. There is not that much left in the other account. There is only about $3 million in the MLR account.

Mr. WYATT. Well, does it appear that the officials at Office of Management and Budget are determined to continue to tap this account as much as they feel they can get away with?

Mr. BERKLUND. I don't know what their overall thinking is. We feel that the O. & C. lands are a model of management because of the arrangements we have had through the availability of funds in order to properly manage them. We have a deep concern which we share with you, Congressman, for the management of these lands.

Mr. WYATT. My concern primarily is that there are people in the Office of Management and Budget and I know some of them by name, who have been determined to break the formula, to repeal the law that Congress passed, and they were going to do it by the budgetary process and it appears to me that this is but another effort to do just that and I think this subcommittee is going to have to look at this hard and fast because this is an awfully poor way to repeal a statute.

I, of course, have to discuss this with the O. & C. people to determine their attitude on the thing. We realize the receipts have been rising but we don't think that is going to be a permanent situation either.

THE VALUE OF RENEWABLE RESOURCES

Mr. BERKLUND. I think one thing we should try to do is get the awareness of the people who don't share our concern for the renewable resources of the tremendous value we have in them.

Our rangelands and our timberlands have a tremendous potential value. They are one of our most valued resources, considered so by Bureau of Land Management. Because of the press and the attention that has been given to mineral development such as repeated articles written about the $41,000 an acre return on an oil shale sale, there has been no attention focused on the potential we have in renewable resources.

In a recent timber sale at Roseburg, Ore., we received $31,000 an acre for a renewable resource that will be renewed within approximately 80 years. Yet we have to get this awareness to people so that we will be able to continue expanding our management programs for renewable resources.

Mr. WYATT. Mr. Director, I appreciate what you say because every word of it is very, very valid and I would add that the Bureau of Land Managements management of the O. & C. timber resource is certainly a model for all public management of timber resources lands.

For example, if the Forest Service were able with the funding to manage the national forests that grow commercial timberlands on the same high level of management that the O. & C. timberlands are managed, we wouldn't have a timber or wood fiber shortage in this country.

I am certain of that. So that is much more the basis of my concern for these lands than any parochial or political interest in connection with the counties involved.

My home county in western Oregon doesn't share in these receipts but I represent nine other counties that do, so I appreciate it.

I will carefully review the record that was made this morning when I was absent.

Mr. BERKLUND. Yes, our concern of course is in the management of those resources and that is a deep concern with us.

BLM FUND IMPOUNDMENTS

Mr. WYATT. I am really concerned about having the principle violated to the extent that it is being violated, plowing back these funds into the O. & C. lands themselves. I mean in effect impoundment.

Mr. VETTERICK. The important principle is that no O. & C. funds are being diverted into other areas. The amount of money available for expenditures in the O. & C. for fiscal year 1975 is $28,750,000 and that amount will be spent in western Oregon on behalf of the O. & C. lands.

Mr. WYATT. Actually they are really indirectly being diverted, are they not really?

I read from your budget justification:

> These increased funds are made available by a corresponding decrease in O. & C. forest management normally funded in this activity. The resulting decrease in the management of western Oregon forests financed by this appropriation will be offset by an increase in the forest development, protection, and management activity of the O. & C. grant lands appropriation which is made possible by increasing timber receipts from western Oregon in fiscal years 1974 and 1975.

Are there any other funds impounded?

Mr. VETTERICK. There are funds in reserve.

Mr. WYATT. How much in dollars?

Mr. HASTEY. A little over $5 million in the O. & C. grant lands fund and about $29 million in the public lands development of roads and trails.

Mrs. HANSEN. $29 million?

Mr. HASTEY. This $29 million is money that is appropriated as budget authority through the Federal Aid Highway Act. The $5 million is O. & C. funds.

Mr. WYATT. About when was this done approximately?

Mr. HASTEY. It was during the apportionment process last fall.

Mr. WYATT. Has this been done previously?

Mr. VETTERICK. We have always maintained and carried forward some reserves in the Oregon and California grant lands just for that contingency that you discuss, the falloff of receipts, so that even in the middle of the fiscal year if the receipts did fall drastically we would not have to put immediate brakes on the program.

Mr. WYATT. Of course, that wasn't the purpose of the impounding this year, was it?

Mr. VETTERICK. By way of comparison, the reserve in the O. & C. grant land fund as of the end of fiscal year 1973 was $5,242,697 and that same amount has been carried as a projected reserve throughout fiscal year 1974. If receipts go higher than anticipated in fiscal year 1974, the reserve will increase as well.

Mr. WYATT. As of now that is what is impounded?

Mr. VETTERICK. That is one way of describing it.

Mr. WYATT. And actually?

Mr. VETTERICK. Actually it could be called impoundment or reserves.

Mr. HASTEY. We do not have access to it.

Mr. BETTENBERG. We have been carrying some amount forward for several years, an unobligated balance has been carried forward from

year to year. The amount was carried forward from 1973 into 1974, and the budget calls for carrying that amount of reserve into 1975 now.

Mr. WYATT. For the record I think that the officials of the OMB may be jumping up and down with glee that neither Mrs. Hansen nor I are going to be back in Congress next year.

Mr. YATES. I wouldn't say that.

Mr. WYATT. For the record I think the officials of the OMB should know that there will be an awful lot of other people watching this item and they will be watching for diversions, they will be watching for any kind of indirect control of these funds which was attempted in 1969 and I don't think we are going to sit still and watch an act of Congress be repealed by the OMB.

I just want that to be of record and I am sure that Mrs. Hansen will be back here with me and assisting other members of the Oregon delegation and Washington delegation if this should occur.

Thank you, Madam Chairman.

Mrs. HANSEN. Thank you.

You have received the message I trust.

Mr. BERKLUND. Yes, ma'am.

Mr. WYATT. I think they have had the message for a long time. I hope they are able to transmit it.

WILD HORSE AND BURRO PROGRAM

Mrs. HANSEN. For your wild horses and burro program, you are requesting a $300,000 increase for a total of $700,000.

Mr. BERKLUND. This money is to accelerate the further implementation of the Wild Horse and Burro Act which calls for the control, protection and management of wild horses and burros.

Presently we are in the process of reviewing and processing some 1,600 claims for 17,000 animals that is now before the Bureau. This is the first step toward management, to find out how many wild horses and burros we have and those horses and burros that are in trespass on the public land.

The advisory board is meeting the last week of this month.

Mrs. HANSEN. I have a letter from a woman who has spent some time in the Death Valley area. She says:

> Some time ago, I talked to you about the excess burro population in the Death Valley National Monument. We thoroughly enjoyed viewing the animals and listening to their braying, from visible and hidden areas. We visited several canyons and plateaus, but all is not well, with the burros and their habitat. The plant life is gnawed to the very roots and the waterholes are polluted. These animals are not native to the region and have no known predators. Already the 1,500 estimated burros, exceed the 300 which the Park Service personnel feel the area can support. Any farmer knows there is a limited carrying capacity for a range, and beyond that, mass starvation results. With luck, the starving animals will die of disease rather than hunger—nature is that way. Meanwhile, the fragile desert habitat is destroyed, and will take years to recover, if ever. The desert bighorn, which is native to the region, has been driven from the Westside mountains.
>
> I suppose there are those, who would suggest the excess burros be moved to another area, but what of the animals and plant life in that area. Carried to the extreme, Congress can appropriate money to feed them. Commonsense says the Death Valley herd must be reduced now.

I realize that this is a park installation but do you have any comments on this?

Mr. TURCOTT. We are aware of the problem in Death Valley and you are correct, Madam Chairman, this is a National Park Service jurisdictional area.

Mrs. HANSEN. But you can give them some advice.

Mr. TURCOTT. It is typical of other desert areas involving burros and a very fragile ecosystem, especially in some of the mountain areas of California and southern Nevada where the desert Bighorn Sheep, a rare species, is struggling for survival and there is direct competition for forage between the animal species.

The National Park Service, in the past, has gone into programs of just simply eliminating animals from the area. It really isn't feasible to talk about transplanting burros to other areas.

MANAGEMENT DIFFICULTIES

Under the Wild Horse and Burro Act, if we were to try to transfer some of the animals, provide a new home for them, the act says very specifically that these animals must have been in place previously in the transferred area.

So this is very difficult. There is no question that even before the Wild Horse and Burro Act brought some protection to these two kinds of animals, that the burro population was exploding, especially in the Southwest deserts. When and if the public will accept the fact that there is going to have to be a balance derived between these animals, their habitat and other competing animals and other values, then we will have the basis for a management program.

With respect to burros and horses, our estimated figure of 40,000 to 60,000 animals now, although the count isn't exact until the claiming process is through, is opposed to our estimate just a short while back of only 17,000 animals. There has been an ecological explosion of the wild horses in the more northern States of the West. There is no question about it.

We have great difficulty under the law with the word "unclaimed" and the provision in the law that the claiming of animals will be done through the State statutes for stray animals.

We can't use motorized vehicles or aircraft to help gather the animals even though we think we can do it safely and humanely by the use of aircraft. So we have a very serious management problem facing us. It hasn't become like the goats on Catalina Island or the rabbits in Australia, but a situation like that could develop unless we can get it under control soon. As I see it, it is just like the elk problem in Yellowstone National Park and the Jackson Hole National Park. There are tremendously conflicting views, those that want every animal preserved and protected, and those people that don't understand the relationship between vegetation and foraging animals. For those that do understand there are going to be some hard decisions coming up in the next 5 years to reduce these populations. It is going to be one of those tough situations.

Mrs. HANSEN. It is a tragedy to see animals starve to death.

Mr. TURCOTT. Yes. We have said, Madam Chairman, that in some areas, especially with wild horses, if we know that a substantially

large number of animals in a band are starving in the winter, we will feed them. But these are wild animals out there. They are under conditions of the survival of the fittest and we won't attempt to feed them unless there is no other way to preserve them.

Mr. WYATT. Would you yield, Madam Chairman?

Mrs. HANSEN. Yes.

Mr. WYATT. Mr. Turcott. I, like most other Members of Congress, have received hundreds of postcards and letters and so forth, and I am sure you have been besieged with them too, from schoolchildren about save our burros, about the horrible treatment that the burros and donkeys and whatnot are getting, and I think the real heart of the problem—this is an example—is where a few do-gooders or do-gooder organizations will go out and give one part of a small picture and stir up all kinds of emotion and sloganize something and attempt to create a knee jerk reaction in the Congress, and all you are doing is just making the problem worse really because you are addressing a very small segment of the entire pie that should be considered as a whole.

Mr. TURCOTT. The act calls for a report to the Congress by the end of June. A Senator in the other body has indicated he may try to hold hearings before that. I hope we can hold off until we can get our report made because the Director and I feel that we have to recommend to the Secretary an objective situation report to the Congress. Several features of the act need changing to help us manage these animals in accordance with good professional biological principles. We need such things as letting us use motorized vehicles and aircraft and letting us dispose of the animals in fee to someone that might want them.

We can't now. They are the property of the United States forever. There are some of these saddle clubs and riding clubs out West in the small towns that want to take two or three of their good horses out there and capture some of these wild horses. It takes two or three good grain-fed horses to do it.

I think we should be able to quitclaim an animal to these persons very quickly. I am not a lawyer but I think we have to have some way to get more criteria in the statute about what is a claimed animal and what is an unclaimed animal.

Mr. WYATT. I think that is excellent.

Madam Chairman, will you yield just one further moment? I, like everyone else, was present and voted for that bill and I know the reaction on the floor of the House at the time it was passed. I think we acted out of a great wealth of ignorance.

Mr. YATES. Why don't you send some of the burros to Mexico?

Mr. BERKLUND. Under the law, they are in U.S. ownership. I think we would run into additional problems transporting them across the international boundary.

Mr. YATES. But if you can make an arrangement with Mexico?

Mr. BERKLUND. We don't have the authority to dispose of them.

Mr. YATES. Well, the State Department. Many countries ship animals through mutual agreements.

Mr. BERKLUND. But the way the act reads, Congressman, they are the property of the U.S. Government.

Mr. YATES. You mean the U.S. Government can't make a gift of it to another country?

Mr. BERKLUND. We can dispose of excess animals but, as a part of our management responsibilities must insure that humane treatment is provided.

Mr. YATES. That ought to be amended then.

Mr. TURCOTT. We can dispose of them but the political sensitivity is just immense.

PRIVATE CLAIMS FOR HORSES AND BURROS

Mr. YATES. I know. I will be hearing about it even though I am from Chicago. I notice here you have something like 1,600 claims. What are they for? What is the nature of those claims?

Mr. BERKLUND. They are people who have claimed horses on public lands as their own private property. The claims run all the way from one animal to a position by the State of New Mexico where they have claimed all the horses and burros in the entire State.

ALASKA NATIVE CLAIMS SETTLEMENT PROGRAM

Mrs. HANSEN. You are requesting an addition of $1,735,000 for Alaska Native claims, for a total of $5,268,000. Do you want to briefly tell us what these increases are for?

Mr. BERKLUND. That is only the lands and minerals portion. It is for the adjudication and processing of claims. The biggest portion of the increase for Native claims of course is in cadastral survey. There we are asking for an increase of $3,265,000.

CADASTRAL SURVEYS IN ALASKA

We have taken quite a bit of time earlier going into the problems that we face in the area of cadastral survey, but I would like to report to you that we have completely reorganized the cadastral survey staff in Alaska.

We have developed a branch of contract survey so that we can try to meet our survey and patent obligations on time. We have some deadlines now that are coming up very soon. The village selections are to be completed by December 17, 1974. As soon as they are complete we will give them an interim conveyance but we can't give them the final patent until it is surveyed.

We have another deadline with regional selections in that they shall be completed December 17, 1975. We are putting all of our resources in cadastral survey and land adjudication in Alaska to complete cadastral surveys and the patents for the full 40 million acres by 1983.

At that time then we hope we will be able to fully divert those resources to the State selection applications in the State of Alaska.

OTHER ALASKAN LAND AND MINERAL APPLICATIONS

Mrs. HANSEN. You state in your justifications: "* * * 12,000 existing oil and gas applications and a large number of applications for special land use permits for pipelines, withdrawals, reservations, airports, communication sites, townsites, and rights-of-way."

What is happening on those?

Mr. BERKLUND. We are processing, first, those that are in conflict with the ongoing ANCSA program, that are holding up ongoing programs. Hopefully we will be reducing that backlog.

We know we will have processed the part of those cases that are on the 40 million acres that will be transferred to the Natives, and those that are on State-selected lands. Some will have to be delayed until we have completed the work on Alaskan Native claims.

ALLOTMENT MANAGEMENT PLAN PROGRESS

Mr. MCKAY. I notice on page 61 of your justification that you had 214 allotment management plans completed but not implemented at the beginning of fiscal year 1974. On page 60, you indicate another 115 allotment management plans will be completed in fiscal year 1974 but as few as 20 can be implemented. Is this backlog of allotment management plans the result of lack of funds? If so, how much additional capability would be required to accelerate implementation of these allotment management plans?

Mr. BERKLUND. Funding is the main limitation to additional allotment management plan work. Even the high number of plans scheduled for completion this fiscal year reflects the culmination of work over the past several years.

Almost all of our available funds are now devoted to basic program administration—the maintenance of use records, billings, issuing licenses and permits—or to supervising, evaluating, and maintaining allotment management plans already in operation.

I recall a cost of $2 to $3 million for initiating a reduction of this backlog—I think that's the figure—which is distributed between range management, watershed, and wildlife. I think most of the money was in watershed which finances fences, water developments, and other livestock management structures necessary for implementation.

ACCELERATED RANGE PROGRAM

Mr. MCKAY. Some recent studies in my State and throughout the West indicate that use of the Federal range is important to the economy of the West, and I also have heard Secretary Butz talk about the need to produce more meat. These Federal lands produce grazing, in fact, considerable meat for the Nation, and they generate income that helps support rural communities. Yet I see no recognition in the budget request of this increased importance of these lands. You are requesting no program increases for range. Can the Bureau of Land Management produce more meat and a higher sustained agricultural-ranching income from national resource lands without program increases?

Mr. BERKLUND. Yes, to a certain degree. Bureau of Land Management is fully aware of its inability to accelerate the range program as much as we'd like, but other national priorities have precluded any increases in this area this year. However, the increased grazing fee will provide some range improvement funds which can be brought to bear on the problem. We expect an increase of about $1 million in 1975 which may be used somewhat to further our ongoing allotment management plan program although a sizable portion will have to be devoted to the maintenance of existing range facilities. Past experi-

ence in this program has indicated that we can, in fact, produce more meat and assist in raising range incomes through more intensive management of the rangelands, which both improve and maintain the quality of the range resource as a whole.

Mr. McKay. At a recent meeting of a State livestock association, I understand that mention was made of a proposed accelerated range program. Does that involve the Bureau of Land Management? And if so, would you explain?

Mr. Berklund. The Governors of the western range States will meet soon with the Senate Agricultural Committee to discuss possibilities for an accelerated range program in the Western States. The Bureau of Land Management, along with other agencies has been asked to provide information about the present status of the grazing program, as well as potential for improvement throughout the west. We have asked our field offices for information regarding these items, and expect to forward it near April 1. We understand the information will be used in the discussions concerning the possibility or extent of an accelerated program.

Mr. McKay. Are any other agencies in the Department of Interior other than the Bureau of Land Management involved in this accelerated program?

Mr. Berklund. No. Since other Interior agencies generally deal with one specific program, such as national park management, and Bureau of Land Management is the only agency in Interior that has a substantial responsibility for range management for livestock forage production.

Mr. McKay. What would it cost to produce the amount of forage a recent Forest Service study showed should come from national resource lands and to get the ranges in satisfactory condition?

Mr. Berklund. The Forest Service study didn't break out national resource lands from "all other Federal lands," but we can assume national resource lands comprises the bulk of that category. Recent analysis by Bureau of Land Management indicates a need for about $600 million over the next 25 years to realize full potential from western range lands, or an average of about $24 million a year. A condition of the cost of production is, of course, to maintain rangeland in a satisfactory stable condition.

UTAH RANGELAND DEVELOPMENT COMMITTEE REPORT

Mr. McKay. I have before me a report of a special Utah Rangeland Development Committee appointed by Governor Rampton of Utah. This committee was chaired by Dan Freed and made up of representatives from various agencies of Federal and State Government, educational institutions, and user groups. This committee, in my opinion, has made a significant contribution in its report. It points out among other things that:

Utah range lands comprise 92 percent of the State's 52 million acres of land.

The proper use and development of this range is critical as a source of water, wildlife habitat, livestock forage, scenery, open space, and many forms of recreation.

Do you agree that proper use of the range resources does, in fact, enhance the other uses and resources mentioned above?

Mr. BERKLUND. Yes. Proper management and use of the range resource means a stable resource base and sustained production of a variety of products in addition to livestock forage. It results in a reduction of surface water runoff allowing greater recharge of underground systems, and decreasing soil loss and sedimentation of streams. Allotment management plans as implemented by Bureau of Land Management consider habitat for wildlife and include forage for wild horses. A sustained vegetative cover is more pleasing esthetically than gullies and denuded areas, and generally enhances the recreational values of the land.

Mr. MCKAY. In this report the present situation is described as follows:

> Despite their importance—and while considerable improvement has been made in recent years, Utah's rangelands remain one of our most neglected and underdeveloped resources. Past range use—carried out with inadequate knowledge about the rangeland environment—has caused a deterioration of many ranges. Depleted range has less value for all uses of man and grazing animals than lands that are improved to their potential.
>
> Many diversified plant communities have been replaced by less desirable, nearly pure stands of such species as sagebrush, pinyon-juniper, wyethia, or cheatgrass. This undesirable situation has resulted in accelerated soil erosion, sedimentation, unstable plant communities, and reduced overall productivity and natural beauty. Range specialist and research findings have proven that proper resource management practices can correct these undesirable conditions and increase desirable plants as much as 5 to 10 times on some of our poorer condition ranges.

Do you have any disagreement with this statement?

Mr. BERKLUND. No. The Bureau of Land Management has found that in many areas, desirable plants can be increased 5 to 10 times with selected treatment and management. Other areas extremely low in productive capability may fall short of a 10-times increase, but in those areas even a lesser increase may be enough to stabilize conditions to an acceptable level. A 5 to 10 times increase is a reasonable estimate for most areas managed by the Bureau of Land Management.

Mr. MCKAY. The committee's specific recommendations were as follows:

> Members of Utah's Rangeland Development Committee, established by the Governor's executive board of the agricultural development council, encourage all individuals and groups interested in range resource development to provide active support in:
>
> A. Developing a coordinated and accelerated range improvement program that encompasses all rangelands in Utah regardless of ownership.
>
> B. Soliciting funds from all available sources to assist non-Federal landowners to accelerate the development of their rangelands.
>
> C. Soliciting funds for an accelerated program of resource development on Federal ranges.

Do you consider that the proper way to implement a program of this nature is to develop a coordinated and accelerated program that encompasses all rangelands in Utah regardless of ownership?

Mr. BERKLUND. Where law permits; yes. The primary thrust of the Bureau of Land Management's allotment management plan program is to place all rangeland used by one rancher or one operation under a coordinated plan that not only realizes a total management approach for the entire operation, but which also increases production and/or utilization of the forage resource on the area. Investment in facilities and vegetative projects is often necessary to implement the plan, and is often done in conjunction with the private landowner. In some in-

stances, neither the Bureau of Land Management nor the rancher could undertake the improvement alone because it requires the entire management area to make up an economical unit. To treat one without the other would not be productive or economically feasible. Also, once the AMP becomes operational, the rancher becomes a major partner in the management of the public lands.

Mr. McKay. The table in back of the Utah report shows a backlog inventory of range improvement work needed on the national resource lands of Utah, with total costs in 1972 estimated at nearly $33 million.

Do you agree that the completion of this work in a reasonable number of years coupled with more intensified management would contribute substantially to better land management and an improved economic situation for rural communities such as we have in Utah?

Mr. Berklund. Yes; in several ways. Completion of the range improvement projects would allow improved management of the vegetative resource, and would result in spinoff benefits to wildlife, watershed, and recreation. It would also provide greater production or utilization of livestock forage and generate more pounds of salable beef for the rancher. In addition, an investment of this magnitude for these kinds of improvements would be made mainly on a local level which would assist in improving the local economy, and would require a substantial labor force to install, thereby generating additional jobs in the local area. Once installed, a continuing maintenance program would be necessary and would provide some measure of economic security to the local community.

RANGE IMPROVEMENTS IN THE FOUR CORNERS AREA

Mr. McKay. I am proposing that additional funding beginning in fiscal year 1975 be appropriated to the Bureau of Land Management to implement the Bureau of Land Management's part of the Governor's committee's recommendations. Some of the national resource land falls within the so-called "Four Corners" area, which has long been recognized nationally as a low-income area whose economies must be strengthened. Do you believe these additional funds, if appropriated, could be expended to actually enhance resource uses and values and improve the economy of our low-income rural areas in Utah?

Mr. Berklund. Where the physical potential for resource improvement exists; yes. The projects described in the report have been proven successful in improving resource uses and values in all areas of the western States. There is no information to indicate they wouldn't be equally successful in this area.

Contracts for projects of the type discussed are advertised and granted locally since the cost would not justify a bidder's coming from outside the local area. The local economy would not only benefit from increased production from the land itself, but would also benefit from the expenditure of funds and the hiring of labor from the locality as well. Depressed areas have been a factor in determining priorities for initiating programs of this kind.

INVESTMENT REQUIREMENTS FOR NON-FEDERAL LANDS

Mr. McKay. There is a need for better grazing of non-Federal rangeland, and range research. How is the Bureau of Land Manage-

ment involved in grazing off national resource lands? And, have you made any estimation of what it would cost for the Bureau of Land Management to work on non-Federal grazing problems as well as to cover needed range research?

Mr. BERKLUND. We have not made any estimate of what grazing management on non-Federal lands would cost in total. However, for lands that are intermingled with Federal lands and could be managed in conjunction with Federal lands, an approximation could be made. Experience with our present allotment management plan systems shows about 85–15 percent investment on the part of the Bureau of Land Management and the private landowner respectively. We could extend that ratio in general to private lands inside established grazing districts and arrive at a figure for those lands. Large blocks of private lands that are not adjacent to or mingled with Federal lands would present a totally different problem.

I would estimate we have spent about $40 million on allotment management plans covering around 30 or 31 million acres. To have covered the private land costs included in those would have taken another $7 million or so. Simultaneous development of lands remaining that are not under AMP management, both Federal and non-Federal would take another $375 to $400 million I would estimate, with about $75 to $100 million of that covering private lands. Unless developed at the same time as Federal lands though, the private land management costs would be much higher than I've indicated.

ALASKAN SURVEY SCHEDULE

Mrs. HANSEN. For Cadastral Survey, you are requesting an additional $3,265,000 for a total of $4,519,000.

Mr. BERKLUND. That is the total program provided for the surveys for various land disposals required under Native Claims Act.

Mrs. HANSEN. Will that finish the job?

Mr. BERKLUND. No, ma'am. We do not expect to complete all surveys until 1983.

Mrs. HANSEN. By when?

Mr. BERKLUND. 1983 in Alaska for the Native claims portion.

Mrs. HANSEN. Then what else remains in Alaska?

Mr. BERKLUND. We are simultaneously surveying the State selections.

Mrs. HANSEN. Beyond this 1983 figure how many acres remain in Alaska to be surveyed?

Mr. BERKLUND. In the State selection portion, there are still 94 million acres left to survey; 40 million additional acres are for the Native claims in Alaska. I think there are only about 10 million acres of field surveys that are completed in the State of Alaska.

Mrs. HANSEN. It is going to take longer than 1983.

Mr. BERKLUND. 1983 is only the completion date of the 40 million acres for Native claims; 1992 is our completion target for the State of Alaska selections.

Mrs. HANSEN. Some of this State land selection can't be finished until the land is surveyed; isn't that right?

Mr. BERKLUND. That is correct. When the lands are TA'ed they take them over but they cannot get the patent until after the lands have been surveyed. We just entered into a new agreement with the

State of Alaska that will reduce immensely the amount of survey work we will have to do for them. We will give them their patents on protraction diagrams and control points. They have agreed to do this.

Up to the time of that agreement we have been surveying and monumenting both exterior and interior lines every 2 miles. But it is at the discretion of the State. They have the right to request these surveys but if they want title faster, they will accept patent on a protraction basis with control points.

FIREFIGHTING AND REHABILITATION

Mrs. HANSEN. For your firefighting and rehabilitation program, you have a million-dollar decrease. This decrease is equal to the supplemental funds provided in 1974 for rehabilitation. What about this?

Mr. HASTEY. Under the 1974 supplemental passed last December you added on a million dollars to rehabilitate the lands that were burned over last year.

Mrs. HANSEN. That is all done?

Mr. HASTEY. It is not all completed but it is either under contract or in the process of being put under contract.

Mrs. HANSEN. The million dollars will take care of that work?

Mr. HASTEY. Yes, ma'am; the million-dollar reduction in this budget for 1975 brings us back to a more normal type appropriation for rehabilitation of $600,000 although for the last few years our fire rehabilitation needs exceeded that amount.

Mrs. HANSEN. You had quite a large number of fires last year. You had nearly 2,050 fires reported in 1973 in the lower 48 which burned approximately 600,000 acres. Also, in 1973 450 fires burned 50,000 acres in Alaska. How many acres have been rehabilitated?

Mr. VETTERICK. About 323,000 acres.

Mrs. HANSEN. What percent of those that need it?

Mr. VETTERICK. It would be about 50 percent of the total acreage burned.

Mrs. HANSEN. So all of a sudden you decided you don't need any more for rehabilitation?

Mr. VETTERICK. Well, this was an unusually bad fire year.

Mrs. HANSEN. I know, but the testimony has been that the longer the rehabilitation takes, the more problems you have.

Mr. VETTERICK. That is right.

Mrs. HANSEN. You have problems of getting the burned material off the ground before you get insects and infect adjacent areas. There are other problems too.

So I want to know what the rationale is for cutting this particular item.

Mr. BERKLUND. This item is based on our average normal year.

Mrs. HANSEN. I know, but it's kind of startling to see that 50 percent of your lands are going to go without rehabilitation.

SCHEDULED FIRE REHABILITATION WORK IN FISCAL YEAR 1974

Mr. BERKLUND. Last year, Madam Chairman, with the additional funds that this committee saw fit to supply us with, we were able to rehabilitate all but 57,000 acres of lands that we thought needed rehabilitation. There were some of those lands that were not rehabilitated because they were not burned very heavily or could come back naturally.

Mrs. HANSEN. So you feel that the 57,000 acres that remain were all right to let go?

Mr. TURCOTT. I have a table here that I think explains it very well.

Mrs. HANSEN. We will insert it in the record at this point.

[The information follows:]

FIRE REHABILITATION SUMMARY
FY 74, As of Feb. 10

State	Acres Burned	Acres not Requiring Rehab.	Regular Appropriation Cost	Regular Appropriation Acres	Supplemental Cost	Supplemental Acres	Total Cost	Total Acres	Remaining acres that should have been rehabilitated if funds were available last Fall
Alaska	59,800	59,800	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Arizona	11,100	11,100	-0-	-0-	-0-	-0-	-0-	-0-	-0-
California	38,100	10,600	85,100	10,418	137,800	16,672	222,100	27,000	400
Colorado	2,900	2,900	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Idaho	261,400	75,468	299,400	79,206	79,000	20,726	378,400	100,000	26,000
Montana	72,100	72,100	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Nevada	170,500	54,901	28,000	6,779	385,000	93,220	413,000	100,000	15,600
New Mexico	600	600	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Oregon	107,100	31	184,100	30,480	372,000	61,589	556,100	92,000	15,000
Utah	25,800	21,800	-0-	-0-	27,000	4,000	27,000	4,000	-0-
Wyoming	500	500	-0-	-0-	-0-	-0-	-0-	-0-	-0-
	689,900	309,800	596,600	126,893	1,000,000	196,207	1,596,600	323,100	57,000

Mr. TURCOTT. I will just talk from it for now. There was no rehabilitation work done with the regular $600,000 appropriation plus the $1 million in supplemental funds for the States of Alaska, Arizona, Colorado, Montana, New Mexico, Wyoming. The key State is Montana. Usually when we have a fire there, because of the soil and the existing vegetation, it will rehabilitate itself.

When we get into the Great Basin, especially the Snake River Plains of Idaho and Oregon where if it is feasible to rehabilitate we do it because of the soil and the steepness of the slopes. The additional $1 million in fiscal year 1974 allowed us to do that.

Mrs. HANSEN. But how many acres remain unrehabilitated because of lack of funds?

Mr. TURCOTT. I think other than the already mentioned 57,000 acres, it is essentially zero this year.

Mrs. HANSEN. What will happen if you have another bad fire year?

Mr. HASTEY. Once we exceed the $600,000 then we will have to go to the Office of Management and Budget and this committee for an increased supplemental.

IMPROVED SYSTEM FOR REHABILITATION FUNDING

Mrs. HANSEN. Is there any way in the budgetary process so that you could wrap up your firefighting and rehabilitation together so that you could provide rehabilitation immediately after these fires?

Mr. BERKLUND. Yes, ma'am, I will let Paul speak to that.

Mr. VETTERICK. We have the authority now within the general provisions of the Department of the Interior—for firefighting, for emergency firefighting.

Mrs. HANSEN. Yes.

Mr. VETTERICK. Essentially it allows us to use any funds within the Bureau that are available and further allows us to use any funds within the Department.

In other words, there is authority to transfer and use any funds until a supplemental can be provided. As you know, prior to the passage of our annual supplemental, we often borrow money from the land and water conservation fund. This same procedure could be extended to rehabilitation.

Mr. BERKLUND. We feel if the funds had been available right after the fires in this past season we would have rehabilitated an additional 57,000 acres. The supplemental did pull us out and we recovered a lot of acreage but there were still 57,000 acres identified which could not be treated. It was too long past to do us any good.

Mrs. HANSEN. Do you have it all cleaned up so there are no insect problems?

Mr. BERKLUND. This was mostly in rangeland where we wouldn't have the insect problem. But we are going to have some losses in watersheds. We are going to have some loss to wildlife habitat and some of the wildlife areas are endangered species habitat. So there are going to be definite losses, but we couldn't rehabilitate them because it is too late now to go back and do anything with them.

Mrs. HANSEN. I understand. That is exactly why I am asking why it isn't far more sensible to put this in the same category as firefighting and let a professional determination be made.

32-043 O - 74 - 37

Mr. BERKLUND. The Bureau has discussed this approach several times.

Mrs. HANSEN. We spent a lot of money to take the leaves off trees in Vietnam and now all of a sudden we can't plant grass. It seems silly.

GENERAL ADMINISTRATION

For general administration, an increase of $728,000 is requested, for a total of $4,151,000. What do you expect to do here?

Mr. HASTEY. The program increases of $200,000 is needed to meet the additional administrative workload brought on by the increases in the other program activities.

Over the last 5 or 6 years we have decreased our general administration support from at one time a little over 4 percent of our appropriation down to 3.3 percent, mainly through automation. We have reached a point now with the relatively sizeable increases for 1975 where we will need additional general administration support for personnel, financial and program management.

PERSONNEL CEILINGS

Mrs. HANSEN. You are requesting an additional 356 positions. How many positions are now filled in this appropriation and what is your end-of-year ceiling for 1974–75?

Mr. VETTERICK. Our current Bureau end-of-year ceiling in fiscal year 1974 is 3,949 positions and our end-of-year ceiling for fiscal year 1975 is 4,257 positions.

Our current on-board strength is 3,863 people.

CONSTRUCTION AND MAINTENANCE

Mrs. HANSEN. We now turn to construction and maintenance.

We will insert pages 85 through 99 in the record.

[The justification pages follow:]

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Construction and Maintenance

Appropriation, 1974		$6,800,000
Unobligated balance from prior years		2,862,000
Total available for obligation		$9,662,000
Decreases:		
Construction of buildings and recreation facilities	$5,912,058	
Maintenance of buildings, recreation facilities and roads	3,749,864	
Subtotal	$9,661,922	
Increases:		
Construction of buildings and recreation facilities	$1,703,000	
Maintenance of buildings and recreation facilities and roads	4,952,000	
Total available for obligation (Budget Estimate FY 1975)		$6,655,000

Construction and Maintenance
Analysis by Activities

Activity	Amount Available 1974	Fiscal Year 1975 Estimated Total Available	Fiscal Year 1975 Unobligated Balance From 1974	Fiscal Year 1975 Budget Estimate	Total Available 1975 compared to total available 1974	Page Ref.
1. Construction	$5,912,058	$1,703,000	--	$1,703,000	-$4,209,058	87
2. Maintenance	3,749,864	4,952,000	--	4,952,000	+ 1,202,136	93
Total	$9,661,922	$6,655,000	--	$6,655,000	-$3,006,922	

1. Construction

Analysis by Subactivities

Fiscal Year 1975

Subactivity	Amount Available 1974	Estimated Total Available	Unobligated Balance from 1974	Total Estimate	Total available 1975 Compared to total
Buildings	$3,265,999	$ 690,000	-0-	$ 690,000	$-2,575,999
Recreation Facilities	2,646,059	1,013,000	-0-	1,013,000	-1,633,059
Total	$ 5,912,058	$1,703,000	---	$1,703,000	$ -4,209,058

1. Construction: Fiscal Year 1974, $3,235,000; Fiscal Year 1975, $1,703,000; a decrease of $1,532,000. This program provides for the construction of (a) buildings and (b) recreation facilities.

(a) Building Construction: Fiscal Year 1974, $2,035,000; Fiscal Year 1975, $690,000; a decrease of $1,345,000 exclusive of carryover funds. The FY 1975 building construction program consists of the following:

Location	Type of Building	Prior Years	Request FY 1975
1. Bureauwide	Survey and Design	-	230,000
2. Anchorage, Alaska	Anchorage District Complex, Conversion of Existing Warehouse	800,000	210,000
3. Price, Utah	Remodel District Office, Heating and Electrical	-	60,000
4. Oregon	Drewsey Repeater, Radio Building Construction	-	10,000
5. Completion of work in Progress		-	180,000
Total		800,000	690,000

A description of the building construction projects proposed for FY 1975 follows:

1. Survey and Design of Future Facilities $230,000

The FY 1975 proposed program will provide the survey and design efforts that will meet both present and future building construction needs in locations having inadequate facilities and a lack of available space. This funding level coupled with the current and proposed construction program, will reduce the backlog of critical administrative and special purpose facility needs.

2. Anchorage District Office Complex, Anchorage, Alaska $210,000

Because of increased workloads in the Anchorage District involving implementation of the Alaska Native Claim Settlement Act, fire control and preparation for the impending Trans Alaska Pipeline, personnel levels of the Anchorage District have increased and more office space is needed. This involves the conversion of existing warehouse space to offices for employeees and follows the construction of a new warehouse at Anchorage in FY 1974.

3. Price District Office, Price, Utah $ 60,000

This is primarily a remodeling project to correct inadequate electrical and heating systems in the present building.

4. Drewsey Repeater, Radio Building Construction, Oregon $ 10,000

This building will be utilized to house two-way radio communications equipment at a remote repeater location. This building and radio equipment are necessary to maintain adequate radio coverage for fire operations and other communication needs.

5. Completion of Work in Progress $180,000

The funds are requested to cover estimated cost over-runs on prior year projects including a new warehouse in Anchorage, Alaska ($75,000) and new district offices in Shoshone, Idaho, ($30,000); and Las Vegas, Nevada ($75,000). Rapidly rising costs of construction and project modifications have made initial costs estimates of work insufficient to complete the projects as planned. The modification at the Shoshone Office is because of the lava rock in the area. It is necessary to grade the whole complex which will require explosives, even though only the office building will be constructed. The grading is necessary at this time to avoid the use of explosives adjacent to a completed building in constructing the remainder of the complex.

Increased costs associated with the Anchorage Warehouse and Las Vegas Office Complex are attributed to rising costs for materials, labor and increased contract administration by BLM. Some material costs have increased over 100% since August, 1973 and construction labor has also increased substantially. Materials cost increases are due to increased demand, and the scarcity of cement, brick, plumbing fixtures, reinforcing bars, insulation materials and fuel.

(b) Recreation Facility Construction: FY 1974, $1,200,000; FY 1975, $1,013,000; a decrease of $187,000. The purpose of this proposed construction program is to accommodate existing use in specific areas for recreation activities. New recreation construction is required to help reduce the imbalance between the actual use of the public lands for outdoor recreation and the number of facilities available to accommodate this use.

Each year increasing demands are made upon the public lands to provide recreational opportunities to the rapidly growing population in the Western States. The total visitor use on the public domain, amounting to 49 million visitor days in FY 1972, is expected to exceed 80 million visitor days by 1980.

Intensive use (facility oriented) recreation on the public domain is estimated to be 16 million visitor days in 1974, and is expected to reach 23 million visitor days by 1980. The One Time Use (OTU) capacity of current BLM recreation developments is 16,783. With the addition of facilities to be constructed in FY 1974 and FY 1975, the OTU capacity will be increased by 530 to a total of 17,313. The facilities, existing in FY 1974, if used to capacity for the entire season, could accommodate approximately 15% of facility oriented intensive use of the National Resource Lands.

Without basic recreation facilities, the land surface is abused, streams are polluted, trash is scattered, wildfires result from fires built in hazardous areas, and lack of sanitation facilities create hazards to health. Unless steps are taken to provide new facilities and correct present sanitation and health problems, the sanitation and protection problems of the public lands will grow to unmanageable proportions.

The proposed FY 1975 construction program includes construction in the most critical areas to help alleviate unaccommodated visitor use and protect natural resources. The major efforts are oriented to providing facilities subject to use by urban populations and to complete projects already under construction. The total program is shown in the following table.

Recreation Construction, FY 1975
Projects

State	County	Project	Cost Estimate	Family Units or Other Features	One Time Use Capacity
1. All States	-	Survey & Design of Future Sites	$210,000	-	-
Projects Partially Completed					
2. Arizona	Mohave	Virgin Canyon	300,000	117 Overnight Units to complete)	530
3. Calif.	Imperial	Imperial Sand Dunes	160,000	Water & Sewer System Dev.	0
4. New Mexico	Taos	Rio Grande	120,000	12 Vault Toilets	0
5. Utah	Kane	Paria Canyon	50,000	Entrance Station	0
6. Idaho	Twin	Salmon Dam	40,000	Protective Fence	0
7. All States	-	Completion of work in progress	133,000	-	-
Totals			1,013,000		530

1. Survey and Design - All States

The funds will provide for the survey and design of future recreation facilities needed to support the ongoing management program and the proposed management increase. Construction surveys will be directed to areas incurring the highest use and requiring basic sanitation facilities.

2. Virgin Canyon - Arizona

This is a joint project between BLM and the Arizona State Highway Department which is constructing an interchange near the Virgin Canyon Recreation Lands to serve as a rest area (along Interstate Highway 15). It is the only roadside camping area serving the 150 mile distance between St. George, Utah, and Las Vegas, Nevada. The joint program is designed to control and manage the use in the whole area by providing sanitation and camping facilities and a jump-off point for extensive

use of the area. A water distribution system, power transmission lines and an interior road net are in the FY 1974 Budget. FY 1975 funding is required to provide 117 family units, 5 comfort stations, a contact station, a trailhead facility and an interpretive overlook.

3. Imperial Sand Dunes - California

This will provide water and sanitation facilities for phase II of the Imperial Sand Dunes Development. Recreation use on this area averages 6,000 visitors per weekend day, and over 35,000 for a long weekend. Despite the intensive use, there are presently no sanitary facilities for the off-road-vehicle enthusiasts who use the site.

4. Rio Grande Gorge - New Mexico

Funds are needed to provide 12 vault toilets to replace the existing pit toilets which do not meet the state sanitation standards. These toilets service the campground located adjacent to the visitor center. Interpretive displays for the visitor center will also be provided Project visitation after completion is estimated at 100,000 visitors per year. Approximately 40,000 visits are anticipated annually at the visitor center.

5. Paria Canyon - Utah

FY 1975 funding will provide for construction of an entrance station designed to help insure the safety of the 5,000 visitors annually entering Paria Canyon at its main entrance in Southern Utah. It will consist of a trailer office, water supply, two vault toilets, parking area, and garbage cans. Since the canyon is subject to severe flash floods, it is necessary to have the main entrance manned to warn visitors of impending floods. The station will also be used to control the number of people entering the area, thereby preventing damage from overuse.

6. Salmon Dam Campground - Idaho

The Salmon Falls Reservoir is a very productive fishery which is open to year-round use, including ice fishing and ice boating as well as the usual uses associated with water based recreation. The site is located ten miles west of U.S. 93 and Rogerson, Idaho, near the Salmon Falls Reservoir dam site. It is within easy access for the 350,000 people in the Boise - Twin Falls complex. Fourteen campsites are being provided in FY 1974. Funds are required in FY 75 to provide protective fencing (including some areas of chain link fence along a steep cliff).

7. Completion of Work in Progress

Rapidly rising costs of construction have made initial cost estimates of work insufficient to complete several developments. Increase in pay costs and the pace of construction have also increased the cost of contract supervision by BLM. Unforeseen contingencies and project modifications have also had an impact on available construction capabilities. The funds requested in this category will allow the Bureau to complete work on the Squaw Lake Recreation Site ($30,000), and Barstow Way Station ($103,000).

2. MAINTENANCE

Analysis by Subactivities
Fiscal Year 1975

Subactivity	Amount Available 1974	Estimated Total Available	Unobligated Balance from 1974	Budget Estimate	Total available 1975 compared to total available 1974
Buildings	$ 538,000	$ 746,000	---	$ 746,000	$+ 208,000
Recreation	1,491,156	2,147,000	---	2,147,000	+ 655,844
Roads	1,720,708	2,059,000	---	2,059,000	+ 338,292
Total	$3,749,864	$4,952,000	---	$ 4,952,000	+$1,202,136

2. Maintenance: Fiscal year 1974, $3,565,000; fiscal year 1975, $4,952,000 an increase of $1,387,000. The increase requested for FY 1975 consists of the following:

	Increase (+) or decrease (-) Amount	Positions	Total Amount	Program Positions	Explanation
(a)	+$ 208,000	+ 2	$ 746,000	11	To provide for the corrective and preventative maintenance of buildings, parking lots, outdoor storage areas, loading docks, fences & grounds.
(b)	661,000	+ 4	2,147,000	23	To provide for periodic maintenance of developed recreation sites. Also includes maintenance related to hazard reduction.
(c)	518,000	+ 4	2,059,000	45	To provide for the preventative and corrective maintenance on access roads under Bureau jurisdiction.
	+ $ 1,387,000	+ 10			

Cost Factors Involved in Increase

(a) Two permanent man-years at an average annual cost of $16,000, $32,000; Five temporary man-years at an average cost of $10,000, $50,000; Travel, transportation of persons, supplies and materials and equipment, $15,000; contractual maintenance services $111,000.

(b) Four permanent man-years at an average annual cost of $16,000; $64,000; Fifteen temporary man-years at an average cost of $10,000, $150,000; Travel, transportation of BLM persons and per diem at an average cost of $500, $9,500; Supplies and materials, equipment, rent, communications and utilities, $40,000; contractual maintenance services, $397,500.

(c) Four permanent man-years at an average annual cost of $16,000; $64,000; Ten temporary man-years at an average cost of $10,000, $100,000; Travel, transportation of BLM persons and per diem at an average cost of $1,000, $14,000; Supplies, materials and equipment, $30,000; contractual maintenance services, $310,000.

Need for Increase:

(a) Building Maintenance: This increase of $208,000 including $30,000 for October, 1973 pay raise costs and 2 permanent positions in FY 1975 will permit the Bureau to work towards achieving an acceptable building maintenance standard for building space of 960,000 square feet in 859 existing structures. This increase will help satisfy the Bureau's current existing building maintenance needs, and provide for up-grading maintenance on existing structures as well as the care and upkeep of new facilities scheduled for construction in FY 1974.

The present building maintenance program funding and personnel levels need to be increased to have a safe and healthy environment in which government employees may work and serve the public. Not only are some structures deteriorating at an increasing rate due to inadequate maintenance, but in many cases they will not meet the minimum national health and safety codes.

Increases in costs for maintenance services, materials and supplies have resulted in a decrease in actual maintenance accomplished on structures at past years funding levels. This is compounded by the fact that many BLM operated buildings are in a deteriorated state, having been built as early as the 1930's.

In addition to direct maintenance of buildings, other features such as parking lots, outdoor storage areas, loading docks, fences and grounds require increased emphasis.

Improved levels of maintenance will correct unsafe and poor working conditions, help extend the usefull life of all affected structures and enhance their utility and appearance for the public which they are intended to serve.

(b) Recreation Maintenance: This increase of $661,000 including $35,000 of pay raise costs, will help improve the maintenance of the 195 existing developed sites plus 2 sites to be constructed in FY 1974. It will, through a program of hazard reduction, reduce the number of deaths and serious injuries incurred on public lands.

Each year increasing demands are made upon the public lands (particularly in the California Desert and Lower Colorado River) to provide recreational opportunities to the rapidly growing population in the Western States. The sheer numbers of people using the relatively few developed sites require accelerated maintenance schedules to keep pace with the need for clean-up and repair. The funding level for recreation facility maintenance has not and is not keeping astride of previously constructed facilities, and rising costs of materials.

Increased emphasis is also planned to reduce the number of deaths and serious injuries related to public land recreation in BLM areas of most intensive public use. In these areas, an estimated 400 hazards will be eliminated, neutralized or reduced. This will be accomplished by fencing, signing, or filling mine shafts and other hazards. Cooperative efforts with organized user groups such as ORV clubs, community service organizations, youth clubs, and others, are expected to increase the effectiveness of this increase by fifty percent.

(c) Road Maintenance: The FY 1975 program proposes an increase of $518,000 which includes $30,000 in pay raise costs, and 4 permanent positions to maintain approximately 7,400 miles of roads and trails on a periodic schedule. This increase will help begin to properly maintain the 44,000 miles of existing roads on National Resource Lands.

Use of the public lands road system continues to increase each year. Much of the Bureau's road system is in poor condition and poses serious safety problems because the roads are increasingly used by visitors who are unfamiliar with local conditions. Also, inadequately maintained roads have an environmental impact which far exceeds the immediate land they occupy. Erosion, caused by poor drainage or improper grades, can influence water quality for many miles downstream. Poorly maintained roads also result in heavy rutting, land slides and other degradations of outdoor surroundings.

The total Bureau road system contains approximately 44,000 miles, most of which have never been graded or drained. As little as 20% of BLM's road system is maintained in some States. Roads built by the CCC's in the late 1930's have deteriorated to the point where they must be replaced; the current road maintenance capability is insufficient to upgrade these unsafe roads or road structures.

Status of road maintenance for Bureau controlled roads is as follows:

Maintenance Requirements for Roads on the Public Lands

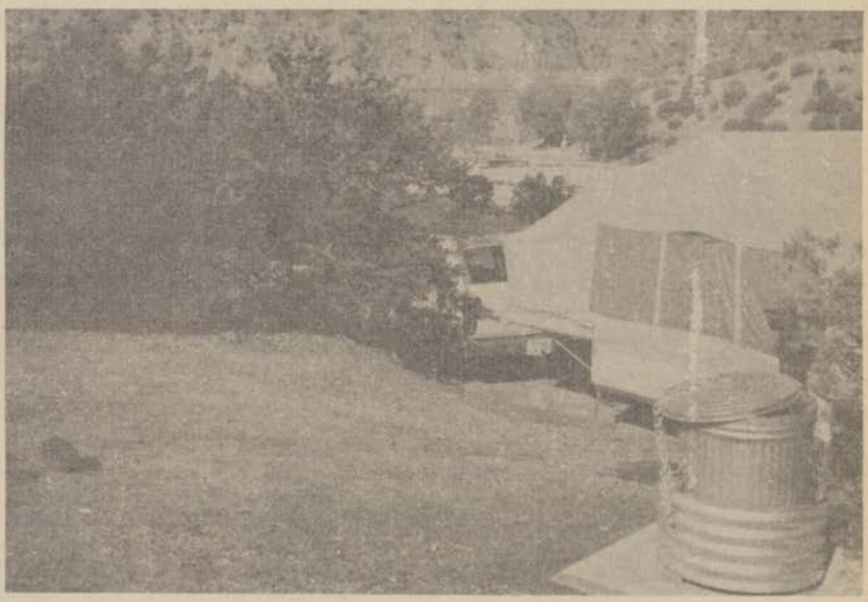
	Miles	Maintenance Costs
1. Roads Improved by Grading or Draining:		
a. Total miles to maintain	9,500	
b. FY 1974 budget	5,150	$ 1,391,000
c. FY 1975 proposed budget	5,650	1,909,000
2. Unimproved Roads Used by the Public:		
a. Total miles to maintain	34,500	150,000
b. FY 1974 Budget	1,720	150,000
c. FY 1975 proposed budget	1,720	150,000
3. Total		
a. Miles to maintain	44,000	
b. FY 1974 budget	6,870	$ 1,541,000
c. FY 1975 proposed budget	7,370	$ 2,059,000

Adequate road maintenance reduces long-run costs by protecting the investment in roads and provides more efficient land and resource management through improved access. Safety hazards for all users are greatly reduced along with the possibility of adverse court decisions and public criticism. Usable roads also tend to protect the more fragile areas from unregulated use by directing the public into areas which can absorb use pressure and which possess adequate facilities.

Program of Continuing Work: The Bureau's maintenance efforts will be directed toward insuring that, insofar as possible, facilities are adequately cared for to: (1) provide for the safety of employees and the visiting public, (2) extend the useful life and utility of existing structures and other capital investments and, (3) enhance the efficiency of resource management and related administrative and technical support functions.

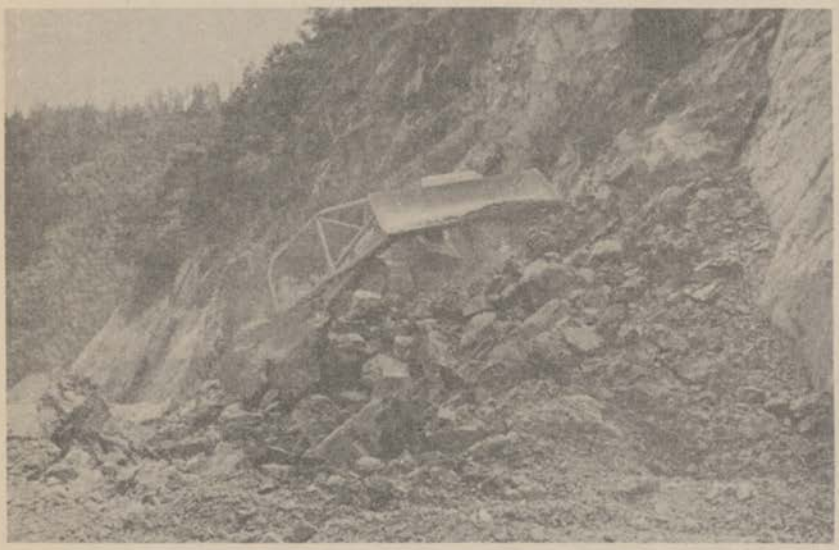
Building Maintenance: In FY 1975 the Bureau will increase efforts to maintain BLM-owned buildings and related structures and grounds to make them safe, attractive and convenient for public use. An average of $.57 per square foot is now being spent for the care and upkeep of Bureau space which is less than one-half the average for other government and private facilities.

Recreation Facility Maintenance: Recreation sites (197) will be periodically maintained to satisfy increasing visitor use
To the extent possible, efforts also will continue to be directed to the cleanup of undeveloped sites, roadsides and waterways on the public lands. The Johnny Horizon anti-litter campaign will also continue to receive emphasis in FY 1975 to enlist public support and direct contributions in the cleanup and maintenance of our public land environment.



BLM DEVELOPED SITE IN NEW MEXICO

Road and Trail Maintenance: Approximately 7,400 miles of roads and trails will be maintained on a period schedule with the base level program. Frequency of maintenance will be governed by the volume of public use, the nature of use, and the relative levels of investment in these transportation facilities.



CLEARING ROCK SLIDE DEBRIS FROM A BUREAU ROAD

Construction & Maintenance

Personnel Summary

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions.....	100	100	110
Full time equivalent of other positions.	92	103	133
Average number of all employees.....	187	198	234
Average GS grade.....	9.0	9.0	9.0
Average GS salary.....	$13,866	$14,527	$14,527

ITEMIZATION OF ESTIMATE

Construction and Maintenance

	Actual 1973	Estimate 1974	Estimate 1975	Increase (+) Decrease (-)
Program & Financing:				
Total obligations...	$5,641,670	$9,661,922	$6,655,000	$-3,006,922
Unobligated balance available start of year.....	- 738,592	-2,861,922	-----	+2,861,922
Unobligated balance available end of year.....	2,861,922	-----	-----	-----
Appropriation.....	$7,765,000	$6,800,000	$6,655,000	$- 145,000
Obligation by Objects:				
11.0 Personnel compensation.....	$2,232,000	$2,297,000	$2,711,000	+ 414,000
12.1 Personnel benefits: Civiliam Empl..	207,000	216,000	227,000	+ 11,000
21.0 Travel & Transportation of persons.....	144,000	150,000	160,000	+ 10,000
22.0 Transportation of things.....	260,000	300,000	320,000	+ 20,000
23.0 Rent, communications, and utilities.....	55,000	60,000	70,000	+ 10,000
24.0 Printing and reproduction...	16,000	20,000	25,000	+ 5,000
25.0 Other Services.	1,017,000	4,375,000	1,524.000	-2.851.000
26.0 Supplies & Materials.....	414,000	450,000	500,000	+ 50,000
31.0 Equipment.....	110,000	100,000	125,000	+ 25,000
32.0 Lands & Structures.....	1,192,000	1,700,000	1,000,000	- 700,000
Subtotals	5,646,670	9,668,000	6,662,000	-3,006,000
95.0 Quarters and Subsistence Charges.....	- 5,000	- 6,000	- 7,000	- 1,000
Total Obligations...	5,641,670	9,662,000	6,655,000	- 3,007,000

32-043 O - 74 - 38

Mrs. HANSEN. Please insert in the record at this point a tabulation of your unobligated balances by project as of June 30, 1973, and January 31, 1974. This tabulation should indicate the year in which funds were appropriated for each project.

Mr. BERKLUND. We will be pleased to do that.

[The information follows:]

BUREAU OF LAND MANAGEMENT

UNOBLIGATED BALANCES IN CONSTRUCTION ACTIVITY BY PROJECT

[In thousands of dollars]

	Unobligated balance	
	June 30, 1973	Jan. 31, 1974
Buildings and year authorized:		
Roseburg district office, 1973	733	1,140
Shoshone district office, 1973	165	235
Las Vegas district office, 1973	333	0
Survey and design of future projects and contract supervision	0	66
Subtotal, buildings	1,231	1,441
Recreation and year authorized:		
Critical desert management (California), 1973	0	8
Barstow way station (California), 1973	247	0
Pollution control (Alaska), 1972	67	67
Cripple creek campground (Alaska), 1973	61	0
Lower Colorado River complex (Arizonia), 1972	188	188
Salmon Dam campground (Idaho), 1973	93	93
Holter Lake campground (Montana), 1973	120	0
Rio Grande development (New Mexico), 1972	87	0
Little Sahara development (Utah), 1973	166	166
Pony express stations (Utah), 1973	36	0
Red Rocks complex (Nevada), 1972	381	681
Garnet Ghost Town (Montana), 1974	0	31
Virgin Canyon campground (Arizona), 1974	0	130
Survey and design of future projects and contract supervision	0	120
Subtotal, recreation	1,446	1,484
Total	2,677	2,925

Note: We anticipate contracts on all of these projects will be awarded on or before June 30, 1974, and there will be no unobligated balance as of that date.

CONSTRUCTION COST OVERRUNS

Mrs. HANSEN. What cost overruns have you experienced in the past year?

Mr. HASTEY. We had cost overruns in almost every project we have had this year.

Mr. HANSEN. Due to what?

Mr. HASTEY. This is due to the same reasons why much of the things you buy downtown have gone up. It is the price rise in steel, cement, all of the building materials that go into constructing some of the facilities that we requested.

Mrs. HANSEN. So that actually when you make your budget estimates you have built in about 10 percent escalation; isn't this correct?

Mr. HASTEY. We are being forced to build this in although the direction we have from the Office of Management and Budget is not to project any inflationary trends. That is why many of the budget estimates that we come forward with are underestimated. It is pretty hard to forecast the inflation we are experiencing now.

We have had projects that a year ago were estimated for $300,000 and today's prices are probably costing us $450,000, almost a 50 percent increase.

BUDGETARY DECREASES

Mrs. HANSEN. Your estimate for 1975 is $3,006,922 below the $9,661,922 available in 1974. Would you please explain this?

Mr. HASTEY. The decreases are primarily in the building construction and recreation construction programs with cutbacks in the number of facilities we plan to build in fiscal 1975.

We do have increases in building maintenance, recreation maintenance and road maintenance. The major decreases are in the two construction subactivities, buildings and recreation. This is why we have the cutback in the number of facilities in 1975.

BUILDING CONSTRUCTION

Mrs. HANSEN. For your buildings you have a $2,575,999 decrease. Are these buildings that are finished?

Mr. HASTEY. No. These are buildings and complexes we have started in past years. We have no new starts. Most of our construction, both in buildings and in recreation, is a continuation or completion of ongoing projects. I think you will notice that both in buildings and recreation, much of that money is to pick up the fiscal year 1974 cost overruns I just mentioned.

Our building construction is down about $1.3 million and our recreation construction is down about $200,000.

Mrs. HANSEN. You have projects in Anchorage, Utah, and Oregon. That is about all you have.

Mr. HASTEY. Yes, ma'am; and these are projects that have been started in past years. One is a remodeling and a conversion job of an existing warehouse in Anchorage. There is a new radio repeater station in Oregon. But this is a very small budget item in the building program.

Mrs. HANSEN. Is that all you have need for?

Mr. HASTEY. There are other projects, ma'am, that we could initiate.

Mrs. HANSEN. Such as?

Mr. HASTEY. For example, we have the Craig warehouse in Colorado. Right now we have much of our storage outside because of lack of space in the warehouse at the Craig district. These are some of the projects that we had to defer because of other priorities in our budget, particularly in the energy area.

RECREATION FACILITY CONSTRUCTION

Mrs. HANSEN. Your recreation facility construction request is $1,013,000.

Mr. HASTEY. Yes. Like buildings, these are continuations of existing projects. There are no new starts in the fiscal 1975 budget for recreation construction.

POLLUTION ABATEMENT PROGRESS

Mrs. HANSEN. The President issued an Executive order that you had to obligate all your pollution abatement projects by July 31, 1974. How does this budget put you in line with that proclamation?

Mr. HASTEY. In our pollution control for BLM buildings we are pretty much on schedule. In the recreation area, the existing facilities

we have, have been corrected or else they are on track. One problem we have, of course, in the area of pollution control is the cleanup from use of undeveloped sites.

In other words, a camper goes out and uses an area that does not have toilet or water facilities. In this case you have a continuing pollution problem.

Mrs. HANSEN. There are two serious areas. First is the problem of possibility of typhoid. The next is water quality. What about that?

Mr. HASTEY. I would say most all of our sites, developed recreational sites, are pretty much on track in terms of improving the water quality. There are a few sites in Alaska that we haven't completed upgrading but we hope to complete them in the near future.

But that doesn't take care of the undeveloped recreation sites.

Mrs. HANSEN. So your problem is in these undeveloped recreation sites where a band of 12 or 15 people decides to camp for a weekend. Is there any way that you can warn the public that they use such areas at their own risk?

Mr. VETTERICK. We post such water sources that are unsafe. Certainly where we know people are using unsafe water they are posted.

Mrs. HANSEN. Why don't you put some signs which prohibit camping in these areas?

Mr. VETTERICK. There is a problem of enforcement.

Mr. HASTEY. This relates to what we are trying to do in 1975, particularly in the desert. Our primary thrust is what we call visitor management. In other words, the money you appropriated last year for our Barstow way station was to establish some contact point where the visitor to the desert would channel through.

At this station we provide visitor education as to where some of the hazards in the desert are, the water problems, and where they should and shouldn't camp. So rather than build a lot of facilities we are trying to manage the visitor.

Many of the people who use the desert have their own campers, their own trailers, and carry their own water. So now it is as much of an education problem as it is lack of facilities.

MAINTENANCE PROGRAMS

Mrs. HANSEN. Your request for maintenance is $4,952,000. Do you want to give us some details of this?

Mr. HASTEY. In our building maintenance program we have an increase of $208,000. This is to apply preventive maintenance to our administrative and special purpose buildings.

Mrs. HANSEN. Are these buildings you are renting from GSA?

Mr. HASTEY. No; these are Bureau-owned buildings.

The second part of the maintenance increase is in the recreation area, a part of which is to provide periodic maintenance at our developed recreation sites. This $661,000 is split between maintenance of the developed sites and hazard reduction.

The hazard reduction portion would be used to either fence, post, or fill some of the mine shafts we have in the desert; also to sign some of these areas that you mentioned in terms of poor water, to point out dangerous areas such as cliffs where people riding motorcycles across the desert have driven off. In summary, it would be a program of hazard reduction and maintenance of developed recreation sites.

Mrs. HANSEN. In your road maintenance program, you have planned to maintain 7,400 miles of roads and trails. I don't think many of your roads are really roads at all. They would be in the trail category.

Mr. HASTEY. This is a serious problem. Many of our 44,000 miles of roads are not really maintainable because of the condition they are in. They were never constructed to a road standard. They were developed by animal herds walking along a trail, then a jeep, and then a tractor, and that was the road.

Mrs. HANSEN. You note down at the bottom of the page that you have a poorly maintained road and you can't keep it up because it doesn't have any base in the first place, so you are going to get heavy rutting, landslides, and everything else. What can you do about that with this kind of a budget?

Mr. HASTEY. The only way to solve some of our road problems is through a large increase in our construction program. These roads need base material. The types of soils we are dealing with are highly erodible, both from wind and water and they rut very easily.

Mrs. HANSEN. I am going to suggest to you people that you organize a little camping trip for the OMB and you take them out to the desert and let them drive over some of these "roads."

PUBLIC LANDS DEVELOPMENT ROADS AND TRAILS

We now turn to your road account. We will insert pages 100 to 104 in the record.

[The pages follow:]

RECAPITULATION OF PUBLIC LANDS DEVELOPMENT ROADS AND TRAILS STATUS OF NBA AND LIQUIDATING CASH APPROPRIATIONS

Fiscal Year	New Budget Authority Authorized by the Federal Aid Highway Acts (in $1,000's)	Budget Authority Lapsing (in $1,000's)	Programmed New Budget Authority (in $1,000's)	Liquidating Cash Appropriation (in $1,000's)	Unfunded Balance Lapsing (in $1,000's)
1963	2,000		-----	-----	
1964	4,000		2,000	760	
1965	2,000		2,500	2,500	
1966	2,000		2,000	2,000	
1967	3,000		2,000	2,000	
1968	5,000		3,000	2,600	
1969	3,500		3,320	3,500	
1970	5,000		4,000	3,500	
1971	5,000		2,500	3,500	
1972	10,000		4,000	3,200	
1973	-----		4,313	3,265	
1974	20,000		4,000	4,000	
1975	10,000	4,891	4,070	4,070	4,891
Total	71,500	4,891	37,703	34,895	4,891

Unprogrammed Contract Authorization at end of FY 1975 - $28,906 thousand.
Unfunded Contract Authorization at end of FY 1975 - $31,714 thousand.

Planned Use of Contract Authority - FY 1975. The Bureau obligation program will permit road grading of 41 miles, road surfacing of 141 miles, construction of one bridge and one mile of trail, and for the Bureau's sign program. The estimate also includes funds to accomplish survey and design and acquire easements for roads and trails.

An adequate road and trail system is essential to the public use and proper management and protection of 450 million acres of National Resource Lands administered by the Bureau. Most of the land is presently accessible only by primitive roads and many millions of additional acres are completely inaccessible because of lack of easements across surrounding private lands.



ROAD BUILDING ON THE NATIONAL RESOURCE LANDS

Most of the existing Bureau road system consists of primitive roads which do not adequately service the Bureau's resource and administrative needs. Furthermore, these roads often pose a serious safety hazard to the using public, many of whom are not properly equipped or familiar with local driving hazards. Expanded use of the lands for recreation and other purposes is aggravating public safety problems.

Of the 44 thousand miles of existing roads, 32 thousand are classed as primitive and approximately 30 thousand miles are in need of upgrading. These roads do not meet adequate standards and many can be used only seasonally. In addition, another 6,700 miles of added construction and surfacing has been identified to serve the long term management needs of the National Resource Lands. Of the estimated 19 thousand miles of trail requirements, only about 5 thousand miles presently exist.

Construction standards vary from single-lane graded dirt roads for fire control to double-lane surface roads to meet multiple resource needs and intensive recreation access.

A summary of the programmed authority for FY 1975 by State is as follows:

Arizona	$ 294,000
California	89,000
Colorado	112,000
Idaho	496,000
Montana	182,000
Nevada	95,000
New Mexico	235,000
Oregon	422,000
Utah	264,000
Wyoming	308,000
Survey & Design & Easement Acquisition (All States)	1,573,000
TOTAL OBLIGATION PROGRAM	$4,070,000

Public Lands Development Roads and Trails
Personnel Summary

	1973 Actual	1974 Est.	1975 Est.
Total number of permanent positions	75	75	75
Full-time equivalent of other positions	26	29	29
Average number of all employees	95	98	98
Average GS grade	9.0	9.0	9.0
Average GS salary	$13,866	$14,527	$14,527

ITEMIZATION OF ESTIMATE

Public Lands Development Roads and Trails

	Actual 1973	Actual 1974	Actual 1975	Increase + Decrease -
Program and Financing:				
Total obligations.....	$ 3,158,333	$ 5,155,000	$ 4,070,000	$- 1,085,000
Unobligated balance available start of year.....	-17,274,160	-14,115,827	-28,960,827	-14,845,000
Unobligated balance available end of year.....	14,115,827	28,960,827	30,000,000	+ 1,039,173
Unobligated balance lapsing.....	----	----	4,890,827	+ 4,890,827
Unfunded balance, start of year.....	17,940,000	14,675,000	30,675,000	+16,000,000
Unfunded balance, carried forward.....	-14,675,000	-30,675,000	-31,714,173	- 1,039,173
Unfunded balance, lapsing	----	----	- 4,890,827	- 4,890,827
Appropriation to liquidate contract authorization.....	$3,265,000	$4,000,000	$4,070,000	+$ 70,000
Obligations by Objects:				
11.0 Personnel compensation.....	$1,258,000	$1,270,000	$1,340,000	+ 70,000
12.1 Personnel benefits: Civilian employees	108,000	108,000	108,000	----
21.0 Travel and transportation of persons	105,000	145,000	150,000	+ 5,000
22.0 Transportation of things.....	60,000	86,000	86,000	----
23.0 Rent, communications, and utilities.....	13,000	18,000	20,000	+ 2,000
25.0 Other services.....	263,000	377,000	350,000	- 27,000
26.0 Supplies & Materials.	139,000	199,000	200,000	+ 1,000
31.0 Equipment.....	64,000	97,000	100,000	+ 3,000
32.0 Lands & Structures...	1,147,333	2,855,000	1,716,000	- 1,139,000
Total Direct Obligations..	3,158,333	5,155,000	4,070,000	- 1,085,000

LAPSED BUDGET AUTHORITY

Mrs. HANSEN. Please explain the "budget authority lapsing" of $4,891,000 in fiscal year 1975.

Mr. VETTERICK. Madam Chairman, we have had some of this money in reserve for a long period of time. Under the Federal Aid Highway Act, as long as we have cumulative obligations that equal the amounts appropriated under the Federal Aid Highway Act out to a 3-year extension we have nothing lapsing. Because the way the Federal Aid Highway reads, at the end of the third year following that new authority any unobligated portion of that authority does automatically lapse. This is the case here. In other words, our cumulative obligations over the years has not kept pace with the cumulative appropriations made through the Federal Aid Highway Act. We underran it 3 years beyond the last act by $4,819,000. Thus this authority has lapsed as a result of keeping those funds in reserve for a period of time and letting them build up for the last few years.

Mrs. HANSEN. With all of the problems you have?

Mr. VETTERICK. We have quite a few problems.

LEVEL 1975 ROAD PROGRAM

Mrs. HANSEN. Your program is about level with last year. How does this level of effort compare with the authorization in the Highway Act? Does this funding level adequately provide for the road needs of the Bureau?

Mr. VETTERICK. We have new authority of $10 million, and we are proposing a program of $4,070,000. So there is almost a $6 million difference between the authority we do have in fiscal year 1975 and the amount we are programing for obligation and expenditure.

Mr. HASTEY. As to the second part of your question, it does not meet all of the needs we have in terms of reconstruction of some of the very low standard roads we have in the public lands.

ROADS AND RIGHTS-OF-WAY FOR RESOURCE DEVELOPMENT

Mrs. HANSEN. As you are searching out more minerals, you are going to have to get those minerals out to be processed. Your road program is going to have a deep impact upon our ability to fulfill the national need for energy and minerals. Isn't this true?

Mr. BERKLUND. This is very true. We have never taken any responsibility of providing roads for mineral development, but for the management of those minerals, for the preparation of sales and such they are a necessity. This facilitates the Bureau of Land Management in the preparation of a leasing program or disposal of whatever severance we would have to make in a Federal offering.

Mrs. HANSEN. It is penny wise and pound foolish.

Mr. TURCOTT. We are back in an activity we analyzed previously. That is the rights-of-way involved in minerals development. Many of the rights-of-way are haul roads or main access roads. The com-

panies have to build them. Under the 1872 mining law they don't but I was speaking with reference to mineral leasing.

Mrs. HANSEN. But you have some management problems associated with your work.

Mr. TURCOTT. Yes, indeed.

Mr. BERKLUND. Management and fire protection.

Mr. TURCOTT. The main one being that even with the discretionary right-of-way authorization, we probably don't have adequate control of private road planning and designing to insure it is where we want it for multipurposes rather than just one purpose.

Mrs. HANSEN. Does your road program adequately provide for the accelerated leasing programs in such areas as oil shale, geothermal, and coal?

Mr. TURCOTT. Not as far as it being a Government constructed road under the public land roads and trails development program.

As I said, these roads are going to be built by others requesting rights-of-way across the public lands. There are potentially hundreds of thousand of miles involved.

Mr. TURCOTT. I think it was World War II authority. I know in my home country in Nevada there were a lot of access roads built for minerals. I believe that law has lapsed or has been rescinded.

Mrs. HANSEN. Most of the States had the provisional right after World War II. A mines to market and farms to market kind of program.

Mr. TURCOTT. I don't know of any program of that kind now.

Mrs. HANSEN. No; but it was very popular in the Western States.

OWNERSHIP TRENDS IN OIL SHALE LEASES

Mr. YATES. May I ask a question on the oil shale?

Mrs. HANSEN. Yes.

Mr. YATES. I notice way back on page 58 you talk about six prototype oil shale lease sales are scheduled for fiscal 1974. Two each in Colorado, Utah, and Wyoming. I would like to know whether or not these leases will go to any companies which already own oil shale land?

Mr. BERKLUND. It is possible they could, but this hasn't been the trend to date.

The two majors that bid on the first Colorado sale were Standard Oil of Indiana and Gulf. According to our records they do not hold any significant amount of private oil shale lands.

For ARCO, Oil Shale Corp., Ashland, and Shell who acquired the second tract, the same was true except possibly for ARCO. As individuals, they did not hold any large private holdings.

Mr. YATES. Of Oil Shale?

Mr. BERKLUND. Yes; as individual companies, they don't except for ARCO.

Then on the third, the Utah tract that has been bid in, Phillips and Sun Oil, the high bidders are not major private landholders of oil shale lands.

We can go back and probably find some that they have a part interest, a fractional interest, but we can't tell you what it is. But, outside of ARCO, none of these high bidders are the major holders of oil shale lands.

There was concern because on the third sale that was held most of the land adjacent to it or close to it was held by a large major oil company. We thought they had an advantage to bid. But they were not even a bidder.

Oregon and California Grant Lands

Mrs. Hansen. We will now consider Oregon and California grant lands. Insert pages 105 through 121 in the record at this point.

[The pages follows:]

Department of the Interior
Bureau of Land Management
Oregon and California Grant Lands

Estimated appropriation, 1974		$ 28,750,000
Unobligated balance from prior years (included in this unobligated balance, $305,088 for Forest Service)		5,242,697
Total available for obligation		33,992,697
Decreases		
Construction and acquisition (included in this amount is $3,445,313 for Forest Service)	$ 16,031,333	
Forest development, protection and management (includes $188,876 for Forest Service)	13,084,860	
Operation and maintenance	4,876,504	
		-33,992,697
Increases		
Construction and acquisition (included in this amount is $4,064,313 for Forest Service)	13,188,333	
Forest development, protection and management (includes $243,876 for Forest Service)	15,952,860	
Operation and maintenance	4,851,504	
Total available for obligation		33,992,697
Less: Unobligated balance from prior years		5,242,697
Budget Estimate, 1975		28,750,000

Oregon and California Grant Lands
Analysis by Activities

	Fiscal Year 1975					
	Amount Available 1974	Estimated Total Available	Unobligated Balance from prior year	Budget Estimate	Total Available 1975 Compared to Total Available 1974	Page Ref.
1. Construction & acquisition	$16,031,333	$13,188,333	$-1,688,333	$11,500,000	- $2,843,000	107
2. Forest development, protection & management	13,084,860	15,952,860	-2,752,860	13,200,000	+ 2,868,000	116
3. Operation & maintenance	4,876,504	4,851,504	- 801,504	4,050,000	- 25,000	118
Total	33,992,697	33,992,697	-5,242,697	28,750,000	---	

JUSTIFICATION

Appropriation Title

Oregon and California Grant Lands - $28,750,000

Under this title an amount equal to 25% of the gross receipts from sales of timber and other products on the revested Oregon and California Railroad Grant Lands is appropriated for the construction, acquisition, operation and maintenance of access roads and other improvements, and for forest management, reforestation, and protection of the BLM administered lands in western Oregon.

The estimate for FY 1975 for this appropriation is $28,750,000, no change from 1974 exclusive of carryover funds.

1. Construction and Acquisition - $11,500,000

The FY 1975 estimate of $11,500,000 is a decrease of $3,300,947 below FY 1974 exclusive of carryover funds. This activity provides for the construction of access roads and recreation facilities in western Oregon.

The analysis of new budget authority, total availability, and the obligation program follows in tabular form on the following page.



A SUSTAINED YIELD OF WESTERN OREGON TIMBER HELPS MEET THE NATION'S GROWING DEMAND FOR FOREST PRODUCTS.

1. Construction and Acquisition Activity, Analysis by Subactivity and Agency

Agency	Amount Available FY 1974	Fiscal Year 1975 Estimated Total Available	Unobligated Balance From FY 1974	Budget Estimate	Total Available 1975 Compared to 1974	Obligation Program FY 1975	Page Ref.
(a) Access roads:							
1. Bureau of Land Management	$10,546,020	$ 8,472,020	$ 497,020	$ 7,975,000	$-2,074,000	$ 8,225,000	109
2. Forest Service	2,650,000	3,175,000	350,000	2,825,000	+ 525,000	2,075,000	109
Subtotal, Access roads	13,196,020	11,647,020	847,020	10,800,000	-1,549,000	10,300,000	
(b) Recreation facilities							
1. Bureau of Land Management	2,040,000	652,000	652,000	-0-	-1,388,000	500,000	109
2. Forest Service	795,313	889,313	189,313	700,000	+ 94,000	700,000	109
Subtotal, Rec. facilities	2,835,313	1,541,313	841,313	700,000	-1,294,000	1,200,000	
Activity total	16,031,333	13,188,333	1,688,333	11,500,000	-2,843,000	11,500,000	

(a) Access Roads-$10,800,000

The amount of $10,800,000 includes $2,825,000 for the Forest Service. The BLM amount of $7,975,000 is a decrease of $2,107,000 compared to the amount available for 1974 exclusive of carryover funds. These funds will be used for survey and design, rights-of-way agreements, and acquisition of easements as well as construction, improvement, and acquisition of roads and bridges in support of the management of the O&C revested lands in western Oregon.

The access road system must be planned sufficiently ahead of actual sales to provide access to undeveloped areas of mature, over-mature, decadent, and scattered salvage timber stands to insure a well-balanced schedule of timber harvest. Access affords bidding opportunities to all prospective timber buyers.

During FY 1975, a BLM obligation program of $8,225,000 including $250,000 in carryover funds is planned to accomplish 31 miles of surfacing and 34 miles of grading. Rock production for road repair and surfacing and construction of bridges and culverts is also included.

The Forest Service road construction estimated new authority of $2,825,000 is an increase of $272,000 over FY 1974, exclusive of carryover funds. The Forest Service planned obligation program for FY 1975 is $2,075,000.

(b) Recreation Construction - $700,000

The BLM portion of this program will be carried out with $500,000 in carrover funds. The Forest Service recreation construction amount is $700,000, an increase of $94,000 over FY 1974 exclusive of carryover funds.

Access roads have opened many previously remote areas with high recreation value. Increasing use of these areas by the public creates fire and pollution hazards which endanger both the resources and the using public. The recreation construction program attempts to minimize or eliminate these hazards by providing potable water and sanitary picnic and camping facilities in carefully selected areas.

The BLM FY 1975 program will provide for environmental studies, survey and design, recreation inventory, coordination and advance planning for future recreation demands in Western Oregon. No facility construction is planned in FY 1975.

Details of the construction and acquisition program are shown in the following tables:

32-043 O - 74 - 39

OREGON AND CALIFORNIA GRANT LANDS
Fiscal Year 1974 Program
Construction and Acquisition

Availability:

Unobligated balance as of 6/30/73, brought forward..... (included in this unobligated balance is $286,212 for Forest Service)		$ 1,230,386
Estimated warranted authorization, FY 1974.....		14,800,947
Less: Unobligated balance, end of year FY 1974.....		-1,688,333
Available for 1974 program.....		14,343,000

Utilization:

Bureau of Land Management:		
Planning, reconnaissance.....	$ 400,000	
Acquisition.....	300,000	
Recreation construction.....	1,388,000	
		2,088,000
Federal Highway Administration:		
Surveys.....	200,000	
Road construction.....	9,149,000	
		9,349,000
Forest Service:		
Construction of roads.....	2,300,000	
Recreation construction.....	606,000	
		2,906,000
		14,343,000

Detail of Road Construction Program, BLM Lands, FY 1974

Road System	Project Name	Miles	Type	Cost Estimate
Galice	Galice Creek	12	Grading	$ 3,500,000
Columbia	Seaporia	11	Grading	140,000
Blue Ridge	Blue Ridge	19	Surfacing	325,000
Glendale	Cow Creek Slide	-	Correct slide condition	80,000
Rock Creek	Berry Creek	7	Surfacing	350,000
Elk Head	Wards Butte	6	Grading	114,000
Lake Creek	Deadwood	6	Grading	300,000
Upper Rogue	W. Branch Elk Creek	.6	Grading & Surfacing	160,000
Molalla	Middle Fork Road	12	Surfacing	250,000
Glendale	Bobby Creek	4.5	Surfacing	300,000
Bridges and culverts				730,000
Aggregate production				2,000,000
Survey and design				200,000
Construction Engineering & Contract Modification				900,000
Subtotal (FHWA)				9,349,000
Planning and reconnaissance (BLM)				400,000
Road and Easement acquisition (BLM)				300,000
Total FY 1974 Obligation Program				10,049,000



TIMBER ACCESS ROAD IN WESTERN OREGON

Detail of Recreation Construction Program, BLM Lands, FY 1974

Project	County	Cost Estimate	Family Units	1/ OTU's
Shotgun	Lane	$ 674,000	57	285
Pollution Control	All O&C Counties	145,000	Modification of Water Systems	
Rock Creek	Douglas	25,000	Stream Bank Stabilization	
Rogue River Trail Bridges	Josephine	4,000	Contract Supervision	
Swiftwater	Douglas	237,000	75	450
Total		$ 1,085,000	132	735

In addition to the funds identified above, the remaining sum of $303,000 is for survey and design, recreation inventory and analysis, coordination and planning for future recreational demands in Western Oregon.

1/ OTU's represent "one-time-use" capacity or the average number of people which the proposed facility could accommodate at any given moment. It applies only to construction features, which by their nature, increase capacity.

OREGON AND CALIFORNIA GRANT LANDS
Fiscal Year 1975 Program
Construction and Acquisition

Availability:		
Unobligated balance as of 6/30/74, brought forward..... (included in this unobligated balance is $539,313 for Forest Service)		1,688,333
Estimated warranted authorization, FY 1975.....		11,500,000
Less: Unobligated balance, end of year FY 1975.....		1,688,333
Available for FY 1975 program.....		11,500,000
Utilization:		
Bureau of Land Management:		
GSA Space Costs.....	$ 90,000	
Planning, reconnaissance.....	410,000	
Acquisition.....	300,000	
Recreation construction.....	500,000	
		1,300,000
Federal Highway Administration:		
Surveys.....	200,000	
Road Construction.....	7,225,000	
		7,425,000
Forest Service:		
Construction of roads.....	2,075,000	
Recreation construction.....	700,000	
		2,775,000
Total 1975 program.....		11,500,000

Detail of Road Construction Programs, BLM Lands, FY 1975

Road System	Project Name	Miles	Type	Cost Estimate
Galice	Galice Creek	12	Surfacing	$ 1,625,000
Columbia	Scaponia	11	Surfacing	325,000
Rock Creek	Bob Butte	8	Grading & Surfacing	1,300,000
McKinzie	McKinzie-Bear	5	Grading	300,000
Mohawk	Shotgun Creek	1	Grading	75,000
Rock Creek	Berry Creek Spurs	8	Grading	350,000
Bridges and culverts				725,000
Aggregate production				1,525,000
Survey and design				200,000
Construction Engineering & Contract Modification				1,000,000
Subtotal (FHWA)				7,425,000
Planning and reconnaissance (BLM)				410,000
Road and easement acquisition (BLM)				300,000
GSA Space				90,000
Total FY 1975 Obligation Program				8,225,000

2. Forest Development, Protection and Management - Analysis by Subactivity and Agency

Subactivity and Agency	Amount Available FY 1974	Estimated Total Available	Unobligated Balance From FY 1974	Budget Estimate	Total Available 1975 Compared to 1974	Obligation Program FY 1975	Page Ref.
(a) Forest protection: Bureau of Land Management	$1,361,549	$ 1,521,548	- $ 221,549	$ 1,300,000	+ $ 159,999	1,300,000	116
(b) Forest Development: Bureau of Land Management	4,900,000	5,100,000	- 1,000,000	4,100,000	+ 200,000	4,100,000	116
Forest Service	188,876	243,877	- 18,876	225,000	+ 55,001	225,000	117
(c) Forest Management: Bureau of Land Management	6,634,435	9,087,435	- 1,512,435	7,575,000	+ 2,453,000	7,575,000	118
Total	13,084,860	15,952,860	- 2,752,860	13,200,000	+ 2,868,000	13,200,000	

3. Operation and maintenance (ALL BLM) - Analysis by Subactivity

(a) Roads	3,725,000	3,700,000	400,000	3,300,000	-25,000	3,300,000	118
(b) Recreation facilities	1,151,504	1,151,504	401,504	750,000	--	750,000	119
Total	4,876,504	4,851,504	801,504	4,050,000	-25,000	4,050,000	

(2) Forest Development, Protection and Management $13,200,000

The FY 1975 estimate of $13,200,000 is an increase of $3,550,559 over FY 1974 exclusive of carryover funds. The program provides for the protection of western Oregon forests, reforestation, and rehabilitation practices, timber stand improvement and a variety of forest management functions oriented toward the orderly harvest of timber crops.

(a) Forest Protection - $1,300,000

The estimate of $1,300,000 is an increase of $819,011 over FY 1974 exclusive of carryover funds. On an obligation program basis the increase is $1,000,000. BLM contracts for fire protection on approximately 2.4 million acres of O&C and public domain forest lands in western Oregon. These contracts are negotiated with the State of Oregon, the Forest Service, and Clackamas County on a rate per acre which reflects each agency's costs for fire suppression and fire prevention in past years. The Bureau will also continue to contribute to presuppression and control measures through the removal of snags, slash disposal, firebreak construction, fire law enforcement and fire investigations on Bureau administered lands. The obligation program increase is attributable to higher actual fire costs in 1973 which will be reflected in FY 1975 protection contracts.

(b) Forest Development - $4,325,000

The estimate of $4,325,000 represents an increase of $215,000 over the FY 1974 amount, exclusive of carryover funds.

Bureau of Land Management - $4,100,000

The purpose of this program is to insure maximum timber production which is reflected in the level of the annual allowable cut. This is accomplished in part by pre-commercial thinning which involves the removal of trees from immature, overstocked stands of timber. This practice gives the residual trees more room for growth and development and will produce commercial sized timber in a shorter period of time with more useable wood volume than would otherwise be realized.

Site and stand improvement, stand conversion, reforestation, and genetic improvement are also part of this program. These practices are all conducive to bringing denuded forest lands with little or no natural regeneration and unproductive hardwood stands into full timber production. Site treatment involves the removal of brush and other obstacles from potential timber producing sites to permit planting of desirable tree species. Genetic improvement of commerical tree species helps provide superior seed and planting stock. These practices together with commerical thinning and mortality salvage operations make up the Bureau's western Oregon intensified forest management program. Through study and analysis, each practice has been found to be both environmentally and economically feasible. The best possible combination or mix of practices is determined through computerization which

also permits allowable cut projections far into the future based on varying levels of intensity and mix of development practices.



FORESTER EXAMINING YOUNG REPRODUCTION OF DOUGLAS FIR IN SALEM, OREGON DISTRICT.

Forest Service - $225,000

The Forest Service program of $225,000 is an increase of $55,000 over FY 1974 and is included in the forest development total. This provides for reforestation and stand improvement work on those O&C lands which are under Forest Service jurisdiction.

(c) Forest Management - $7,575,000

The estimate of $7,575,000 is an increase of $2,476,548 over the amount available in FY 1974, exclusive of carryover funds. The increase is necessary to maintain a level forestry program in a situation of rising management costs such as pay raises enacted for prior years and GSA Space Costs ($635,000). Also the increase is necessary to offset a reduction of $1,425,000 in the amount of Management of Lands and Resources appropriation funds utilized for Western Oregon Forest Management. This funding adjustment permits an increase of an equivalent amount for forest management programs on other than Western Oregon lands as discussed under Management of Lands and Resources.

The total Western Oregon management program including the Management of Lands and Resources Appropriation funds, provides for the layout, measurement, appraisal, sale and administration of the total allowable cut in Western Oregon. This cut is determined from periodic inventories which are correlated with the principles of multiple-use and environmental protection and enhancement to develop a sustained yield timber harvest.



HARVESTING OLD GROWTH TIMBER

3. Operation and Maintenance $4,050,000

The amount of $4,050,000 is a decrease of $249,612 over the amount available for FY 1974, exclusive of carryover funds. This program provides adequate maintenance of access roads and recreation facilities on Bureau lands in western Oregon.

(a) Roads - $3,300,000

The amount of $3,300,000 is a decrease of $48,107 over FY 1974 availability, exclusive of carryover funds.

These funds provide maintenance for approximately 7,500 miles of timber access roads. These roads must be kept in usable condition to insure an even flow of logs to the mills, particularly during the rainy season when inadequately maintained roads rapidly deteriorate. Washouts are costly both in repairs and in the economic loss suffered by the mill operator and the logger.

Use of the O&C road system continues to increase each year. Much of this road system is in poor condition and poses serious safety problems because the roads are increasingly used by visitors who are unfamiliar with local conditions. Also, inadequately maintained roads have an environmental impact far beyond the immediate land they occupy. Erosion, caused by poor drainage or improper grades, can influence water quality for many miles downstream. Poorly maintained roads also result in heavy rutting, land slides and other degradations of outdoor surroundings. The road maintenance program includes preventative and corrective maintenance to alleviate the above problems, reducing the long-run costs of protecting the investment in roads and resulting in more efficient land and resource management through improved access.

The estimated requirement for GSA Space included in this subactivity in FY 1975 is $42,000.

(b) Recreation Facilities - $750,000

The esitmate of $750,000 is a decrease of $201,505 over the amount available in FY 1974, exclusive carryover funds. The obligation program is $750,000 for both years. The O&C areas are near population centers and are receiving more recreation use every year. Visitor days at western Oregon recreational facilities are increasing every year and the trend is expected to continue throughout the 1970's. This increasing demand comes largely from metropolitan areas of California and other surrounding states as well as additional pressure from in-state residents.

Heavy use increases the maintenance effort. This program provides adequate services such as disposing of garbage, servicing sanitation facilities, keeping drinking water safe, and repairing and maintaining facilities on 53 developed sites in western Oregon.

Personnel Summary

Bureau of Land Management	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions	410	410	453
Full-time equivalent of other positions	79	80	80
Average number of all employees	480	481	521
Average GS grade	9.0	9.0	9.0
Average GS salary	$13,866	$14,527	$14,527

Allocation Accounts	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions	79	109	115
Full-time equivalent of other positions	22	24	27
Average number of all employees	190	132	141
Average GS grade	8.3	8.3	8.3
Average GS salary	$13,823	$14,661	$14,983
Average salary of ungraded positions	$10,173	$10,640	$10,640

ITEMIZATION OF ESTIMATE

Oregon and California Grand Land (receipt limitation)

	Actual 1973	Actual 1974	Estimate 1975	Increase (+) Decrease (-)
Program and Financing:				
Total obligations	$18,045,000	$28,750,000	$28,750,000	---
Unobligated balance available, start of year...	-964,000	-5,243,000	-5,243,000	---
Unobligated balance available, end of year.....	5,243,000	5,243,000	5,243,000	---
Appropriation.....	22,324,000	28,750,000	28,750,000	---
Obligations by Objects:				
11.0 Personnel compensation....	6,930,000	7,389,000	8,158,000	+ 769,000
12.1 Personnel benefits: Civilian employees.....	594,000	637,000	693,000	+ 56,000
21.0 Travel and transportation of persons.....	269,000	393,000	489,000	+ 96,000
22.0 Transportation of things.....	518,000	652,000	757,000	+ 105,000
23.0 Rent, communications, and utilities.....	101,000	176,000	244,000	+ 68,000
24.0 Printing and reproduction..	6,000	6,000	12,000	+ 6,000
25.0 Other services.	3,043,000	5,468,000	5,675,000	+ 207,000
26.0 Supplies and materials.....	678,000	754,000	834,000	+ 80,000
31.0 Equipment.....	180,000	226,000	301,000	+ 75,000
32.0 Land and structures.....	5,728,000	13,052,000	11,593,000	-1,459,000
Subtotal.....	18,047,000	28,753,000	28,756,000	+ 3,000
95.0 Quarters and subsistence charges.....	-2,000	-3,000	-6,000	- 3,000
Total obligations....	18,045,000	28,750,000	28,750,000	---

INCREASE IN O. & C. FOREST MANAGEMENT

Mrs. HANSEN. Your proposal shows an increase of $2,868,000 for forest development, protection, and management and a decrease of $2,843,000 for construction and acquisition. Please explain this.

Mr. HASTEY. Most of the increase in the forest management activity is to pick up that $1.4 million worth of forest management work that was moved from management lands and resources. The remaining part of the increase in the forest management portion covers fund transfers to the General Services Administration for space rentals. We are absorbing the General Services Administration item in this account, plus the addition cost of the October pay raise which we must also absorb in this account. In order to make up those three increase items we had to decrease the construction program because we are working against a level program when compared to fiscal year 1974. We also have a ceiling, you might say, based upon the amount of receipts that come in from timber sales.

[Discussion off the record.]

RANGE IMPROVEMENTS

Mrs. HANSEN. We now turn to range improvements and will insert pages 122 through 124 in the record.

[The pages follow:]

RANGE IMPROVEMENTS

Fiscal Year 1975

Amount Available 1974	Available	Unobligated Balance from Prior Year	Budget Estimate	Total available, 1975 compared to total available, 1974
$3,242,000	$4,503,000	-----	$4,503,000	$+1,261,000

Range Improvements, an annual, indefinite appropriation, is derived from the Range Improvement Fund established by Law (43 U.S.C. 315). Included also are receipts from Bankhead-Jones Farm Tenant Act lands transferred from the Department of Agriculture by various Executive Orders. The increase for 1975 results from the increase of $0.22 per animal unit month in grazing fees for the grazing year beginning on March 1, 1974, a portion of which is designated in the Act as the Range Improvement Fee. This will bring the total fee to $1.00 per animal unit month. One half of the 1974 increase has been designated for the Range Improvement Fund in the case of fees derived from within grazing districts where the Secretary has discretionary authority to designate distribution of the fee.



FENCES FACILITATE ACCOMPLISHMENT OF RESOURCE MANAGEMENT PROGRAMS

The objectives of this program are to support intensive range management on deteriorated and declining range lands, to restore and sustain forage production, and to complement the watershed treatment and wildlife habitat improvement programs. Lands valuable for forage production are usually also valuable upland watersheds and important wildlife winter ranges or habitat areas.

Program of Continuing Work:

In FY 1975, the estimated work include construction of 50 miles of fence, 600 water developments and continued maintenance of existing range improvements. These added improvements will aid implementation of multiple-use management plans on lands which are important for forage production, watersheds, and wildlife habitat. Land improvements resulting from these efforts will provide additional forage for livestock and wildlife.

Personnel Summary

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions positions	44	44	44
Full-time equivalent of other positions	36	60	60
Average number of all employees	76	101	101
Average GS Grade	9.0	9.0	9.0
Average GS salary	$13,866	$14,527	$14,527

ITEMIZATION OF ESTIMATE

Range Improvement (receipt limitation)

	Actual 1973	Estimate 1974	Estimate 1975	Increase (+) Decrease (-)
Program & Financing:				
Total obligations....	$2,624,760	$3,463,127	$4,503,000	+$1,039,873
Unobligated balance available, start of year.....	- 132,119	- 221,018	-----	+ 221,018
Unobligated balance available, end of year.....	221,018	-----	-----	-----
Appropriation.....	2,713,659	3,242,109	4,503,000	+1,260,891
Obligations by Objects:				
11.0 Personnel compensation.....	$ 873,000	$1,155,000	$1,155,000	-----
12.0 Personnel benefits: Civilian Empl...	74,000	100,000	110,000	+ 10,000
21.0 Travel & Transportation of persons.....	48,000	70,000	70,000	-----
22.0 Transportation of things.....	128,000	175,000	225,000	+ 50,000
23.0 Rent, communications and utilities.....	6,000	10,000	10,000	-----
24.0 Printing and reproduction....	4,000	5,000	5,000	-----
25.0 Other services..	27,000	30,000	40,000	+ 10,000
26.0 Supplies and materials.....	630,760	825,127	1,000,000	+ 175,000
31.0 Equipment.....	30,000	35,000	45,000	+ 10,000
32.0 Lands and Structures.....	804,000	1,058,000	1,843,000	+ 785,000
Total Obligations...	2,624,760	3,463,127	4,503,000	+1,040,000

32-043 O - 74 - 40

GRAZING FEE SCHEDULE

Mrs. HANSEN. As of March 1, 1974, your total grazing fee is $1 per animal each month. How does this compare to the fair market fee and when do you expect to reach the fair market level?

Mr. TURCOTT. The dollar fee for this grazing year is computed at a fair market value of $1.54. The original fair market value as a result of the 1966 grazing survey was $1.23, but through the operation of the formula and the Secretary's regulation which has a fluctuating factor to account for the equivalent private land lease or rental rate, it has raised the fair market value now to $1.54.

The schedule to meet fair market value will be reached in 1980 if, in each grazing year between now and 1980, the formula is held to by the Secretary of the Interior. The President in his budget for the 1974 fiscal year came down on page 104 with a firm policy position that we would reach fair market value in accordance with the schedule and the Secretary's regulations.

Mrs. HANSEN. When are you going to reach it?

Mr. TURCOTT. 1980.

ACRES OF GRAZING LAND

Mrs. HANSEN. How many acres of grazing land do you have?

Mr. TURCOTT. 140 million acres.

Mrs. HANSEN. How much of that 140 million acres is at a maximum standard for production?

Mr. TURCOTT. That which is at the maximum standard of production—I would say it is about 16 percent of the total acreage.

ALLOTMENT MANAGEMENT PLANS

Mrs. HANSEN. Yet if you increased the quality of your grazing land you could have a far better production of cattle and sheep and whatever else.

Mr. TURCOTT. Yes, ma'am, there is no question about it.

Mr. YATES. How do you increase the quality?

Mr. TURCOTT. There is a whole science and art of range management. We discussed previously a program that is covered in our continuing work under the range management activity; allotment management planning. In this program we work in cooperation and partnership with the range permittee to apply more of the scientific part of range management in terms of resting and rotating pastures, developing water and fences. And there is a rehabilitation part where we do rangeland seeding. We don't do much herbicide treatment anymore, although I think in the next 2 or 3 years it will increase.

Mrs. HANSEN. The sage brush is gone.

Mr. TURCOTT. We have to get out our programmatic statement on herbicidal treatment. The use of herbicide is a very sensitive issue. I think in 2 or 3 years it will increase.

Mr. YATES. How do you develop water?

Mr. TURCOTT. It can be done by very small impoundments that impound no more than an acre foot or 2 of water which we call stock ponds. They are multipurpose. We develop springs or drill wells or use pipelines from large storage tanks that are filled from wells.

Mr. YATES. There is great use for this isn't there?

Mr. TURCOTT. Yes. In these 140 million acres of land we are talking about, and this may be what Madam Chairman is getting at, about 31 percent of the land is land in the worse condition in the United States. It produces little forage for grazing animals or the wildlife.

BENEFITS OF SOUND RANGE MANAGEMENT

Mr. BERKLUND. The benefits from this, Madam Chairman, are far reaching as George Turcott tried to point out.

We are not talking only about a grazing program but the use of domestic livestock for treatment of rangelands whereby we can improve the watersheds, the wildlife habitat, aesthetic values and other resource values that are cumulative on the land.

Mr. TURCOTT. We actually have a concept now where we use the grazing animal as a tool for improving forage. The Greeks knew this and a lot of succeeding civilizations, but we forgot it when we developed the West and the herds came out of Texas and all of the rest. We just chewed off all there was, and the results show what we have now.

When the Taylor Grazing Act came into being it was not a well funded program and never has been. Over the years we were involved in adjudicating the grazing privileges to the preferred operators under the law. For over 25 years we merely tried to establish boundaries, perimeter fences and minimal stock water and said that is range management. It wasn't. Instead, it is a scientific system based on the physiology of the forage that will improve the range. When we improve the vegetative conditions, you are automatically improving watershed conditions because vegetation is the key factor.

And wildlife. If you upgrade the quantity and quality of forage generally you will have better wildlife habitat, and of course it looks better. Rather than just looking at bare dirt you are looking at range land that is supporting the vegetation it is capable of supporting.

Mrs. HANSEN. I think it is tragic that the richest nation on Earth can't manage its land.

Mr. BERKLUND. There is a report out by an independent group, Madam Chairman, the Council for Agricultural Science and Technology. The bottom line of that report is that the public domain lands are in the best condition now than they have been in in the last 50 years. So we are showing a trend upward but it is not at the rate we would like to see. People like to dwell on the sore spots, the areas we are not satisfied with either. But overall our program is advancing forward, but with glacial speed.

Mr. YATES. Could you double that speed if you had more money? How do you double glacial speed?

Mrs. HANSEN. Range management takes a lot of time, and I think the input should be there now, so you can see the results in a few years.

Mr. TURCOTT. It is remarkable how fast the range will recover. We have case studies in northern Nevada that in 3 years forage conditions tripled. I can't say that would happen everywhere. If you got down on the Sonora Desert in Arizona it would take longer, but it is a relatively short period of time because we know what to do. We have the science, and more and more, we have willing operators. They don't care to just

hold you off and say "I am going to do it the way Grandpa did." They are wanting and seeking and demanding this scientific input from us to help improve range conditions. They are involved in the management of the plan. We don't want people to go out and watch every cow.

POTENTIAL REVENUE AND FUND LOSSES

Mrs. HANSEN. What is your estimate of revenues foregone which could be used for range improvement as a result of grazing your lands at less than fair market value?

Mr. TURCOTT. We would have to compute that, ma'am.

Mrs. HANSEN. Will you insert it in the record?

Mr. TURCOTT. Yes, ma'am.

[The information follows:]

GRAZING RECEIPTS

The following chart presents grazing receipts generated at the current grazing fee level compared with those generated if fair market value (FMV) were charged.

[In thousands of dollars]

	Fiscal year—	
	1974	1975
At fair market value ($.54 per AUM)	20,251	20,251
At 1974 grazing fee ($1 per AUM)	12,248	
At 1975 estimated grazing fee ($1.09 per AUM)		14,046
Difference in receipts	8,003	6,205

The amount going into the range improvement fund as a result of the above receipts would be as follows: (It should be noted that payments to the range improvement fund are made in the year following receipt of the grazing fees. That is, fees collected in fiscal year 1974 determine the level of the fiscal year 1975 range improvement fund.)

[In thousands of dollars]

	Fiscal year—			
	1974 receipts	1975 R.I. fund	1975 receipts	1976 R.I. fund
At current grazing fee	$12,248	$4,503	$14,046	$5,331
At fair market value	20,251	8,244	20,251	8,244
Difference		3,741		2,913

RECREATION, DEVELOPMENT AND OPERATION OF RECREATION FACILITIES

Mrs. HANSEN. Now we have "Recreation, Development and Operation of Recreation Facilities."

We will insert pages 125 through 127 in the record.

[The pages follow:]

RECREATION DEVELOPMENT AND OPERATION OF RECREATION FACILITIES

Fiscal Year 1975				
Amount Available 1974	Estimated Total Available	Unobligated Balance from Prior Years	Budget Estimate	Total available 1975 compared to Total available 1974
$165,000	$242,000	---	$242,000	+$77,000

The Recreation Development and Operation of Recreation Facilities, appropriation is derived from recreation user fees collected pursuant to the Land and Water Conservation Fund of 1965, as amended. Funds from this source are utilized to operate, maintain and improve re-recreation facilities on the public land. The overall goal of the Bureau's recreation program is to meet rapidly increasing public demands for safe recreation experiences while protecting the lands and related resources. The increase for 1975 is attributable to increased receipts from permits for organized events such as off-road vehicle rallies.



ORV RALLY IN CALIFORNIA

The planned program for FY 1975 complements recreation maintenance financed in the Construction and Maintenance and Oregon and California Grant Lands Appropriation and contributes to the off-road vehicle management program. Funds will be used to perform corrective and preventative maintenance at recreation facilities and to construct and improve facilities in support of the BLM off-road vehicle management program.

Personnel Summary

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions	---	---	---
Full-time equivalent of other positions	---	6	10
Average number of all employees	---	6	10
Average GS grade	---	9.0	9.0
Average GS salary	---	$14,527	$14,527



DEVELOPED RECREATION SITE

Itemization of Estimate
Recreation Development and Operation of Recreation Facilities
(Receipt Limitation)

	1973 Actual	1974 Estimate	1975 Estimate	Increase (+) Decrease (-)
Program and Financing:				
Total obligations....	---	$165,000	$242,000	+ 77,000
Appropriation.....	---	165,000	242,000	+ 77,000
Obligations by Objects:				
11.0 Personnel compensation...	---	60,000	100,000	+ 40,000
12.0 Personnel benefits: Civilian employees	---	8,000	10,000	+ 2,000
21 Travel and Transportation of persons.....	---	8,000	10,000	+ 2,000
23 Rent, communication & Utilities	---	4,000	5,000	+ 1,000
25 Other services..	---	60,000	87,000	+ 27,000
26 Supplies & materials	---	20,000	25,000	+ 5,000
31 Equipment.....	---	5,000	5,000	-----
Total Obligations.....	---	165,000	242,000	+ 77,000

Mrs. HANSEN. Please summarize some of your accomplishments in this program during the past year.

Mr. VETTERICK. This is combined with our regular maintenance account and together provides funds for recreation site maintenance, and cleanup. It is designed for cleanup, improvement, and upgrading of existing recreation facilities.

Mrs. HANSEN. You can insert any further remarks in the record.

[The information follows:]

EXPLANATION OF RECREATION DEVELOPMENT AND OPERATION OF RECREATION FACILITIES FUND

The recreation development and operation of recreation facilities fund is a new account initially established in fiscal year 1974 under the act of July 11, 1972 (86 Stat. 461). Under this legislation, recreation user fees, formerly appropriated to the land and water conservation fund, are now available for appropriation to the collecting agency for any authorized outdoor recreation purposes. The Appropriation Act limits the amount of the fund that can be utilized for fee collection purposes to 40 percent.

The Bureau utilizes the funds in this account to supplement the funds available in the "Construction and maintenance" appropriation for recreation activities. The funds are primarily utilized for both routine and corrective maintenance at developed recreation sites to help keep pace with the added maintenance workload generated by increasing use. In addition, this account provides some flexibility to help finance portions of recreation construction projects, particularly in a period of rapidly increasing construction cost.

ADMINISTRATIVE PROVISIONS

Mrs. HANSEN. Now we have administrative provisions. We will insert page 128 in the record.

[The page follows:]

ADMINISTRATIVE PROVISIONS

Authorization is requested to purchase two aircraft for use in Alaska or to acquire such aircraft by transfer from another agency's surplus if suitable aircraft becomes available. Subsequent to acquisition by BLM, these aircraft will be under the jurisdiction of the Office of Aircraft Services, Office of the Secretary and available for use in Alaska by BLM and all other Interior agencies.

Cessna 210.—The proposed acquisition will replace a 10-year-old Cessna 180. The Cessna 210 will be used for activities which presently require the use of a twin-engined Aero Commander or leased aircraft with higher operating costs. The 210 will serve as the lead or guide plane for BLM's firefighting retardant bombing operations.

Aero Commander.—This airplane would replace an 8-year-old Aero Commander which is a light twin-engine aircraft seating six or seven. Substantial savings in maintenance costs can be realized by acquiring a new plane. The Aero Commander will be primarily used for employee transport requirements associated with the Native claims program and Alaska pipeline inspection.

Replacement aircraft to be acquired

Number	2
Cost	$265,000

NEED FOR REPLACEMENT AIRCRAFT

Mrs. HANSEN. Explain your need for two replacement aircraft. Where will these be?

Mr. BERKLUND. The first plane we need to replace is a 10-year-old Cessna 180 in Alaska. The demands have changed.

We were using old planes like DC–3's for retardant bombers. We are now contracting DC–6B's. The 180 is not fast enough to function as a spotter plane for the newer bombers. The maintenance costs are high, and consequently we have been using a twin engine Aero Commander and Cessna 210's under contract. We would like the authority to go ahead and acquire a new 210. Our Aero Commander is 8 years old. Maintenance costs are high. This is primarily used for moving personnel in Alaska where aircraft is the primary mode of transportation, and we are at a point now where we feel it would be cheaper to acquire a new one if we can't acquire it from another Federal agency.

OFFICE OF AIRCRAFT SERVICES

Mrs. HANSEN. What has your experience been with the Department's Office of Aircraft Services? Tell us the truth.

Mr. BERKLUND. There are those that are enthusiastic about it and feel it is the proper way to go. It hasn't been in operation long enough for us to have drawn any conclusions within the Bureau. We are giving it full support and would like to reserve comment until after they have been in operation longer.

Mrs. HANSEN. All agencies are using the service?

Mr. BERKLUND. That is right.

Mrs. HANSEN. Where are the central repair and service facilities?

Mr. BERKLUND. Alaska is going to be the pilot program. This year it will be in operation in Alaska only.

Mr. HASTEY. It is headquartered in Boise. That is where the Director of the Office of Aircraft Services is, but the pilot program is in Alaska.

Mr. YATES. How many planes are serviced in Alaska?

Mr. VETTERICK. We have 10 in Alaska.

Mrs. HANSEN. What is the departmental number in Alaska?

Mr. BETTENBERG. I will furnish that for the record.

[The information follows:]

AIRCRAFT IN ALASKA

The Department owns 36 aircraft located in Alaska. In addition, the Department leases five aircraft for use in Alaska and operates and maintains two aircraft in Alaska for the National Oceanographic and Atmospheric Administration.

Mr. WYATT. How many people do you have in the aircraft center in Boise?

Mr. HASTEY. We have nobody attached to us.

Mr. WYATT. How many does the Department have?

Mr. BETTENBERG. I would have to furnish that for the record. I don't know the number.

Mrs. HANSEN. Give us some details on this.

[The information follows:]

OFFICE OF AIRCRAFT SERVICES—NUMBER OF PERSONNEL

The Office of Aircraft Services presently has 14 full-time permanent employees stationed in Boise, and is recruiting for six vacancies.

Mr. BETTENBERG. I think that would be a good set of questions to ask when we have the Office of the Secretary here.

Mrs. HANSEN. I want to know what the people in the bureaus think. They objected to it in the beginning.

Mr. YATES. Why is Mr. Berklund supporting it then?

Mrs. HANSEN. Because he is being very tactful I suppose.

Why was Boise selected?

Mr. BERKLUND. Because of the interagency fire center there. It is the central place for distribution of firefighting equipment and manpower, and it is the logical location if we are going to incorporate all of the lower 48 and Alaska into the program. Because of the facilities that were available Alaska was selected as the pilot for the initial OAS consolidation.

Mrs. HANSEN. Your operations are sprawled out all over. Alaska is a sizable distance from Boise.

Mr. WYATT. From Boise to some parts of Alaska is as far as from Boise to South America.

Mr. HASTEY. The Director of the Office of Aircraft Services is housed in Boise, but there is a Regional Director in Alaska that operates the Alaskan region. So he is centralized in Alaska, but the Director of OAS is in Boise.

Mr. YATES. What is the advantage of having a centralized operation?

Mr. HASTEY. I think one thing we are probably overlooking, is the fact there was some need for a departmental overview in terms of standards, particularly in the contract area. The problem we have had was in the operational levels such as contracting for firefighting aircraft.

Mrs. HANSEN. I think you need better safety standards. You have had some bad accidents. Some of those bad accidents were caused by some of your friends at the Office of Management and Budget not allowing you the planes you needed.

We appreciate your testimony, Mr. Berklund and Mr. Horton, and the testimony of your staff. We appreciate the very frank replies we received to our questions.

Thank you very much.

MONDAY, MARCH 11, 1974.

FEDERAL METAL AND NONMETALLIC MINE SAFETY BOARD OF REVIEW

WITNESSES

REPRESENTING THE BOARD

DR. HOWARD L. HARTMAN, CHAIRMAN
JUBAL HALE, EXECUTIVE SECRETARY

REPRESENTING THE DEPARTMENT OF THE INTERIOR

RICHARD BAKER, BUDGET ANALYST

Mrs. HANSEN. We now have the Federal Metal and Nonmetallic Mine Safety Board of Review.

We have as our principal witness, Dr. Howard L. Hartman, the Chairman.

Dr. Hartman, I am sure that you have a statement. If you wish, you may place it in the record and summarize it.

GENERAL STATEMENT

Mr. HARTMAN. I would like to place it in the record, if I may, Madam Chairman. Since you do have a copy I will spare you the reading of it.

[The statement follows:]

Madam Chairman, I am Dr. Howard L. Hartman, chairman of the Federal Metal and Nonmetallic Mine Safety Board of Review. I would like to make a statement on behalf of the board and answer any questions you or members of the subcommittee may have.

Members of the board, in addition to myself, are: Peter J. Bensoni, of Duluth, Minn., William W. Little, of Douglas, Ariz., Robert W. McVay, of Jefferson City, Mo., and Charles E. Schwab, of Colorado Springs, Colo.

The Board is a hearing agency, established to hear appeals from mine operators who wish to contest a mine closure order issued by the Department of the Interior which requires a mine operator to close all or part of a mine because conditions exist in violation of the Federal Metal and Nonmetallic Mine Safety Act or regulations issued pursuant thereto. The Board hears an appeal upon application of a mine operator. Appeal to the Board is the principal administrative remedy of a mine operator affected by a closure order and it is before the Board that a record is made from which further appeal may be taken to the court.

In fiscal year 1974, Congress reduced the budget of the Federal Metal and Nonmetallic Mine Safety Board from $160,000 to $60,000. This, I believe, was done because no cases had been filed with the Board, and I hope it did not represent any dissatisfaction with the way the board has conducted its business affairs. As no closure order has yet been appealed to the Board by a mine operator, we have, with the assistance of the Office of Management and Budget, prepared a budget for congressional consideration in the amount of $63,000. This budget, we believe, will be adequate to maintain an office in the District of Columbia, as required by the act under which we operate, but will allow very little for handling a caseload, should one develop.

I do not pretend to be able to predict how many appeals, if any, will be filed with the Board in fiscal year 1975. However, as Chairman of the Board, I feel that I must point out to this committee that, as our budget has been decreased, the funds appropriated to the Department of the Interior for enforcement have been greatly increased and this increase in appropriation has been largely devoted to increasing their force of mine inspectors. At the end of the last fiscal year, the Department of the Interior employed approximately 140 mine inspectors. They anticipate that this will be increased by 75 mine inspectors this fiscal year (as of January 31, 1974, they had 192 mine inspectors) and they are requesting funds to increase their force by another 75 mine inspectors by the end of fiscal year 1975.

If the additional mine inspectors are put to effective use, this would mean more intense and effective enforcement of mine safety regulations, which presumably could influence the number of appeals that would be filed with our Board. There are, no doubt, other factors which could have a similar influence. The Board, of course, must be in a position to act quickly, as mines will be closed and miners may be out of work while a case is pending before the Board. Therefore, I feel I must emphasize that, for our board to effectively operate in fiscal year 1975, should a caseload develop, a supplemental appropriation would be required.

FISCAL YEAR 1975 FUNDING REQUEST

Mr. HARTMAN. Very briefly, we find ourselves in the same situation as last year, to report to you that there has been no caseload and that the Board has met only one time and that was for administrative reasons. Our very efficient staff of two people here in Washington continues to operate the office.

We are asking for essentially the same budget as last year, actually increased by $3,000 from $60,000 to $63,000.

Mrs. HANSEN. We will insert the justification in the record at this point.

[The justifications follow:]

FEDERAL METAL AND NONMETALLIC MINE SAFETY BOARD OF REVIEW

SALARIES AND EXPENSES

Appropriation/Total available, 1973..... $160,000

Appropriation/Total available, 1974..... 60,000

Summary of Increases and Decreases, 1975

	Base for 1975	Increase 1975	
Adjudication and Administration:			
Revised estimate of program needs.....	$60,000	$+3,000	$ +3,000
Budget estimate, 1975.....			63,000

Analysis by Activities

Activity	F.Y. 1973 Amount Available	F.Y. 1974 Amount Available	F.Y. 1975 Estimate	Increase (+) or Decrease (-) 1975 Compared with 1974
Adjudication and Administration.....	$50,489	$60,000	$63,000	$+3,000
Unobligated Balance Lapsing.....	109,511	---	---	---
Total.....	160,000	60,000	63,000	+3,000

JUSTIFICATION

Adjudication and Administration: Fiscal year 1974, $60,000; fiscal year 1975, $63,000; increase, $3,000. The increase consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
$+3,000	--	$63,000	2	Revised estimate of program needs.

An appropriation of $63,000 is requested for operation of the Federal Metal and Nonmetallic Mine Safety Board of Review for fiscal year 1975. This is $3,000 more than the Board's fiscal year 1974 budget.

The Federal Metal and Nonmetallic Mine Safety Board of Review is an independent, quasi-judicial agency, established by section 10 of the Federal Metal and Nonmetallic Mine Safety Act (30 U.S.C. 721-740). More particularly, section 10(a) of the act provides:

> "An agency is hereby created to be known as the Federal Metal and Nonmetallic Mine Safety Board of Review, which shall be composed of five members who shall be appointed by the President, by and with the advice and consent of the Senate."

FEDERAL METAL AND NONMETALLIC MINE
SAFETY BOARD OF REVIEW

SALARIES AND EXPENSES

Appropriation/Total available, 1973..... $160,000

Appropriation/Total available, 1974..... 60,000

Summary of Increases and Decreases, 1975

	Base for 1975	Increase 1975	
Adjudication and Administration:			
Revised estimate of program needs.....	$60,000	$+3,000	$ +3,000
Budget estimate, 1975.....			63,000

Analysis by Activities

Activity	F.Y. 1973 Amount Available	F.Y. 1974 Amount Available	F.Y. 1975 Estimate	Increase (+) or Decrease (-) 1975 Compared with 1974
Adjudication and Administration.....	$50,489	$60,000	$63,000	$+3,000
Unobligated Balance Lapsing.....	109,511	---	---	---
Total.....	160,000	60,000	63,000	+3,000

JUSTIFICATION

Adjudication and Administration: Fiscal year 1974, $60,000; fiscal year 1975, $63,000; increase, $3,000. The increase consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
$+3,000	--	$63,000	2	Revised estimate of program needs.

An appropriation of $63,000 is requested for operation of the Federal Metal and Nonmetallic Mine Safety Board of Review for fiscal year 1975. This is $3,000 more than the Board's fiscal year 1974 budget.

The Federal Metal and Nonmetallic Mine Safety Board of Review is an independent, quasi-judicial agency, established by section 10 of the Federal Metal and Nonmetallic Mine Safety Act (30 U.S.C. 721-740). More particularly, section 10(a) of the act provides:

> "An agency is hereby created to be known as the Federal Metal and Nonmetallic Mine Safety Board of Review, which shall be composed of five members who shall be appointed by the President, by and with the advice and consent of the Senate."

The membership of the Board is required to be tripartite in nature, that is, two members must represent the viewpoint of the metal and nonmetallic mine operators; two members must represent the viewpoint of the metal and nonmetallic mine workers; and the chairman, who is required to be an engineer experienced in the metal and nonmetallic mining industry and without financial or employment connection with the groups concerned.

On July 15, 1971, the Senate confirmed the following individuals as members of the Board:

Howard L. Hartman (Chairman), of Tennessee, for the term of 5 years expiring September 15, 1975.

Peter J. Bensoni, of Minnesota, for the remainder of the term of 5 years expiring September 15, 1972. On October 14, 1972, the Senate confirmed Mr. Bensoni for the term of 5 years expiring September 15, 1977.

William W. Little, of Arizona, for the remainder of the term of 5 years expiring September 15, 1971. On October 21, 1971, the Senate confirmed Mr. Little for the term of 5 years expiring September 15, 1976.

Robert W. McVay, of Missouri, for the remainder of the term of 5 years expiring September 15, 1973. On December 5, 1973, the Senate confirmed Mr. McVay for the term of 5 years expiring September 15, 1978.

Charles E. Schwab, of Colorado, for the remainder of the term of 5 years expiring September 15, 1974.

The Federal Metal and Nonmetallic Mine Safety Act provides for promulgation, by the Secretary of the Interior, of mandatory health and safety standards applicable to metal and nonmetallic mines, and for the enforcement of such standards.

The Mining Enforcement and Safety Administration (MESA) performs the actual on-site inspections of mines.

The Board is a hearing agency, established to review contested orders issued by MESA which require a mine operator to withdraw personnel from a mine the Bureau believes to be in a condition in violation of mine safety standards. As such, the Board performs essentially a judicial function; the Board is not engaged in mine inspection, or in the promulgation of safety standards. A withdrawal order issued by MESA is reviewed by the Board whenever an operator of a mine affected by an order files an application for review with the Board. Appeals from final Board orders may be taken to the U.S. Courts of Appeals, and then to the U.S. Supreme Court.

To adjudicate the cases that come before it, the Board is required to conduct public hearings; to render final decisions and orders; and to certify records on appeals to the courts. Because of the "urgent need for prompt decisions," all such actions of the Board are specifically required to "be taken as rapidly as practicable, consistent with adequate consideration of the issues involved."

Apart from its adjudicative functions, the Board is required to perform the numerous organizational duties of any quasi-judicial agency in the executive branch. It is required to perform the ongoing activities of an independent agency: the maintenance of records, files and supporting data; the submission of administrative reports to other executive departments and agencies; reports to the Congress, including a detailed annual report of its operations; the

prompt handling of inquiries and correspondence: and the participation in hearings before committees of the Congress.

During fiscal year 1972, the Board spent only $59,765 and during fiscal year 1973, the Board spent only $50,489. The Board was able to operate on a budget of these amounts because no cases were filed before the Board in either of these fiscal years. The Board, when estimating budget requirements in advance, must, of course, presume that at least some cases will be filed, as MESA is carrying on an active mine inspection program of the approximately 17,000 mines, quarries, sand and gravel pits, and milling operations covered by the Federal Metal and Nonmetallic Mine Safety Act.

The Board's fiscal year 1975 budget has been prepared on the assumption that only a small number of cases will be filed. Based on it's previous operating experience $53,000 will be required to maintain the Board in accordance with the provisions of the Federal Metal and Nonmetallic Mine Safety Act. In addition, $10,000 is requested for hearings costs should a caseload develop. Should sufficient caseload develop to the extent that additional resources are needed, supplemental appropriations would be required since the Board must be in a position to act promptly.

PERSONNEL SUMMARY

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions...	2	2	2
Average paid employment.....	2	2	2
Average GS grade.....	10.5	10.5	10.5
Average GS salary.....	$15,285	$16,518	$16,518

ITEMIZATION OF ESTIMATE

Appropriation Title: Salaries and Expenses — Federal Metal and Nonmetallic Mine Safety Board of Review

	1973 Actual	1974 Estimate	1975 Estimate	Increase (+) or Decrease (-)
Program and Financing:				
Total obligations.....	$50,489	$60,000	$63,000	$+3,000
Unobligated balance lapsing.	109,511	---	---	---
Budget authority (appropriation).....	160,000	60,000	63,000	+3,000
Object Classification:				
11. Personnel compensation...	30,212	35,000	37,000	+2,000
12. Personnel benefits.....	2,584	3,000	3,000	---
21. Travel and transportation of persons.....	1,520	4,000	7,000	+3,000
23. Rent, communications and utilities.....	13,380	13,000	9,000	-4,000
24. Printing and reproduction	222	1,000	1,000	---
25. Other services.....	2,237	3,000	5,000	+2,000
26. Supplies and materials...	334	1,000	1,000	---
Total obligations.....	50,489	60,000	63,000	+3,000

Mrs. HANSEN. You have had no hearings or meetings this year at all, other than your typical organization meeting?

Mr. HARTMAN. Yes. It's a budget preparation and review meeting where the Board members meet with our counsel.

Mrs. HANSEN. They could almost do that in a telephone booth.

Mr. HARTMAN. Yes, we could, almost.

BASIS FOR BUDGET ESTIMATE

Mrs. HANSEN. You are requesting $53,000 to maintain the Board and $10,000 for hearing costs as your caseloads develop. What is the basis for these estimates, in view of the history of this?

Mr. HARTMAN. It is very difficult to estimate. We tried to make some estimates at our meeting in Denver in September last year. It was our feeling that $5,000 per caseload is probably a rock bottom minimum estimate. Transportation costs alone for the Board members and subsistence would run a few thousand. Stenographic services and reproduction costs would easily consume another few thousand.

If the hearing were over in a matter of 2 or 3 days, $5,000 would probably cover all costs. If it became a prolonged hearing, it could easily consume more than that.

So our estimate is $5,000 to $6,000 per hearing.

Mrs. HANSEN. On a typical case which might come before you, what would be your guess as to the length of time and cost?

Mr. HARTMAN. Since we haven't had any?

Mrs. HANSEN. Don't you find it rather strange that there has been no appeals to the Board? Has there been no question raised about any of the decisions made in the compliance effort under this law?

LACK OF APPEAL OF CLOSURE ORDERS

Mr. HARTMAN. Mr. Hale, we have had essentially no inquiries, have we?

Mr. HALE. The last inquiry we had was a matter of months ago. There has just been nothing, so far as I know, recently that has even come close to an appeal.

Mrs. HANSEN. I would think that if MESA was enforcing the law strictly people would get upset and would come before you.

Mr. WYATT. Maybe they are doing just right, Madam Chairman.

Mrs. HANSEN. Apparently. Maybe they are afraid of getting into a hornet's nest.

Mr. EVANS. Have any mines been closed?

Mr. HARTMAN. Closure orders last year ran 965, which is more than four times the previous year which was approximately four times the year prior to that. We have had a very high order of increase in closure orders each year. But this has still produced no appeals.

Mr. EVANS. Do you have any understanding of why this is so?

Mr. HARTMAN. Really none. We speculate as to why there has been none and what circumstances would cause a caseload to develop. There really seems to be no rational process that leads you to be able to explain it.

Mr. EVANS. You have nothing to do with the regulations under the law, do you?

AREA OF BOARD'S RESPONSIBILITIES

Mr. HARTMAN. We have nothing to do with the passing of the regulations or the enforcement, either one.

Mrs. HANSEN. Yours is just strictly a board of review?

Mr. HARTMAN. It's simply a hearing and appellate group. If there are no appeals made, then there are none to hear.

The answer to your original question, Madam Chairman, is that we would expect a hearing to be rather short in duration. But I have no grounds to explain to you why I feel that way, except the fact we haven't had any.

We believe that if a hearing came to us it would be out of dire circumstances, of a mining company feeling that they simply could not live with a closure order, that it was imperative for various reasons to get that order rescinded or changed and they would want the hearing to take place as quickly as possible.

Mrs. HANSEN. In other words, it would be almost an emergency category?

Mr. HARTMAN. Almost. That is my feeling.

HEARING SITE

Mr. EVANS. Where do you sit? Where would you sit if a case came for you to consider?

Mr. HARTMAN. The law requires us to maintain an office here in the District of Columbia, which we do. We would hold a hearing here if it were convenient for the party who makes the appeal. We assume, however, that it is more apt to be in a mining district. We would be prepared to conduct our hearing near the site of the location of the mine or mining company as a convenience to all parties.

This is one of the reasons why the board does not hold its own business meetings here in Washington. We have tried to minimize distance of travel by going somewhat to a more central location.

Mrs. HANSEN. Where was your business meeting held this year?

Mr. HARTMAN. In Denver.

Mr. EVANS. I know of some small mines that have been closed in Colorado because the ownership is held by families. They are getting along in years and they have been told that they either close their mines or they secure many thousands of dollars worth of equipment. They have been fiery mad, very angry. They look at the costs of what they would have to borrow and they know they are not going to live long enough to pay those costs and loans so they just close down their mines.

As a matter of fact, I think in many instances the law is too strict and in many instances the regulations under the law are unreasonable. In fact, in this one community, 60 percent of the homes were heated by coal that came from these small mines. They have been through considerable crises and yet there has not been one appeal. I don't understand that.

Mr. HALE. I would like to explain one thing. You say the homes were heated by coal that came from the mines. We have nothing to do with coal mines.

Mr. EVANS. You don't touch coal at all?

Mr. HARTMAN. No. Metal and nonmetallic mines only.
Mr. EVANS. I thought coal was nonmetallic.
Mr. HARTMAN. Not in the classification scheme.
Mr. EVANS. You learn something every day.
Mr. HARTMAN. Coal is a third category of fuels.

DETAILS OF BUDGET REQUEST

Mrs. HANSEN. $7,000 is requested for travel. What are the current travel allowances for employees and members?
Mr. HARTMAN. The current budget amount?
Mrs. HANSEN. Yes.
Mr. HARTMAN. It's $4,000.
Mrs. HANSEN. Do you ever go to a business meeting?
Mr. HARTMAN. We actually consumed $1,500 last year but the budget amount is $4,000.
Mrs. HANSEN. So whatever is left over goes back to the Treasury?
Mr. BAKER. That is correct.
Mrs. HANSEN. Your estimate shows a decrease in rent, communications and utilities. Most agencies are showing an increase in this activity due to the new requirement that agencies finance their own rental costs of facilities owned by GSA. Has your agency been excluded from this requirement?
Mr. HARTMAN. No. We have reduced the amount of space from 2,300 to less than 700 square feet. We effected a real economy by reduction of space.
Mrs. HANSEN. Next year you will be in a telephone booth.
Mr. HARTMAN. As you said, we could meet in one. Mr. Hale, our rent has been increased, though, as I understand it.
Mr. HALE. The cost per square foot has been increased.
Mrs. HANSEN. Mr. Wyatt?
Mr. WYATT. No questions.
Mrs. HANSEN. Thank you very much.
Mr. HARTMAN. Thank you, Mrs. Hansen.

MONDAY, MARCH 11, 1974.

MINING ENFORCEMENT AND SAFETY ADMINISTRATION

WITNESSES

JAMES M. DAY, ADMINISTRATOR
DONALD P. SCHLICK, DEPUTY ADMINISTRATOR
JOHN W. CRAWFORD, ASSISTANT ADMINISTRATOR—COAL MINE HEALTH AND SAFETY
ARTHUR P. NELSON, ASSISTANT ADMINISTRATOR—METAL AND NONMETAL MINE HEALTH AND SAFETY
FRANCIS M. WILES, DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

Mrs. HANSEN. The committee will come to order. We now have the Mining Enforcement and Safety Administration and our principal witness is Mr. James Day, the Administrator. Do you want to introduce your staff, Mr. Day?

Mr. DAY. On my immediate left is Mr. Donald Schlick, Deputy Administrator. Next is Mr. John Crawford, Assistant Administrator, Coal Mine Health and Safety, and Mr. Arthur Nelson, Assistant Administrator, Metal and Nonmetal Mine Health and Safety.

METAL AND NONMETALLIC BOARD OF REVIEW

Mrs. HANSEN. Can you tell me why the Metal and Nonmetallic Board of Review has never had a case?

Mr. NELSON. It is true.

Mr. DAY. I think there are a number of reasons. The first reason is there is no civil penalty under the Metal and Nonmetallic Act. If you don't have penalties you are not going to get too many cases.

The second reason is the operators really don't want to get involved in difficult procedures that are against them. They are pretty much stacked up against them under this act. All that happens under this current act is that, if an operator doesn't like an order issued by a inspector he either asks for three more inspectors to come to his property or has to go through the time-consuming board procedures. You just can't win that way. It's very unfair to the operators. I don't blame them.

Mrs. HANSEN. We finally have an answer.

Mr. DAY. We had one case where an operator was going to appeal. At first he was going to go through the complete channel, go to the Board of Mine Operations Appeals and the attorney for the operator came in and alleged lack of jurisdiction. I said, "Great, then you come under OSHA and you pay a penalty." He said, "Oh, no." I said, "I will send out the three inspectors." He said, "Oh, no."

ADMINISTRATIVE PROCEDURES ACT

Mr. EVANS. Madam Chairman, I would like to ask a question on the matter of fairness. What do you think we could do that would make it fairer?

Mr. DAY. At a minimum, I think you should have a hearing under the Administrative Procedures Act. Under the Metal and Nonmetallic Act you have a second report of three inspectors of MESA who will evaluate the validity of the order. You only have an opportunity to challenge their findings with written documentation. You don't get an adequate hearing in the beginning. In fact, the Metal and Nonmetallic Act specifically excludes the Administrative Procedure Act.

Mrs. HANSEN. How can it exclude the Administrative Procedures Act logically?

Mr. DAY. If I were an attorney representing an operator, I would come in and challenge it. I think everyone is entitled to a hearing.

Mr. WYATT. You mean challenge the act?

Mr. DAY. I would challenge the act. You are depriving a man of the ability to use his property, especially in a closure act.

Mr. EVANS. What is the citation of that act?

Mr. DAY. The citation of the act is 30 U.S.C. 721.

Mr. SCHLICK. Public Law 89–577.

Mr. DAY. It's section 18. "The Administrative Procedures Act shall not apply to the making of any finding, order, or notice pursuant to this act nor to any other proceeding for the annulment or revision of any part of this act."

Mrs. HANSEN. Please insert a copy of that act in the record.

[The information follows:]

Public Law 89-577
89th Congress, H. R. 8989
September 16, 1966

An Act

To promote health and safety in metal and nonmetallic mineral industries, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Federal Metal and Nonmetallic Mine Safety Act". Federal Metal and Nonmetallic Mine Safety Act.

DEFINITIONS AND EXEMPTIONS

SEC. 2. For the purposes of this Act.

(a) The term "commerce" means trade, traffic, commerce, transportation, or communication between any State, the Commonwealth of Puerto Rico, the District of Columbia, or any territory or possession of the United States, and any other place outside the respective boundaries thereof, or wholly within the District of Columbia, or any territory or possession of the United States, or between points in the same State, if passing through any point outside the boundaries thereof.

(b) The term "mine" means (1) an area of land from which minerals other than coal or lignite are extracted in nonliquid form or, if in liquid form, are extracted with workers underground, (2) private ways and roads appurtenant to such area, and (3) land, excavations, underground passageways, and workings, structures, facilities, equipment, machines, tools, or other property, on the surface or underground, used in the work of extracting such minerals other than coal or lignite from their natural deposits in nonliquid form, or if in liquid form, with workers underground, or used in the milling of such minerals, except that with respect to protection against radiation hazards such term shall not include property used in the milling of source material as defined in the Atomic Energy Act of 1954, as amended. 80 STAT. 772 80 STAT. 773 68 Stat. 919. 42 USC 2011 note.

(c) The term "operator" means the person, partnership, association, or corporation, or subsidiary of a corporation operating a mine, and owning the right to do so, and includes any agent thereof charged with responsibility for the operation of such mine.

(d) The term "Secretary" means the Secretary of the Interior or his duly authorized representative.

(e) The term "Board" means the Federal Metal and Nonmetallic Mine Safety Board of Review created by section 10.

SEC. 3. (a) Each mine the products of which regularly enter commerce, or the operations of which affect commerce, shall be subject to this Act. Applicability.

(b) The Secretary may, by published rules adopted pursuant to the Administrative Procedure Act, decline to assert jurisdiction under this Act over any class or category of mines where, in the opinion of the Secretary, the effect of the operations of such mines on commerce is not sufficiently substantial to warrant the exercise of jurisdiction under this Act, and the record of injuries and accidents in such class or category of mines warrants such a declination of jurisdiction. Declination of jurisdiction. 60 Stat. 237. 5 USC 1001 note.

INSPECTIONS

SEC. 4. The Secretary of the Interior is authorized at any time to cause to be made such inspections and investigations as he shall deem necessary in mines which are subject to this Act (1) for the purpose of obtaining, utilizing, and disseminating information relating to health and safety conditions in such mines, the causes of accidents involving bodily injury or loss of life, or the causes of occupational diseases

originating therein, (2) for the purpose of determining whether or not there is compliance with a health and safety standard or order issued under this Act, or (3) for the purpose of evaluating the manner in which a State plan approved under section 16 is being carried out. At least once each calendar year the Secretary shall inspect each underground mine which is subject to this Act.

SEC. 5. For the purpose of making any inspection or investigation authorized by this Act, authorized representatives of the Secretary shall be entitled to admission to, and shall have the right of entry to, upon, or through, any mine which is subject to this Act.

80 STAT. 773

80 STAT. 774

HEALTH AND SAFETY STANDARDS

SEC. 6. (a) The Secretary shall develop, and from time to time revise, after consultation with advisory committees appointed pursuant to section 7 of this Act, and promulgate health and safety standards for the purpose of the protection of life, the promotion of health and safety, and the prevention of accidents in mines which are subject to this Act.

Publication in Federal Register.

(b) After consultation with an appropriate advisory committee established pursuant to section 7 of this Act, the Secretary, by a notice published in the Federal Register, shall designate as mandatory standards those standards promulgated pursuant to subsection (a) of this section which deal with conditions or practices of a kind which could reasonably be expected to cause death or serious physical harm, and the operators of mines to which such standards are applicable shall comply with such mandatory standards pursuant to the provisions of section 8 and section 9 of this Act.

(c) The Secretary shall publish in the Federal Register, health and safety standards which he proposes to promulgate, and he shall specifically identify those standards which he proposes to designate as mandatory standards, and he shall also specifically designate those mandatory standards which have been recommended by an Advisory Committee appointed pursuant to section 7 of this Act. Interested persons shall be afforded a period of not less than 30 days after the publication of the proposed standards in which to submit written data, views, or arguments. Except as provided in subsection (d) of this section, the Secretary may, upon the expiration of such period and after consideration of all relevant matter presented, promulgate such standards.

Requests for public hearing.

(d)(1) On or before the last day of a period fixed for the submission of written data, views, or arguments, any person who may be adversely affected by a health and safety standard which the Secretary proposes to promulgate and to designate as a mandatory standard may file with the Secretary written objections thereto stating the grounds therefor, and requesting a public hearing (subject to the provisions of the Administrative Procedure Act) on such objections. The Secretary shall not promulgate any proposed mandatory standard respecting which such objections have been filed, until he has taken final action upon them as provided in paragraph (2) of this subsection.

60 Stat. 237. 5 USC 1001 note.

Publication in Federal Register.

As soon as practicable after the period for filing such objections has expired, the Secretary shall publish in the Federal Register a notice specifying the proposed mandatory standards to which such objections have been filed.

(2) If such objections requesting a public hearing are filed, as soon after the expiration of the period for filing such objections as is practical, the Secretary, after due notice, shall hold a public hearing for the purpose of receiving evidence relevant and material to the issues raised by such objections. At the hearing, any interested person may

be heard. As soon as practicable after completion of the hearing, the Secretary shall act upon such objections and make his decision public. Such decision shall be based only on substantial evidence of record at such hearing and shall set forth detailed findings of fact on which the decision is based.

(3) Any person aggrieved by a decision of the Secretary under paragraph (2) of this subsection may obtain a review of such order by the United States Court of Appeals for the District of Columbia by filing in such court within 20 days following the issuance of such decision a petition praying that the decision of the Secretary be modified or set aside in whole or in part. A copy of such petition shall forthwith be served upon the Secretary, and thereupon the Secretary shall certify and file in the court the record upon which the decision complained of was issued. The findings of fact by the Secretary, if supported by substantial evidence, shall be conclusive; but the court, for good cause shown, may remand the case to the Secretary to take further evidence, and the Secretary may thereupon make new or modified findings of fact and may modify his previous action and shall certify to the court the record of the further proceedings. Such new or modified findings of fact shall likewise be conclusive if supported by substantial evidence. The court shall have jurisdiction to affirm the action of the Secretary or to set it aside, in whole or in part. The judgment of the court shall be subject to review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code. The commencement of a proceeding under this paragraph (3) shall not, unless specifically ordered by the court, operate as a stay of the Secretary's decision. Review of order. 62 Stat. 928.

(e) The provisions of subsection (d) of this section shall not be applicable to any proposed mandatory standard which has been recommended by an Advisory Committee appointed pursuant to section 7 of this Act.

ADVISORY COMMITTEES

SEC. 7. (a) The Secretary is authorized to establish advisory committees to assist him in the development of health and safety standards for mines which are subject to this Act, and to advise him on other matters relating to health and safety in such mines. Each such advisory committee shall include among its members an equal number of persons qualified by experience and affiliation to present the viewpoint of operators of such mines, and of persons similarly qualified to present the viewpoint of workers in such mines, as well as one or more representatives of mine inspection or safety agencies of the States.

(b) Members appointed to such a committee from private life shall, while serving on business of the committee, be entitled to receive compensation at rates fixed by the Secretary, but not exceeding $100 per day, including travel time; and while so serving away from their homes or regular places of business, they may be paid travel expenses and per diem in lieu of subsistence at the rates authorized by section 5 of the Administrative Expenses Act of 1946 (5 U.S.C., sec. 73b–2). Compensation of members. 60 Stat. 808; 75 Stat. 339, 340.

FINDINGS AND ORDERS

SEC. 8. (a) If, upon any inspection or investigation of a mine which is subject to this Act, an authorized representative of the Secretary finds that conditions or practices in such mine are such that a danger exists which could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated, such representative shall determine the extent of the area of such mine throughout which the danger exists, and there-

upon issue an order requiring the operator of such mine to cause all persons, except the following persons whose presence in such area is necessary to eliminate the danger described in such order, to be withdrawn from, and to be debarred from, entering such area:

(1) Any person whose presence in such area is necessary, in the judgment of the operator of the mine, to eliminate the danger described in the order; (2) any public official whose official duties require him to enter such area; or (3) any legal or technical consultant, or any representative of the employees of the mine, who is a certified person qualified to make mine examinations, or is accompanied by such a person, and whose presence in such area is necessary, in the judgment of the operator of the mine, for the proper investigation of the conditions described in the order.

(b) If, upon any such inspection or investigation, an authorized representative finds that there has been a failure to comply with a mandatory standard which is applicable to such mine, but that such failure to comply has not created a danger that could reasonably be expected to cause death or serious physical harm in such mine immediately or before the imminence of such danger can be eliminated, he shall find what would be a reasonable period of time within which such violation should be totally abated and thereupon issue a notice fixing a reasonable time for the abatement of the violation. If, upon the expiration of such period of time as originally fixed or extended, the authorized representative finds that such violation has not been totally abated, and if he also finds that such period of time should not be further extended, he shall also find the extent of the area which is affected by such violation. Thereupon, he shall promptly make an order requiring the operator of such mine to cause all persons in such area, excepting the following persons whose presence in such area is necessary to abate the violation described in the order, to be withdrawn from, and to be debarred from, entering such area:

(1) Any person whose presence in such area is necessary, in the judgment of the operator of the mine, to abate the violation described in the order; (2) any public official whose official duties require him to enter such area; or (3) any legal or technical consultant, or any representative of the employees of the mine, who is a certified person qualified to make mine examinations, or is accompanied by such a person, and whose presence in such area is necessary, in the judgment of the operator of the mine, for the proper investigation of the conditions described in the order.

(c) Findings and orders issued pursuant to this section shall contain a detailed description of the conditions or practices which cause and constitute a situation of imminent danger or a violation of a mandatory standard, and a description of the area of the mine throughout which persons must be withdrawn and debarred.

(d) Each finding made and notice or order issued under this section shall be given promptly to the operator of the mine to which it pertains by the person making such finding or order, and all such findings, orders, and notices shall be in writing, and shall be signed by the person making them. A notice or order issued pursuant to this section may be annulled, canceled, or revised by an authorized representative of the Secretary.

(e) If an order is made pursuant to subsection (a) of this section, and a State inspector did not participate in the inspection on which such order is based, the duly authorized representative of the Secretary who issued the order shall notify the State mine inspection or safety agency immediately, but not later than twenty-four hours after the issuance of such order, that such order has been issued. Following such order the operator of the mine may immediately request the State

mine inspection or safety agency to assign a State inspector to inspect the mine. The State agency shall then promptly assign a State inspector to inspect the mine affected by such order and file an inspection report with the Secretary and the State agency. The order of the duly authorized representative of the Secretary shall remain in effect, but shall immediately be subject to review as provided in this Act.

REVIEW BY SECRETARY

SEC. 9. (a) An operator notified of an order made pursuant to section 8(a) may apply to the Secretary for annulment or revision of such order. Upon receipt of such application the Secretary shall make a special inspection of the mine affected by such order, or cause three duly authorized representatives of the Secretary of the Interior, other than the representative who made such order, to make such inspection of such mine and to report thereon to him. Upon making such special inspection himself, or upon receiving the report of such inspection made by such representatives, the Secretary shall find whether or not danger throughout the area of such mine as set out in such order existed at the time of making such special inspection. If he finds that such danger did not then exist throughout such area of such mine, he shall make an order, consistent with his findings, revising or annulling the order under review. If he finds that such danger did then exist throughout such area of such mine, he shall make an order denying such application.

(b) An operator notified of an order made pursuant to section 8(b) may apply to the Secretary for annulment or revision of such order. Upon receipt of such application the Secretary shall make a special inspection of the mine affected by such order, or cause three duly authorized representatives of the Secretary of the Interior, other than the representative who made such order, to make such inspection of such mine and report thereon to him. Upon making such special inspection himself, or upon receiving the report of such inspection made by such representatives, the Secretary shall find whether or not there was a violation of a mandatory safety standard as described in such order, at the time of the making of such order. If he finds there was no such violation, he shall make an order annulling the order under review. If he finds there was such a violation, he shall also find whether or not such violation was totally abated at the time of the making of such special inspection. If he finds that such violation was totally abated at such time, he shall make an order annulling the order under review. If he finds that such violation was not totally abated at such time, he shall find whether or not the period of time within which such violation should be totally abated, fixed under section 8(b), should be extended. If he finds that such period of time should be extended, he shall find what a reasonable extension of such period of time would be. Thereupon he shall find the extent of the area of such mine which was affected by such violation at the time such special inspection was made, and then he shall make an order, consistent with his findings, revising the order under review. If he finds that such violation was not totally abated at the time of such special inspection, and that such period of time should not be extended, he shall find the extent of the area of such mine which was affected by such violation at the time such special inspection was made, and he shall then make an order, consistent with his findings, affirming or revising the order under review.

(c) In view of the urgent need for prompt decision of matters submitted to the Secretary under this section, all actions which the Secre-

tary or his representatives are required to take under this section shall be taken as rapidly as practicable, consistent with adequate consideration of the issues involved.

CREATION OF REVIEW BOARD

Federal Metal and Nonmetallic Mine Safety Board of Review.

SEC. 10. (a) An agency is hereby created to be known as the Federal Metal and Nonmetallic Mine Safety Board of Review, which shall be composed of five members who shall be appointed by the President, by and with the advice and consent of the Senate.

Membership, duration.

(b) The terms of office of members of the Board shall be five years, except that the terms of office of the members first appointed shall commence on the effective date of this section and shall expire one at the end of one year, one at the end of two years, one at the end of three years, one at the end of four years and one at the end of five years, as designated by the President at the time of appointment. A member appointed to fill a vacancy caused by the death, resignation, or removal of a member prior to the expiration of the term for which he was appointed shall be appointed only for the remainder of such unexpired term. The members of the Board may be removed by the President for inefficiency, neglect of duty, or malfeasance in office.

Compensation.

63 Stat. 166. 5 USC 835 note.

(c) Each member of the Board shall be compensated at the rate of $50 for each day of actual service (including each day he is traveling on official business) and shall, notwithstanding the Travel Expense Act of 1949, be fully reimbursed for traveling, subsistence, and other related expenses. The Board, at all times, shall consist of two persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of metal and nonmetallic mine operators, two persons who by reason of previous training and experience may reasonably be said to represent the viewpoint of metal and nonmetallic mine workers, and one person, who shall be Chairman of the Board, who shall be a graduate engineer with experience in the metal and nonmetallic mining industry or shall have had at least five years' experience as a practical mining engineer in the metal and nonmetallic mining industry, and who shall not, within one year of his appointment as a member of the Board, have had a pecuniary interest in, or have been regularly employed or engaged in, the metal or nonmetallic mining industry, or have regularly represented either metal or nonmetallic mine operators or workers, or have been an officer or employee of the Department of the Interior assigned to duty in the Bureau of Mines.

(d) The principal office of the Board shall be in the District of Columbia. Whenever the Board deems that the convenience of the public or of the parties may be promoted, or delay or expense may be minimized, it may hold hearings or conduct other proceedings at any other place. The Board shall have an official seal which shall be judicially noticed and which shall be preserved in the custody of the secretary of the Board.

Appointment of personnel, etc.

(e) The Board shall, without regard to the civil service laws, appoint and prescribe the duties of a secretary of the Board and such legal counsel as it deems necessary. Subject to the civil service laws, the Board shall appoint such other employees as it deems necessary in exercising its powers and duties. The compensation of all employees appointed by the Board shall be fixed in accordance with the Classification Act of 1949, as amended.

Ante, p. 288. 5 USC 1071 note.

(f) Three members of the Board shall constitute a quorum, and official actions of the Board shall be taken only on the affirmative vote of at least three members; but a special panel composed of one or more members, upon order of the Board, shall conduct any hearing provided for in section 11 and submit the transcript of such hearing

to the entire Board for its action thereon. Every official act of the Board shall be entered of record, and its hearings and records thereof shall be open to the public.

Review of application.

(g) The Board shall hear and determine applications filed pursuant to section 11 for annulment or revision of orders made pursuant to section 8 or section 9. The Board shall not make or cause to be made any inspection of a mine for the purpose of determining any pending application.

Rules of proceedings.

(h) The Board is authorized to make such rules as are necessary for the orderly transaction of its proceedings, which shall include requirement for adequate notice of hearings to all parties.

Subpena powers.

(i) Any member of the Board may sign and issue subpenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and adminster oaths. Witnesses summoned before the Board shall be paid the same fees and mileage that are paid witnesses in the courts of the United States.

Testimony by deposition.

(j) The Board may order testimony to be taken by deposition in any proceeding pending before it, at any stage of such proceeding. Reasonable notice must first be given in writing by the party or his attorney proposing to take such deposition to the opposite party or his attorney of record, which notice shall state the name of the witness and the time and place of the taking of his deposition. Any person may be compelled to appear and depose, and to produce books, papers, or documents, in the same manner as witnesses may be compelled to appear and testify and produce like documentary evidence before the Board, as provided in subsection (i). Witnesses whose depositions are taken under this subsection, and the persons taking such depositions, shall be entitled to the same fees as are paid for like services in the courts of the United States.

(k) In the case of contumacy by, or refusal to obey a subpena served upon, any person under this section, the Federal district court for any district in which such person is found or resides or transacts business, upon application by the United States, and after notice to such person and hearing, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Board or to appear and produce documents before the Board, or both; and any failure to obey such order of the court may be punished by such court as a contempt thereof.

Report to Congress.

(l) The Board shall submit annually to the Congress as soon as practicable after the beginning of each regular session, a full report of its activities during the preceding calendar year. Such report shall include, either in summary or detailed form, information regarding the cases heard by it and the disposition of each.

REVIEW BY BOARD

SEC. 11. (a) An operator notified of an order made pursuant to section 8 may apply to the Federal Metal and Nonmetallic Mine Safety Board of Review for annulment or revision of such order without seeking its annulment or revision under section 9. An operator notified of an order made pursuant to section 9 may apply to the Board for annulment or revision of such order.

(b) The operator shall be designated as the applicant in such proceeding, and the application filed by him shall recite the order complained of and other facts sufficient to advise the Board of the nature of the proceeding. He may allege in such application: that danger as set out in such order does not exist at the time of the filing of such application; that violation of a mandatory safety standard, as set out in such order, has not occurred; that such violation has been totally

or partially abated; that the period of time within which such violation should be be totally abated, as fixed in the findings upon which such order was based, was not reasonable; or that the area of the mine described in such order as the area affected by the violation referred to in such order is not so affected at the time of the filing of such application. The Secretary shall be the respondent in such proceeding, and the applicant shall send a copy of such application by registered mail or by certified mail to the Secretary at Washington, District of Columbia.

(c) Immediately upon the filing of such an application the Board shall fix the time for a prompt hearing thereof.

Temporary relief pending hearing.

(d) Pending such hearing the applicant may file with the Board a written request that the Board grant such temporary relief from such order as the Board may deem just and proper. Such temporary relief may be granted by the Board only after a hearing by the Board at which both the applicant and the respondent were afforded an opportunity to be heard, and only if respondent was given ample notice of the filing of applicant's request and of the time and place of the hearing thereon as fixed by the Board.

(e) The Board shall not be bound by any previous findings of fact by the respondent. Evidence relating to the making of the order complained of and relating to the questions raised by the allegations of the pleadings or other questions pertinent in the proceeding may be offered by both parties to the proceeding. If the respondent claims that imminent danger or violation of a mandatory safety standard, as set out in such order, existed at the time of the filing of the application, the burden of proving the then existence of such danger or violation shall be upon the respondent, and the respondent shall present his evidence first to prove the then existence of such danger or violation. Following presentation of respondent's evidence the applicant may present his evidence, and thereupon the respondent may present evidence to rebut the applicant's evidence.

(f) If the proceeding is one in which an operator seeks annulment or revision of an order made pursuant to section 8(a) the Board, upon conclusion of the hearing, shall find whether or not danger throughout the area of such mine as set out in such order existed at the time of the filing of the operator's application. If the Board finds that such danger did not then exist throughout such area of such mine, the Board shall make an order, consistent with its findings, revising or annulling the order under review. If the Board finds that such danger did then exist throughout such area of such mine, the Board shall make an order denying such application.

(g) If the proceeding is one in which an operator seeks annulment or revision of an order made pursuant to section 8(b), the Board upon conclusion of the hearing shall find whether or not there was a violation of a mandatory safety standard as described in such order, at the time of the making of such order. If the Board finds there was no such violation, the Board shall make an order annulling the order under review. If the Board finds there was such a violation, the Board shall also find whether or not such violation was totally abated at the time of the filing of the operator's application. If the Board finds that such violation was totally abated at such time, the Board shall make an order annulling the order under review. If the Board finds that such violation was not totally abated at such time, the Board shall find whether or not the period of time within which such violation should be totally abated fixed under section 8(b) or section 9(b) should be extended. If the Board finds that such period of time should

be extended, the Board shall also find what a reasonable extension of time should be, and shall immediately also find the extent of the area of such mine which was affected by such violation at the time of the filing of such application and the Board shall then make an order consistent with its findings, revising the order under review. If the Board finds that such violation was not totally abated at the time of the filing of the operator's application and that such period of time should not be extended, the Board shall find the extent of the area of such mine which was affected by such violation at such time, and shall make an order, consistent with its findings, affirming or revising the order under review.

(h) Each finding and order made by the Board shall be in writing. It shall show the date on which it is made, and shall bear the signatures of the members of the Board who concur therein. Upon making a finding and order the Board shall cause a true copy thereof to be sent by registered mail or by certified mail to all parties or their attorneys of record. The Board shall cause each such finding and order to be entered on its official record, together with any written opinion prepared by any members in support of, or dissenting from, any such finding or order.

(i) In view of the urgent need for prompt decision of matters submitted to the Board under this section, all action which the Board is required to take under this section shall be taken as rapidly as practicable, consistent with adequate consideration of the issues involved.

JUDICIAL REVIEW

SEC. 12. (a) Any final order issued by the Board under section 11 shall be subject to judicial review by the United States court of appeals for the circuit in which the mine affected is located, upon the filing in such court of a notice of appeal by the Secretary or the operator aggrieved by such final order within thirty days from the date of the making of such final order.

(b) The party making such appeal shall forthwith send a copy of such notice of appeal, by registered mail or by certified mail, to the other party and to the Board. Upon receipt of such copy of a notice of appeal the Board shall promptly certify and file in such court a complete transcript of the record upon which the order complained of was made. The costs of such transcript shall be paid by the party making the appeal.

(c) The court shall hear such appeal on the record made before the Board, and shall permit argument, oral or written or both, by both parties. The court shall permit such pleadings, in additions to the pleadings before the Board, as it deems to be required or as provided for in the Rules of Civil Procedure governing appeals in such court.

28 USC app.

(d) Upon such conditions as may be required and to the extent necessary to prevent irreparable injury, the United States court of appeals may, after due notice to and hearing of the parties to the appeal, issue all necessary and appropriate process to postpone the effective date of the final order of the Board or to grant such other relief as may be appropriate pending final determination of the appeal.

Final order effective date; postponement.

(e) The United States court of appeals may affirm, annul, or revise the final order of the Board, or it may remand the proceeding to the Board for such further action as it directs. The findings of the Board as to facts, if supported by substantial evidence on the record considered as a whole, shall be conclusive.

(f) The decision of a United States court of appeals on an appeal from the Board shall be final, subject only to review by the Supreme Court as provided in section 1254 of title 28 of the United States Code.

62 Stat. 928.

MANDATORY REPORTING

SEC. 13. The Secretary shall require operators of mines which are subject to this Act to submit, at least annually and at such other times as he deems necessary, and in such form as he may prescribe, reports of accidents, injuries, and occupational diseases, and related data, and the Secretary shall compile, analyze, and publish, either in summary or detailed form, the information obtained; and all information, reports, orders, or findings, obtained or issued under this Act may be published and released to any interested person, and shall be made available for public inspection.

PENALTIES

SEC. 14. (a) Whenever an operator (1) violates or fails or refuses to comply with any order of withdrawal and debarment issued under section 8 or section 9 of this Act, or (2) interferes with, hinders, or delays the Secretary, or his duly authorized representative, in carrying out his duties under this Act, or (3) refuses to admit an authorized representative of the Secretary to any mine which is subject to this Act, or (4) refuses to permit the inspection or investigation of any mine which is subject to this Act, or of an accident, injury, or occupational disease occurring in or connected with such a mine or (5) being subject to the provisions of section 13 of this Act, refuses to furnish any information or report requested by the Secretary, a civil action for preventive relief, including an application for a permanent or temporary injunction, restraining order, or other order, may be instituted by the Secretary in the district court of the United States for the district in which the mine in question is located or in which the mine operator has its principal office.

(b) Whoever violates or fails or refuses to comply with an order of withdrawal and debarment issued (1) under subsection (a) of section 8 or (2) under subsection (b) of section 8 if the failure to comply with an order of abatement has created a danger that could cause death or serious physical harm in such mine immediately or before the imminence of such danger can be eliminated, shall upon conviction thereof be punished for each such offense by a fine of not less than $100, or more than $3,000, or by imprisonment not to exceed sixty days, or both. In any instance in which such offense is committed by a corporation, the officer or authorized representative of such corporation who knowingly permits such offense to be committed shall, upon conviction, be subject to the same fine or imprisonment, or both.

EDUCATION AND TRAINING

SEC. 15. The Secretary shall develop expanded programs for the education and training of employers and employees in the recognition, avoidance, and prevention of accidents or unsafe or unhealthful working conditions in mines which are subject to this Act.

STATE PLANS

SEC. 16. (a) In order to promote sound and effective coordination in Federal and State activities within the field covered by this Act, the Secretary shall cooperate with the official mine inspection or safety agencies of the several States.

(b) Any State which, at any time, desires to develop and enforce health and safety standards in mines located in the State which are subject to this Act shall submit, through a State mine inspection or

safety agency, a State plan for the development of such standards and their enforcement.

(c) The Secretary shall approve the plan submitted by a State under subsection (b), or any modification thereof, whenever the State gives evidence satisfactory to the Secretary that under such plan—

(1) the State agency submitting such plan is the sole agency responsible for administering the plan throughout the State and contains satisfactory evidence that such agency will have the authority to carry out the plan: *Provided*, That the Secretary may, upon request of the Governor or other appropriate executive or legislative authority of the State responsible for determining or revising the organizational structure of State government, waive the single State agency provision hereof and approve another State administrative structure or arrangement if the Secretary determines that the objectives of this Act will not be endangered by the use of such other State structure or arrangement,

(2) such agency has adequate legal authority to enforce existing health and safety standards for the purpose of the protection of life, the promotion of health and safety, and the prevention of accidents in mines in the State that are subject to this Act, which are, in his judgment, substantially as effective for such purposes as the mandatory standards designated under section 6(b) and which provide for inspection at least annually of all such mines, other than quarries and sand and gravel pits,

(3) the agency has adequate qualified personnel necessary for the enforcement of the plan,

(4) the State will devote adequate funds to the administration and enforcement of such standards,

(5) reasonable safeguards exist against loss of life or property arising from mines which are closed or abandoned after the effective date of this Act, and

(6) the agency shall make such reports to the Secretary, in such form and containing such information, as the Secretary shall from time to time require.

State agency reports to Interior Secretary.

(d) The Secretary shall, on the basis of reports submitted by the State agency and his own inspection of mines, make a continuing evaluation of the manner in which each State having a plan approved under this section is carrying out such plan. Whenever the Secretary finds, after affording due notice and opportunity for a hearing, that in the administration of the State plan there is a failure to comply substantially with any provision of the State plan (or any assurance contained therein), he shall notify the State agency of his withdrawal of approval of such plan and upon receipt of such notice such plan shall cease to be in effect.

(e) The provisions of section 8(b) and 9(b) of this Act shall not be applicable in any State in which there is in effect a State plan approved under subsection (c).

ADMINISTRATIVE PROVISIONS

SEC. 17. The Secretary shall provide that the major responsibility for administering the provisions of this Act shall be vested in the Bureau of Mines of the Department of the Interior which has the major responsibility for carrying out the Federal Coal Mine Safety Act. The Secretary acting through the Bureau, shall have authority to appoint, subject to the civil service laws, such officers and employees as he may deem requisite for the administration of this Act; and to prescribe powers, duties, and responsibilities of all officers and employees engaged in the administration of this Act: *Provided, however,*

55 Stat. 177. 30 USC 451 note.

Mine inspectors, qualifications.

That, to the maximum extent feasible, in the selection of persons for appointment as mine inspectors, no person shall be so selected unless he has the basic qualification of at least five years practical mining experience and in assigning mine inspectors to the inspection and investigation of individual mines, due consideration shall be given to their previous practical experience in the State, district, or region, and in the particular type of mining operation where such inspections are to be made.

EXCLUSION FROM ADMINISTRATIVE PROCEDURE ACT

60 Stat. 237. 5 USC 1001 note.

SEC. 18. The Administrative Procedure Act shall not apply to the making of any finding, order, or notice pursuant to this Act, or to any proceeding for the annulment or revision of any such finding, order, or notice.

EFFECT ON STATE LAWS

SEC. 19. (a) No State or territorial law in effect upon the effective date of this Act or which may become effective thereafter, shall be superseded by any provision of this Act, except insofar as such State or territorial law is in conflict with this Act, or with orders issued pursuant to this Act.

(b) Provisions in any State or territorial law in effect upon the effective date of this Act, or which may become effective thereafter, which provide for greater safety of persons in a mine as defined in this Act, than do provisions of this Act, which relate to the same phase of such operations, shall not be construed or held to be in conflict with this Act. Provisions in any State or territorial law in effect upon the effective date of this Act, or which may become effective thereafter, which provide for the safety of persons in a mine as defined in this Act concerning which no provision is contained in this Act, shall not be construed or held to be superseded by this Act.

(c) Nothing in this Act shall be construed or held to supersede or in any manner affect the workmen's compensation laws of any State or territory, or to enlarge or diminish or affect in any other manner the common law or statutory rights, duties, or liabilities of employers and employees under State or territorial laws in respect of injuries, occupational or other diseases, or death of employees arising out of, or in the course of, employment.

REPORT OF SECRETARY

SEC. 20. The Secretary shall submit annually to the Congress, as soon as practicable after the beginning of each regular session, a full report of the administration of his functions under this Act during the preceding calendar year. Such report shall include, either in summary or detailed form, the information obtained by him under this Act, together with such findings and comments thereon and such recommendations for legislative action as he may deem proper.

AUTHORIZATION OF APPROPRIATIONS

SEC. 21. There are authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be necessary to carry out the provisions of this Act.

EFFECTIVE DATE OF ACT

SEC. 22. This Act shall become effective on the date of its enactment, except that sections 8 and 9, and subsection (b) and paragraph (1) of subsection (a) of section 14 shall become effective one year after the date of publication of notice in the Federal Register of the designation of mandatory standards as provided for in section 6(b) of this Act.

Approved September 16, 1966, 12:20 p.m.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 606 (Comm. on Education & Labor) and No. 1921 (Comm. of Conference).
SENATE REPORT No. 1296 (Comm. on Labor & Public Welfare).
CONGRESSIONAL RECORD:
Vol. 111 (1965): Sept. 2, considered and passed House.
Vol. 112 (1966): June 23, considered and passed Senate, amended.
Aug. 31, House and Senate agreed to conference report.

32-043 O - 74 - 42

GENERAL STATEMENT

Mrs. HANSEN. Mr. Day please insert your general statement in the record and summarize it for the committee.

Mr. DAY. All right.

[The statement follows:]

Madam Chairman, I am appearing before this committee today to discuss MESA's 1975 budget request. This occasion represents the first full-year budget presentation ever made on behalf of MESA since it was established under Secretarial Order 2953 of May 7, 1973. I will not go into the details regarding the MESA budget because the written proposals and supporting justifications have already been provided. Instead, I would like to touch upon some of the more significant aspects of MESA programs to illustrate how we expect to protect the men that produce our Nation's coal and minerals.

To achieve safety in the mines, we believe that safe conditions in mines must be insured through inspection and enforcement and that safe behavior on the part of the miner must be brought about as the result of training. We have structured our enforcement divisions accordingly and have developed technical and training capabilities to support them.

COAL MINE HEALTH AND SAFETY

The primary objectives of the Coal Mine Health and Safety Activity's enforcement program is to eliminate fatalities and reduce the frequency and severity of accidents as well as to minimize health hazards pertaining to the coal mining industry. We have been making progress towards these objectives.

Our efforts to bring safe healthful working conditions to the coal mines are achieving results. The regulations pertaining to ventilation, electrical permissibility, and rock dusting have substantially reduced the number of underground ignitions and the resulting disaster-type situations. The year 1973 recorded the lowest number of coal mine fatalities in history at a time when the demand for coal is forcing an expansion in underground coal production.

We are continuing our efforts to reduce respirable dust levels and excessive noise levels in both surface and underground mines.

A new accident reporting system is now operational. This system requires that mine operators report all accidental injuries to coal miners, including those classified as nondisabling. These data generated by this system enable us to identify emerging trends in accidents and alert our inspectors to potentially critical safety problems. In addition, we use the data to identify those larger mines that have an accident frequency rate higher than the national average. Mines so identified are inspected daily until a substantial improvement is made in the accident frequency rate. Initial results indicate that this program is effective in reducing accidents.

ASSESSMENTS

A major deterrent to safety violations is the assessment program. When MESA was established, the assessment program was a mess. We are presently making assessment of all violations current and are working on the backlog of unassessed violations that built up in previous years. The Circuit Court's decision in our favor in the *National Independent Coal Operators' Association, et al.* v. *Rogers C. B. Morton, Secretary of the Interior, et al.* allowed us to propose the following procedures to make the assessment program more effective in achieving operator compliance:

1. Establishment of "Collection Officers" in District and Subdistrict Offices in order to handle informal appeals.
2. Elimination of requirement that MESA, through the Solicitor, file all petitions for assessment with the Office of Hearings and Appeals.
3. Establishment of efficient and expeditious case assignment system for attorneys and administrative law judges. This includes assignment of attorneys to field locations.
4. Revision of inspector's statement of facts of violation and improved Notice of Violation.

In 1975, we expect to maintain our assessment schedule and settle the large inventory of assessment cases now on hand.

I am very proud that we have affected a sizable increase in the number of inspections and investigations of metal and nonmetal mines and mills with a very small increase in the size of our inspection force since MESA was organized. This increase in inspection activity was achieved primarily by better organization and direction of field work, reducing the inspector time spent on report writing, establishing field offices closer to the mines, and other management devices.

Despite the increase in the number of inspections conducted each year, there are still many mines, mostly surface operations, which have never been inspected and others which we have been unable to inspect with regularity. In analyzing the accident data for 1973, it was observed that while fatalities in underground mines were reduced, the number of workers killed at surface mines had increased substantially. Last year 71 percent of all fatalities at metal and nonmetal mines occurred at surface mines and mills which we believe points out a real need to increase our inspection coverage and intensify and strengthen enforcement efforts at surface operations. The budget before you provides funds to hire and train an additional 75 inspectors. This will allow us to conduct initial and follow-up inspections at more surface mines while we continue to maintain the inspection frequency at underground mines.

In addition, this modest increase in inspection staff also will enable us to select and train inspection personnel to handle the industrial hygiene aspects of health inspections. This is necessary for minimizing exposure of miners to harmful radiation, toxic fumes, asbestos fibers, silica dust, and other health hazards. Finally, the additional funds will enable us to accelerate and concentrate our efforts to develop new and improved health and safety standards and improve the caliber of inspections by increased inspector training.

EDUCATION AND TRAINING

With the cooperation of organized labor and the mine operators, MESA instructors held safety classes attended by thousands of miners throughout the United States. In addition to teaching, MESA training personnel developed course materials, visual aids, and motion pictures used by industry personnel assigned training responsibilities. We believe that every miner should be taught how to do his job safely and how to protect himself and his fellow miners in case of an emergency. In addition, he should know his rights and responsibility under the appropriate Federal safety legislation.

A training program in job safety analysis is being prepared for presentation to supervisors and union safety committeemen during fiscal year 1975. This program is expected to help bring safe job performance to supplement the safe conditions required by inspections.

The Mine Health and Safety Academy was established at Beckley, W. Va., in 1971. This facility provides for the training of future coal mine and metal and nonmetal mine inspectors and other required technical specialists. Temporary quarters are being used for the Academy in Beckley, W. Va., until construction of a permanent facility is complete. Construction of the permanent facility is now underway with completion scheduled for March 1976.

TECHNICAL SUPPORT

Technical Support continued to provide assistance to MESA's enforcement organizations and indirectly to the minerals industry on critical engineering problems affecting the health and safety of miners. Perhaps the single most significant contribution of Technical Support of national importance in the past 2 years has been its efforts to assure the safety of coal waste embankments in the country. Since the Buffalo Creek disaster in West Virginia in early 1972, Technical Support has conducted a vigorous program of engineering evaluation of all significant embankments in the country. After the initial emergency investigation of about 140 sites in the summer of 1972, approximately 250 significant sites have been evaluated on a continuous basis. This effort has been possible largely through the assistance of Bureau of Reclamation engineers detailed to MESA. In addition, several contract studies have been initiated to develop engineering guidelines and criteria for design, construction, and maintenance of coal waste embankments. They will represent the first set of comprehensive technical

literature on engineering aspects of coal waste embankments ever prepared and provide an important basis for future studies.

I believe that the foregoing discussion of MESA program areas indicates that we are making progress. At the same time, however, I also realize that we must do better. You have my assurance that we will continue to commit MESA's full resources and best efforts to insure that miners have a safe workplace, that their health is not endangered, and that they possess the knowledge and skills necessary to do their jobs without injury.

Mr. DAY. First of all, Madam Chairman, I am extremely happy to appear before you to present my first presentation of the MESA budget since taking over as Administrator last August. As you know, this is also the first time that MESA will present a budget by itself. We were just formed by secretarial order in May of 1973.

SECRETARIAL ORDER ESTABLISHING MESA

Mrs. HANSEN. Will you place in the record at this point the secretarial order that established MESA.

[The information follows:]

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ORDER NO. 2953

Subject: Reorganization of Bureaus and Offices

Sec. 1 Purpose. This Order outlines the implementation of the reorganization plan described in Secretary's Order 2951 dated February 6, 1973. Provided herein are brief functional descriptions of new organizations created, the transfer of various functions between organizations, and the assignment of bureaus and offices to Assistant Secretaries for Secretarial direction and supervision.

Sec. 2 Responsibilities. Assistant Secretaries named in Secretary's Order 2951 will be responsible for implementing the provisions of this Order as well as the development of new or revised organization statements for publication in the Departmental Manual. The Assistant Secretary - Management is responsible for the approval of all reorganization actions made pursuant to this Order as provided in 101 DM.

Sec. 3 Authority. This Order is issued in accordance with the authority provided by Section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262).

Sec. 4 Secretarial Officers. The functions, authorities, and responsibilities of all Secretarial officers, except the Solicitor, have been revised as provided in Secretary's Order 2951. The following Sections and the chart attached to this Order delineate the transfer and alignment of existing and new organizations. A description of each Secretarial officer position and the organizational entities under its jurisdiction are described below.

Sec. 5 Assistant Secretary - Energy and Minerals. The Assistant Secretary - Energy and Minerals discharges the duties of the Secretary with the authority and direct responsibility for programs associated with energy conservation; energy and mineral data and analysis; generation, transmission and marketing

of electric power except for those functions performed in the Bureau of Reclamation; mine health, safety and training programs; topographic, geologic and mineral resources matters; oil and gas activities, including import allocations; energy, metallurgical and mining research and development; and emergency preparedness and natural disaster energy and minerals functions. The Assistant Secretary - Energy and Minerals exercises Secretarial direction over the described functions of the following organizations:

(a) Geological Survey. The Geological Survey retains its present functions and is transferred from the former Assistant Secretary - Mineral Resources.

(b) Bureau of Mines. The Bureau of Mines is transferred from the former Assistant Secretary - Mineral Resources and retains its traditional functions of energy, metallurgical and mining research and development, mine health and safety research, and mineral supply. Other functions related to mine health and safety are transferred to the Mining Enforcement and Safety Administration described in Section 5(c) below.

(c) Mining Enforcement and Safety Administration. A new Mining Enforcement and Safety Administration is established and is responsible for administering the Federal Coal Mine Health and Safety and the Federal Metal and Nonmetallic Mine Safety Act. Mine health and safety, assessment and compliance, and education and training functions are transferred to this office from the Bureau of Mines.

(d) Power Administrations. The Bonneville, Southwestern, Southeastern and Alaska Power Administrations retain their present functions and are transferred from the former Assistant Secretary - Water and Power Resources.

(e) Office of Oil and Gas. The Office of Oil and Gas retains its present functions and is transferred from the former Assistant Secretary - Mineral Resources.

(f) Office of Coal Research. The Office of Coal Research retains its present functions and is transferred from the former Assistant Secretary - Mineral Resources.

(g) Office of Energy Data and Analysis. A new Office of Energy Data and Analysis is established to serve as the focal point in the Department for coordinating functions related to gathering and analyzing energy data. The Office develops appropriate information systems, analyses, and studies to assist in economic forecasting and policy decision-making. The Office also evaluates and reviews energy data-gathering programs and functions performed in the bureaus and offices reporting to the Assistant Secretary - Energy and Minerals.

(h) Office of Research and Development. A new Office of Research and Development is established to coordinate energy and minerals research and development activities. The Office sets priorities and formulates research and development budgets, oversees development of new research and development programs, and evaluates the progress and results of all research and development conducted or sponsored by the Department. The Office administers a Central Energy Fund and directs the underground electric power transmission research program which is transferred to this office from the former Assistant Secretary - Water and Power Resources.

(i) Office of Energy Conservation. A new Office of Energy Conservation is established to promote efficiencies in the use and development of energy resources; to coordinate all Federal Energy Conservation programs; to conduct research on methods of improving the efficiency of energy usage; to promote consumer awareness of the need for energy conservation; and to develop contingency plans for nationwide power, fuel and mineral resource emergencies caused by natural disasters, civil defense emergencies or other interruptions of the Nation's energy and mineral supplies. The activities associated with the emergency minerals and emergency solid fuels functions are transferred to this office from the former Assistant Secretary - Mineral Resources. The Defense Electric Power Administration is transferred to this office from the former Assistant Secretary - Water and Power Resources.

Sec. 6 Assistant Secretary - Land and Water Resources. The Assistant Secretary - Land and Water Resources discharges the duties of the Secretary with the authority and direct responsibility for programs associated with land use and water planning; public land management; construction and operation of multi-purpose dams and water distribution facilities; marketing of water and

specified Bureau of Reclamation hydroelectric power projects; conversion of saline water and water resources research; and emergency preparedness water resources functions. The Assistant Secretary - Land and Water Resources exercises Secretarial direction over the following organizations:

(a) Bureau of Land Management. The Bureau of Land Management retains its present functions and is transferred from the former Assistant Secretary - Public Land Management.

(b) Bureau of Reclamation. The Bureau of Reclamation retains its present functions and is transferred from the former Assistant Secretary - Water and Power Resources.

(c) Office of Land Use and Water Planning. A new Office of Land Use and Water Planning is established to be responsible for policy development and interagency coordination on use of public land and water resources, liaison with the Water Resources Council, coordination of River Basin Commission activities and interagency coordination with State and other Federal land use and water planning agencies. The Office of Regional Planning, under the former Assistant Secretary - Program Policy, is abolished and its functions are transferred to this office.

(d) Office of Saline Water. The Office of Saline Water retains its present functions and is transferred from the former Assistant Secretary - Water and Power Resources.

(e) Office of Water Resources Research. The Office of Water Resources Research retains its present functions and is transferred from the former Assistant Secretary - Water and Power Resources.

Sec. 7 Assistant Secretary - Fish and Wildlife and Parks. The Assistant Secretary - Fish and Wildlife and Parks discharges the duties of the Secretary with the authority and direct responsibility for programs associated with the development, conservation, and utilization of fish, wildlife, recreation, historical, and national park system resources of the Nation. The Assistant Secretary - Fish and Wildlife and Parks exercises Secretarial direction over the following organizations:

(a) National Park Service. The National Park Service retains its present functions.

(b) Bureau of Sport Fisheries and Wildlife. The Bureau of Sport Fisheries and Wildlife retains its present functions.

(c) The Bureau of Outdoor Recreation. The Bureau of Outdoor Recreation retains its present functions and is transferred from the jurisdiction of the former Assistant Secretary - Program Policy.

Sec. 8 Assistant Secretary - Congressional and Public Affairs. The Assistant Secretary - Congressional and Public Affairs discharges the duties of the Secretary with the authority and direct responsibility for programs associated with legislative and Congressional liaison activities; public information and communications matters; and the Department's Johnny Horizon program. The Offices of Congressional Liaison, Communications, and Legislation and the Johnny Horizon Program Office are transferred to the jurisdiction of the Assistant Secretary - Congressional and Public Affairs.

Sec. 9 Assistant Secretary - Management. The Assistant Secretary - Management discharges the duties of the Secretary with the authority and direct responsibility for the functions carried out by the former Assistant Secretary - Management and Budget through the Offices of Management Consulting, Management Operations, Survey and Review, Organization and Personnel Management, Library Services, Secretarial Operations, Manpower Training and Youth Activities, International Activities, and Accounting Management and Policy. The Office of Budget assigned to the former Assistant Secretary - Management and Budget is transferred to the Assistant Secretary - Program Development and Budget as described in Section 10.

Sec. 10 Assistant Secretary - Program Development and Budget. The Assistant Secretary - Program Development and Budget discharges the duties of the Secretary with the authority and direct responsibility for the functions carried out by the former Assistant Secretary - Program Policy through the Offices of Environmental Project Review, Policy Analysis, Economic Analysis, and Budget. The Office of Budget is transferred from the former Assistant Secretary - Management and Budget.

Sec. 11 Solicitor. The authorities, functions and responsibilities of the Solicitor remain unchanged.

Sec. 12 Commissioner of Indian Affairs. As provided for in Secretary's Order 2951, the Commissioner of Indian Affairs reports directly to the Secretary and directs the activities of the Bureau of Indian Affairs.

Sec. 13 Other Secretarial Offices.

(a) Office of Hearings and Appeals. The Office of Hearings and Appeals retains its present functions, responsibilities and organizational placement.

(b) Office of Territorial Affairs. As provided for in Secretary's Order 2951, the Director, Office of Territorial Affairs, reports directly to the Secretary.

(c) Office for Equal Opportunity. The Office for Equal Opportunity retains its present functions, responsibilities and organizational placement.

(d) The Office of the Science Adviser. The Office of the Science Adviser retains its present functions and responsibilities.

Sec. 14 Secretarial Delegations of Authority.

(a) Broad delegations of the Secretary's authority have been made to the Assistant Secretaries by 210 DM 1.2, and such delegations are not affected by the provisions of this Order. All other delegations of authority in effect preceding the date of this Order remain in effect to the extent they are compatible with the organizations, functions and responsibilities provided in this Order.

(b) Delegations of authority which have been affected by transfer of program responsibility or abolishment of positions are reassigned to the head of the bureau or office to which the program responsibility is transferred by this Order. Such officials are responsible for immediately initiating action for appropriate amendments to the Secretary's delegations of authority provided

in the 200 Series of the Departmental Manual. The Assistant Secretary - Management, in cooperation with the Solicitor, is responsible for the timely conversion and revision of affected Secretary's delegations of authority.

Sec. 15 Administrative Provisions.

(a) The Assistant Secretary - Management and the Assistant Secretary - Program Development and Budget will take appropriate actions to accomplish the transfer of personnel, funds, and property to implement the provisions of this Order.

(b) Detailed organization statements providing for the reassignment of all functions affected by this Order will be prepared and published in the DM within a 90-day transition period beginning with the effective date of this Order.

(c) Employees of bureaus and offices whose functions are reassigned from the bureau or offices in which they are employed are to be detailed to the bureau or office to which the functions are assigned by this Order during the 90-day transition period.

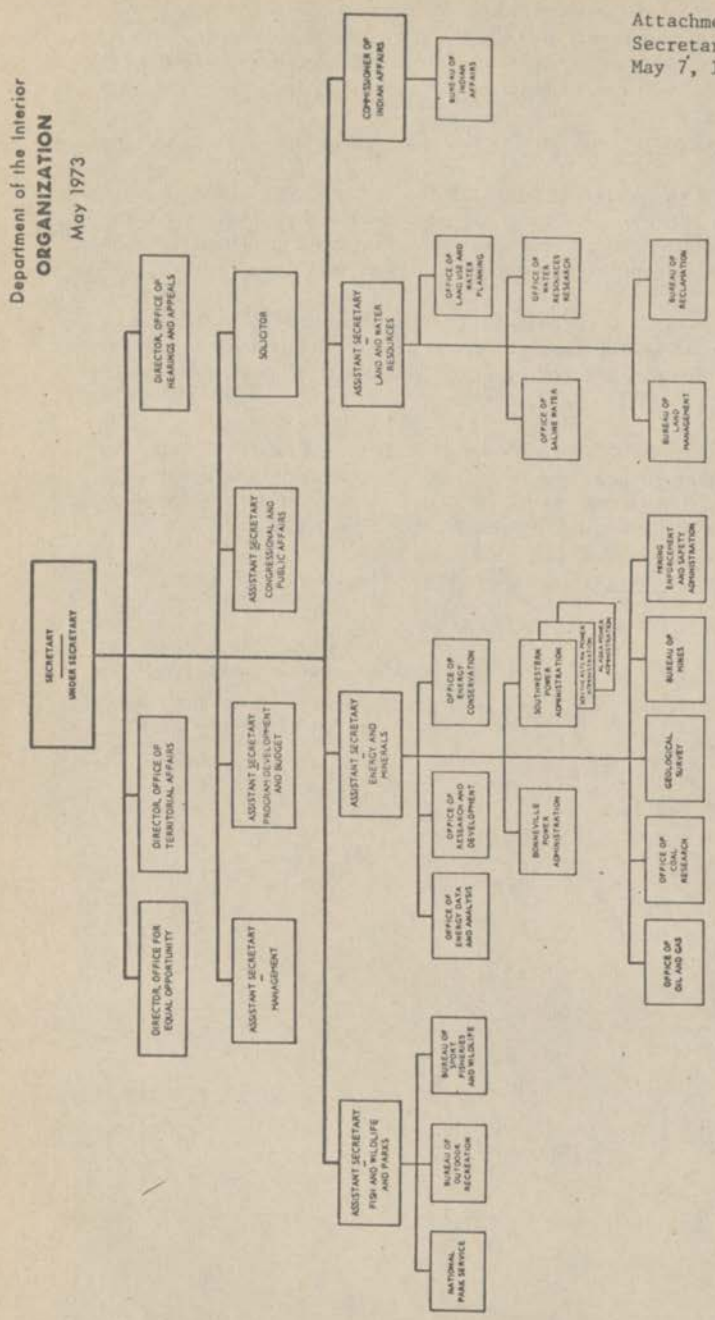
Sec. 16 Effective Date. This Order is effective immediately.

MAY 7 1973

Rogers C.B. Morton
Secretary of the Interior

Attachment

Attachment
Secretary's Order 2953
May 7, 1973



OBJECTIVES OF MESA

Mr. DAY. The primary objectives of the organization is the protection of the health and safety of the individual coal miner. Everything we do, regardless of whether it is training, technical support, or issuing a note of violation, is all in support of this particular activity.

Our efforts to bring a safe and healthful working condition to the coal miners, we feel, are beginning to achieve results. The regulations pertaining to ventilation, electrical permissibility, and rock dusting have substantially reduced a number of underground ignitions over the past few years. These are the types of accidents that generally result in disasters that we hear about—the ignitions and the fires. The year 1973 recorded the lowest number of coal mine fatalities in history.

COAL MINE FATILITIES

Mrs. HANSEN. Will you please place in the record the number of coal mine fatalities since 1965.

Mr. DAY. Certainly.

In 1973, we had 132 fatalities in coal.

Mrs. HANSEN. These fatalities are the result of mine accidents?

Mr. DAY. That is correct. In 1972 we had 156. In 1971, we had 181. In 1970, we had 260. In 1969, we had 203.

Mrs. HANSEN. Can you also compare for the record the coal tonnages produced each year.

Mr. DAY. Tonnage, we certainly can supply that for the record. We will also furnish detailed data relating to coal mine inspection activities.

[The information follows:]

COMPARISON OF FATALITIES WITH PRODUCTION

Year	Coal tonnages produced [1]	Fatalities
1965	527,993	259
1966	545,464	233
1967	560,764	222
1968	553,340	311
1969	569,182	203
1970	609,803	260
1971 [2]	560,919	181
1972 [2]	597,000	156
1973 [2]	596,661	132

[1] Estimated coal production in thousands of short tons.
[2] Preliminary figures.

Coal Mine Health and Safety Activities for 1973

The year 1973 saw many changes in the Secretary's efforts to reduce injuries, fatalities, and occupational diseases in the Nation's coal mines. One of prime importance was removing the "Mine Health and Safety" activity from the Bureau of Mines in July 1973, and placing it under a newly created "Mining Enforcement and Safety Administration" which was then charged with the responsibility of administering the Federal Coal Mine Health and Safety Act of 1969. Surprisingly, the change was accomplished with no interruption of field operations. The effects of other changes are reflected in this report by the reduction in the number of fatals and disabling injuries in coal mines and the improvement in the miners' environment.

Coal production in 1973 is estimated to be about 596 million tons. This is 0.9 percent less than the 602 million tons mined in 1972, but is still the third highest yearly tonnage mined in the last 10 years. Surface mine operations accounted for approximately 48 percent of the total production. The industry continued this higher level of production in January 1974, when tonnages mined exceeded that of January 1973, by an estimated 4 million tons. According to our figures, there are 1418 producing underground mines and 1696 surface mines.

The number of inspectors, engineers, specialists and aides decreased in 1973 to 1226 from 1263 in 1972. All of these persons, however, were not available for inspection duties since other essential tasks also had to be performed. Such tasks included updating inspectors manuals, developing guidelines for inspectors and for use of the industry, and preparing specifications for protective canopies on mining equipment, roll bars for mobile machinery, and fire protection devices.

The District Manager's rotation plan has been in effect for two years. As of now, two of our managers have completed a full year at institutions of higher learning and a third manager is presently taking courses in Administration at West Virginia University. Rotation of field managers in two districts has been successfully attained and plans for rotating other managers will be completed for fiscal year 75. The primary purpose of establishing the plan was to complement a long-range management development program for field officials. The plan also anticipates that key managerial positions would be filled by experienced and knowledgeable mining engineers, a key step in improving the professionalism of the staff.

Fatalities in coal mines in 1973 - though still far above the National average - were the lowest ever recorded in the industry. Work-connected deaths, underground and surface, totaled 132. The frequency rate as well as the number of men killed established another record low of 0.45 per million manhours. Improvement was shown in nearly every hazard area.

Even more encouraging was the low number of underground deaths in half of the months in 1973. In one month five, and in five other months six, making a total of 35 as compared to 50 for the lowest six months of 1972. Moreover, in the month of February 1974, the underground death toll was two - a drastic reduction from records of previous years.

Nonfatal injury experience is finally beginning to show signs, however slight, of improvement. Preliminary figures through October 1973, show that nonfatal disabling injuries were incurred by coal miners during the 10-month period at a rate of 43.6 per million manhours worked. This compares with a rate of 45.74 in 1972 and 45.84 in 1971. These figures indicate that reporting under the mandatory requirements of Part 80, Title 30, Code of Federal Regulations has reached a leveling off point and show a slight decline, hopefully due in part to our expanded inspection efforts.

Accident records show that falls of roof, face, and rib continue to be the leading cause of work related deaths. Therefore, once again we plan to continue an all-out effort against this "No. 1 Killer". The number of fatalities attributed to falls of roof, face, and rib declined from 84 in 1970 to 45 in 1973.

As our inspectors became more proficient and experienced, mines underwent more and more inspections and investigations. Over 90,000 health and safety inspections of all types were conducted in 1973. This compares with 59,481 inspections conducted in 1972. Our ability and capability to review and approve the various plans required to be submitted by coal mine operators also improved through the year as evidenced through our monitoring program that in most instances made approvals more timely.

During the inspections and investigations Federal inspectors issued over 71,000 Notices of Violation. Once again, it should be noted that the conditions most frequently cited represented the most serious hazards in the underground mining of coal. They are the hazards that can result in roof-fall and haulage accidents and in disastrous mine explosions. Consequently, MESA is using every means possible to zero-in more precisely on these hazards.

The number of 104(a) Orders of Withdrawal issued was approximately 1300. In addition, over 1900 Orders of Withdrawal were issued for failure to abate Notices of Violation and for unwarrantable failure on the part of the operator.

Pneumoconiosis or black lung resulting from the breathing of respirable coal dust continues to be the major health problem of the coal industry. Respirable dust levels continued to decline during 1973 which shows a continuation of the progress achieved since the Federal Coal Mine Health and Safety Act of 1969 went into effect. Respirable dust samples taken

by the industry since the more stringent 2.0 mg/m^3 became effective December 30, 1972, show that at the end of 1973 more than 93 percent of all underground working sections were meeting this standard and 60 percent of all working sections were at or below the 1.0 mg/m^3 level. Mines in which the respirable dust samples showed an average concentration in the mine atmospheres in excess of the dust standards were issued 1,793 Notices of Violation as required by Section 104(i) of the Act during 1973. In nine instances, Orders of Withdrawal were issued because of failure to abate the violation in the time either originally set or extended by the inspector.

One of the most serious and persistent health problems has been the control of respirable dust produced by auger-type underground continuous miners. During 1973, MESA has been involved in an extensive experimental project to solve this problem. A successful water transfer mechanism was developed to pass water from the stationary miner into the hollow core of the rotating augers and thence through sprays installed on the augers. This through-auger spray system had reduced the respirable dust concentrations an average of 60 percent by the end of 1973, and more recent improvements have further reduced these concentrations below the 2.0 mg/m^3 standard.

Section 203(b) of the Act provides for the transfer of miners who show evidence of the development of pneumoconiosis to positions in the mine with lower concentrations of respirable dust. Before the close of the year, approximately 724 miners had exercised their right of transfer to a less dusty atmosphere.

Health standards affecting surface mine sites went into effect June 30, 1972, to regulate workers' exposure of respirable coal mine dust, noise and airborne contaminants. The results of respirable dust samples collected from the working environment of surface mine employees during 1973 show more than 98 percent were working in dust concentrations meeting the 2.0 mg/m^3 standard and 95 percent were at or below the 1.0 mg/m^3 level.

Representative data processed during 1973 showed that 6.7 percent of the miners were exposed to excessive noise. This compares to 7.7 percent in 1972. Heavy construction equipment used in surface mining operations is the most prevalent noise problem. Other significant noise hazards are preparation plants, underground stopers, and surface and underground augers. Special emphasis will be given in the 1974 health program toward reducing the magnitude of these problems.

During 1974, a more stringent "Respirable Dust Control Plan" will be required from coal mine operators. MESA will devote a considerable effort to evaluating and approving such plans and to enforcing the implementation of the plans.

Plans are underway to utilize a new type of equipment, a dosimeter, to measure noise exposures. The use of this instrument will enable the MESA inspector to monitor the working environments on mobile equipment which were unsafe to measure with presently available sound level measuring equipment.

During 1974, MESA will develop testing procedures to determine potable water quality and will train inspection personnel in conducting such tests.

MESA will promulgate additional standards for airborne contaminants.

Through continuing efforts expended toward implementation of the above projected programs, MESA will increase the effectiveness of the health inspections during 1974.

It was still evident that although the Act had been passed by the Congress near the end of 1969, many of its detailed provisions and many of the mandatory standards promulgated since 1969 were not generally understood by industry. Consequently, the informational and educational forums, begun in 1970, were continued in 1973. Some of these meetings were organized and conducted locally by MESA's District Managers. Others were designed for broad attendance and these were scheduled by top staff in Washington.

The major new program effected during the year was begun in August. This entailed inspecting on a daily basis those underground mines employing in excess of 200 persons underground and having a disabling frequency rate over the National average. The idea was to stress the use of "Job Safety Analysis" procedures during the daily inspection in an effort to cause a reduction in the accident rate. It is planned to augment this effort by providing professional training in "Job Safety Analysis" to those involved in this activity.

A measure of progress has been made already in the short period the program has been in effect indicating to us that with intensified and broadened efforts further inroads are well within our reach. It is important to note that there are approximately 145 such mines but these mines employ over 40 percent of the underground miners in the Nation. Of these mines only 53 had injury frequency rates higher than the National average in the last quarter of 1973 even though the National injury frequency rate for all mines declined from 45.05 at the end of April to 41.31 for the third quarter and to 28.58 for the last quarter of 1973.

During the year additional safety standards were promulgated. Some of these were related to moving equipment, fire drills, equipment safeguards, communication systems, and escapeways. These standards were designed mainly to prevent recurrences of disasters such as those that occurred at the Blacksville and Itmann Mines. Efforts to improve existing standards and develop new standards will continue. MESA cannot be expected to improve upon the present health and safety record without further improvement in the tools with which it has to work.

32-043 O - 74 - 43

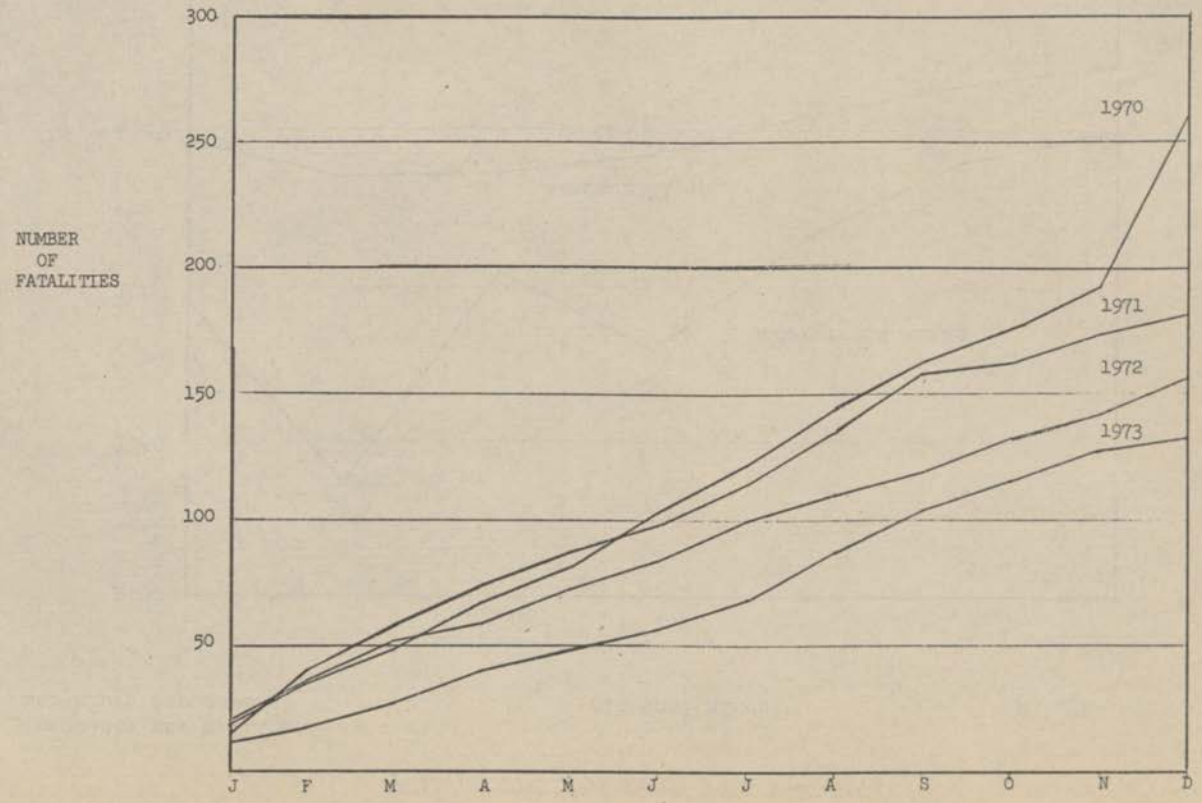
During the past two years, a short synopsis of each fatal accident, entitled "Fatalgrams," has been distributed to the mining industry and more recently a monthly summary of the fatal accidents has been distributed. The idea behind this campaign is to quickly disseminate information on fatal accidents in the belief that it would act as a deterrent to accident occurrences. Both fatalgrams have been favorably received, but continuation of this campaign will depend on a user's survey of its actual value.

Other efforts to reduce injury and death in coal mines in the future include promulgating mandatory standards for rollover protection, training and retraining of mine workers, and the use of diesel equipment in coal mines. Also, efforts will be made to accelerate the use of cabs and canopies on mining equipment used underground which should appreciably reduce not only fatal accidents from falls of roof and rib but also crushing injuries.

Much success was achieved from the retraining programs conducted last year for all Federal inspectors in that more uniform compliance and better judgment from the inspectors have been realized. It is planned to continue this program on an expanded scale in an effort to more professionalize the inspection force.

The major efforts of Coal Mine Health and Safety in 1974 will be directed toward reducing the possibility of occupational diseases and fatal and nonfatal injuries. It is recognized that although improvements have been made, the record is still unacceptable. It is expected that these efforts will have to be greatly increased during the coming years if coal is to be a prime source of energy to combat the energy crisis. Certainly, more coal will have to be mined, but mined safely in order for coal to take its rightful position among the other major fuels of this country.

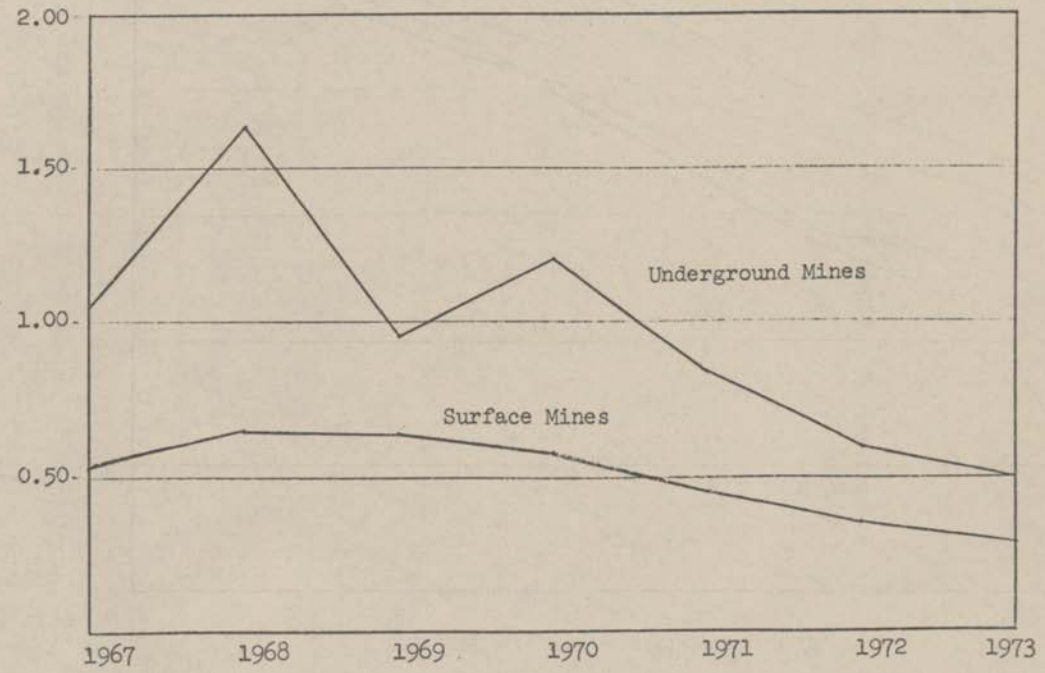
COAL MINE FATALITIES - CUMULATIVE BY MONTH



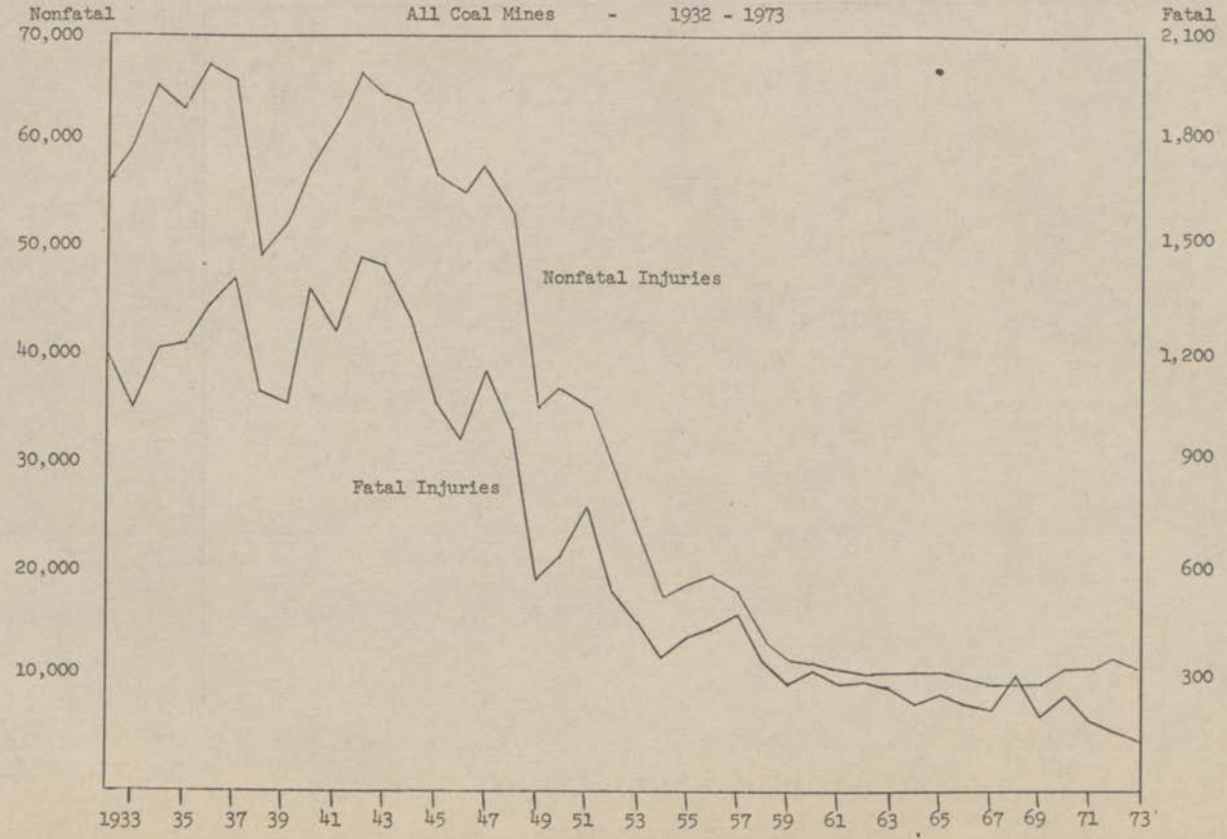
FATAL ACCIDENT FREQUENCY RATE 1967-1973

Frequency per million man-hours exposure

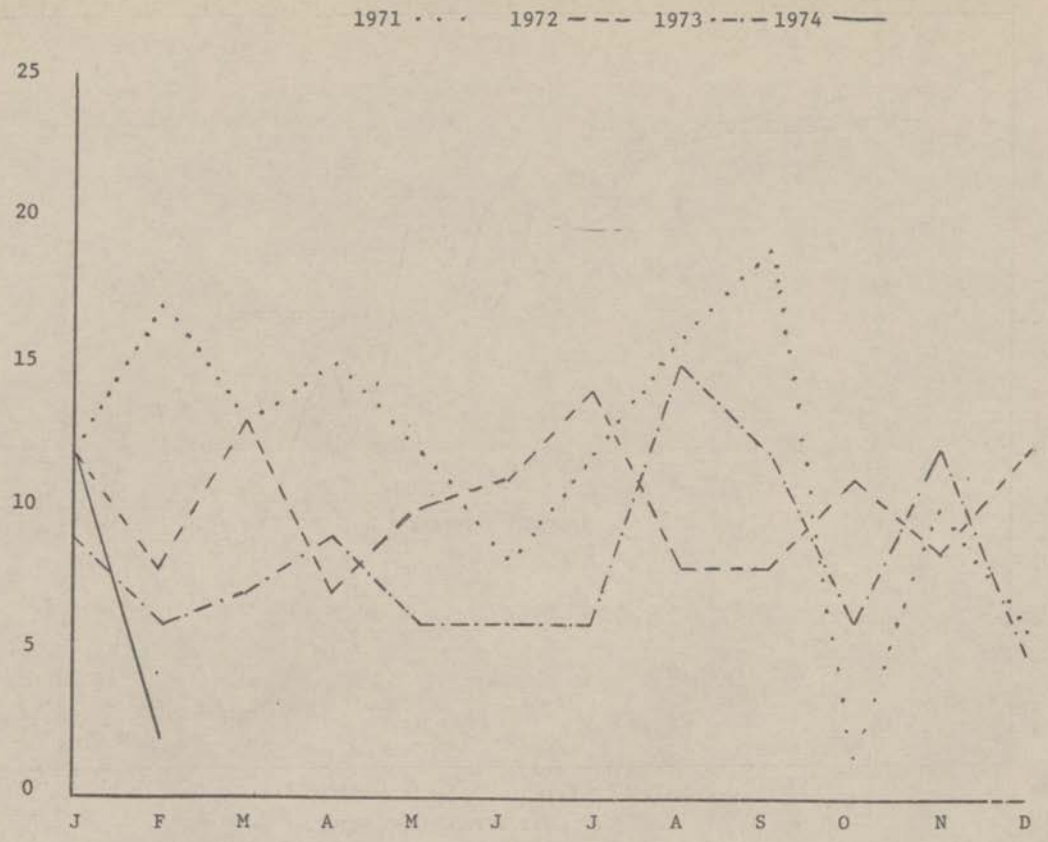
All Coal Mines



FATAL AND NONFATAL INJURIES

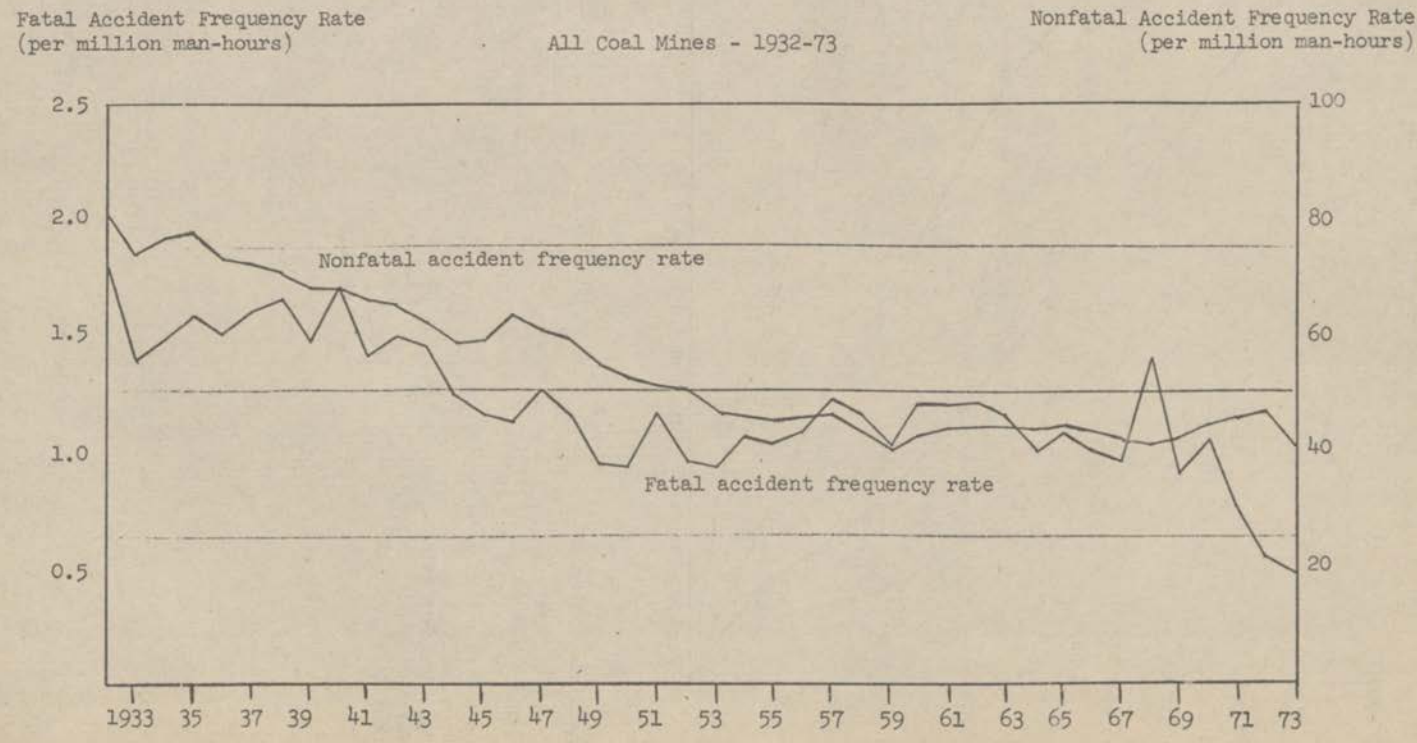


UNDERGROUND FATALITIES

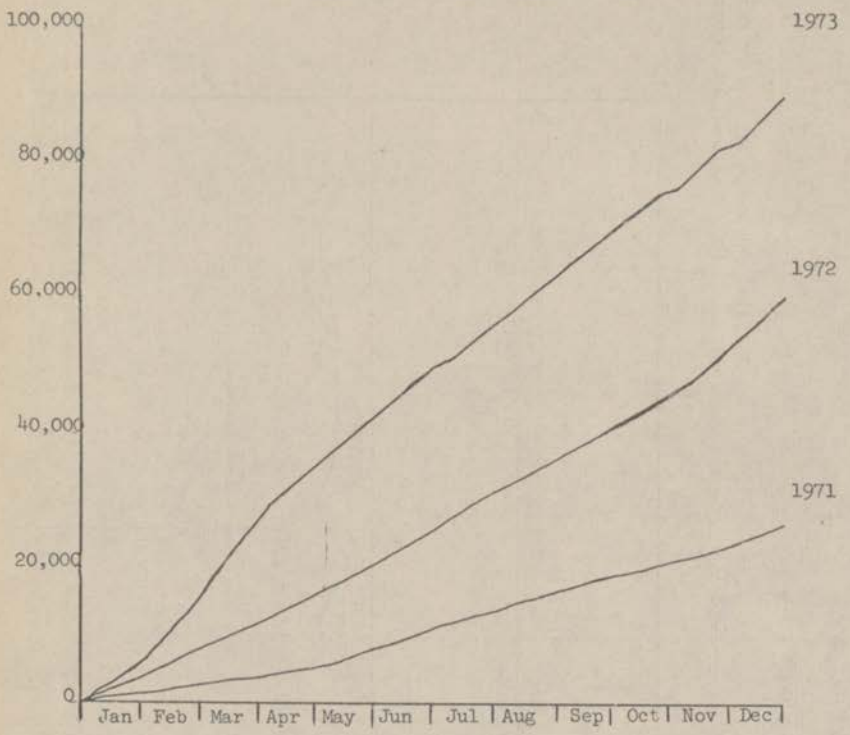


FATAL AND NONFATAL

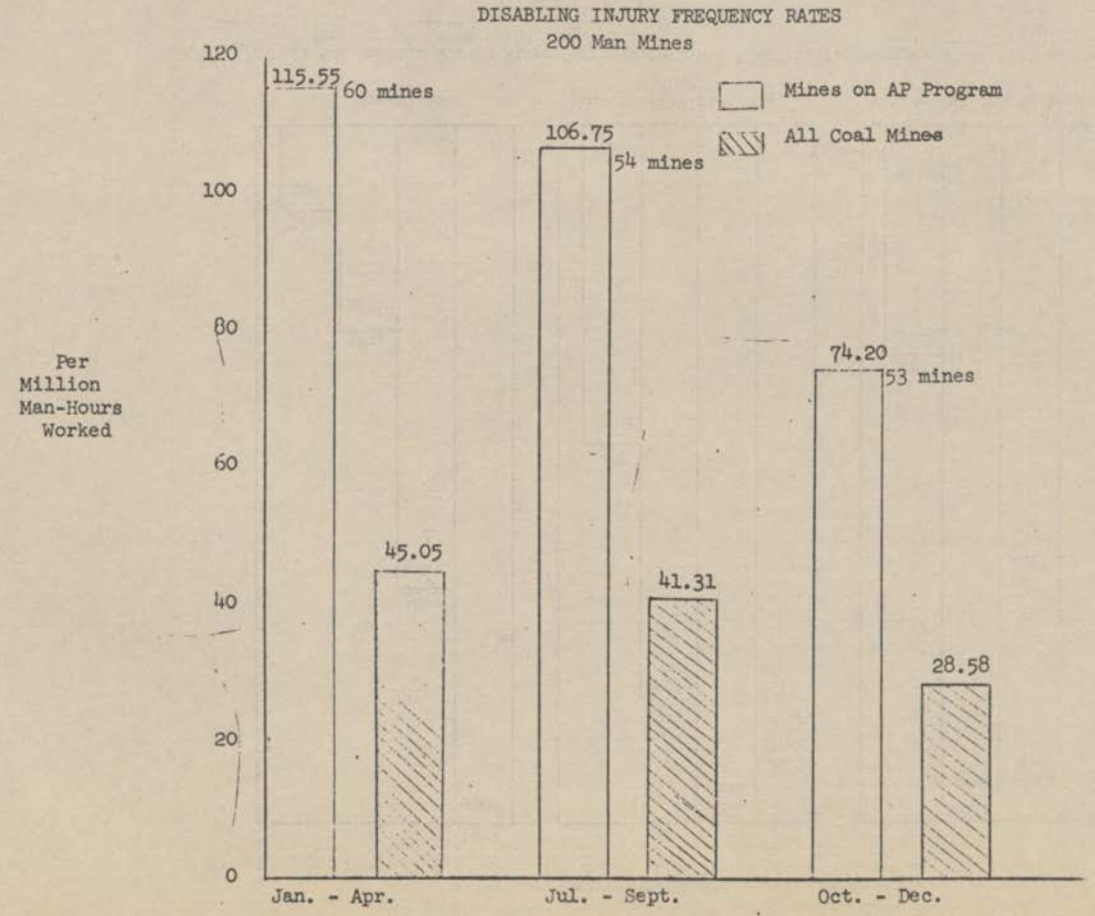
ACCIDENT FREQUENCY RATES



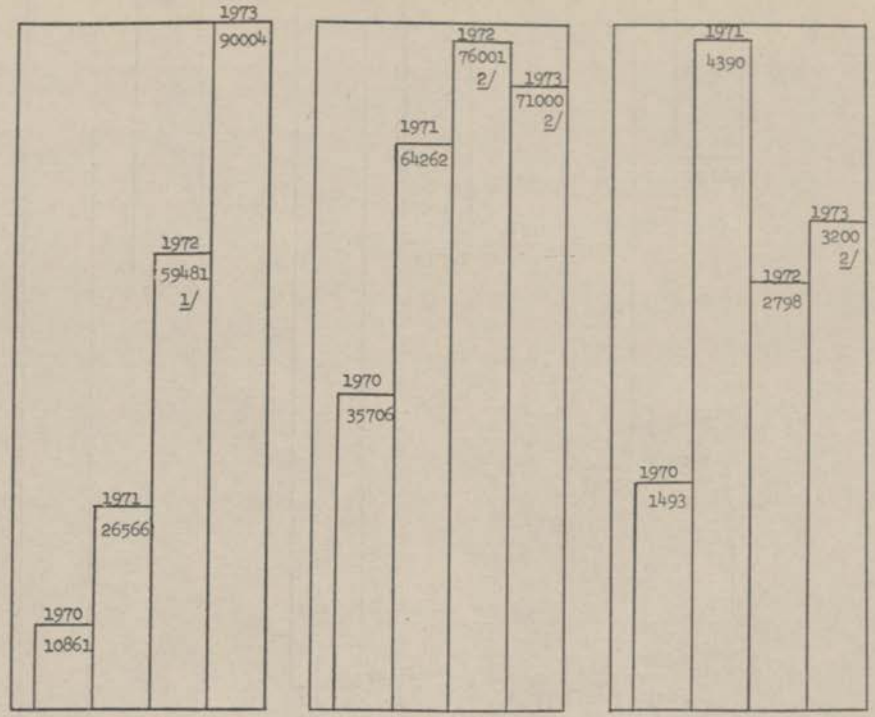
Health and Safety Inspections



Type of Inspection	Surface	Underground
Complete Safety	2,086	2,055
Complete Health	320	1,115
Complete Health & Safety	2,837	4,737
Spot Safety (103(i))	105	9,055
Spot Health	690	3,862
Spot Health & Safety	2,042	10,347
Safety (Other)	1,226	2,477
Spot Safety (Other)	8,935	38,115
Total	18,241	71,763


DISABLING INJURY FREQUENCY RATES
200 Man Mines
Mines on AP Program
All Coal Mines
Per Million Man-Hours Worked
120
100
80
60
40
20
0
115.55
60 mines
45.05
106.75
54 mines
41.31
74.20
53 mines
28.58
Jan. - Apr.
Jul. - Sept.
Oct. - Dec.

SIGNIFICANT CHANGES - 1970 - 1973



1/ Does not include 10,936 River Dock, Waste Bank, Electrical, Transportation System, Roof Control, and Ventilation Surveys and Inspections.

2/ Preliminary Estimate

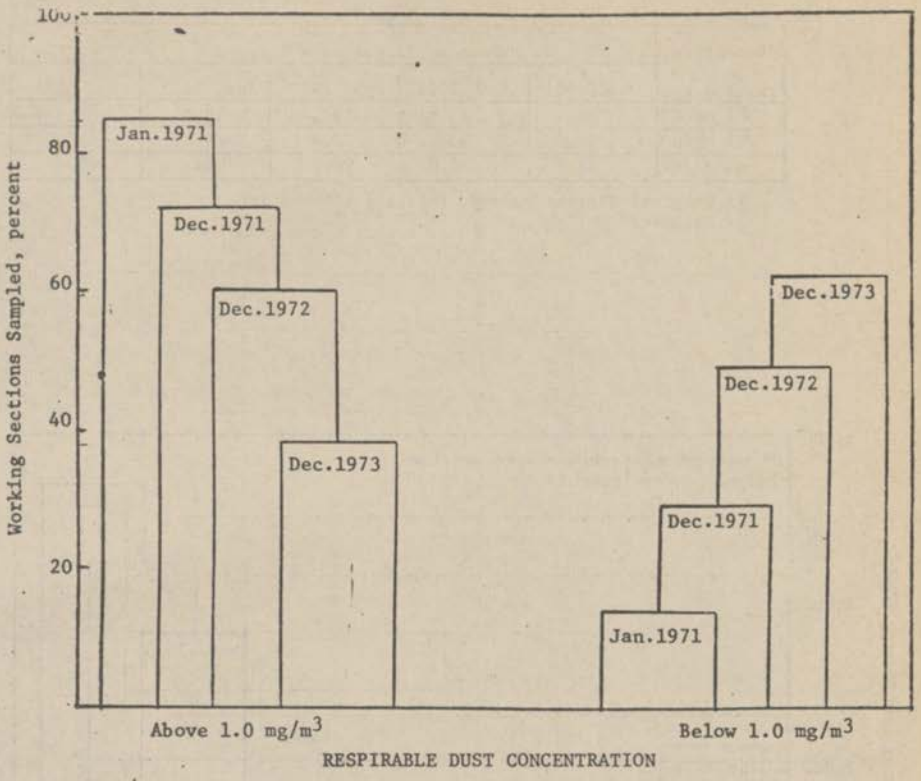


FIGURE 7.- Progress in lowering respirable dust concentrations, January 1971 to December 1973.

Concentration	Percent of Sections Sampled				
(Resp.dust)	1968-69[1/]	Jan. 1971	Jan. 1972	Jan. 1973	Jan. 1974
≤1 mg/m^3	6.1	15.0[2/]	29.1	40.9	60.7
≤2 mg/m^3	20.6	43.4	72.9	79.6	93.9
≤3 mg/m^3	28.4	69.0	92.1	95.7	97.9

1/ Original 29-mine survey, totaling 155 sections
2/ Estimate

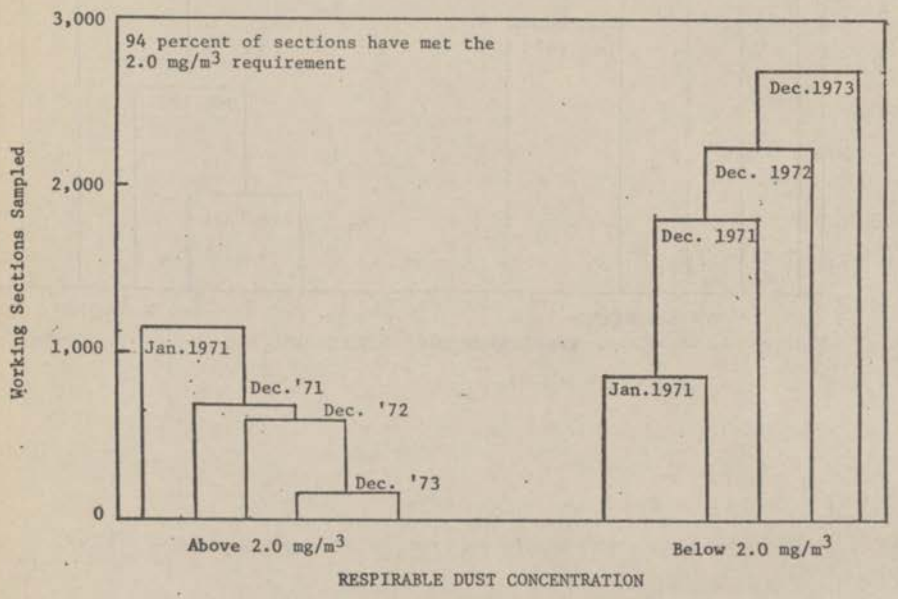


FIGURE 6. - Progress in meeting the 2.0 mg/m^3 respirable dust level, January 1971 to December 1973

A comparison of mean dust level exposures in selected occupations is shown by the following tabulation:

Occupation	1968-69[1] 29 mines	7-70 - 6-71[2] 29 mines	7-71 - 6-72[2] 29 mines	1-1 - 6-30-72[2] All mines	4-1 - 9-30-73[2] All mines
Continuous miner operator	6.5	3.1	2.6	2.1	1.5
Loading machine operator	6.0	2.7	2.2	1.7	1.1
Cutting machine operator	5.9	2.9	2.2	1.7	1.1
Shuttle car operator	2.3	1.6	1.5	1.4	0.9
Laborer	10.4	2.9	1.2	1.7	1.1
Timberman (Jack setter)	3.9	1.7	1.7	2.2[3]	1.7[3]
Roof bolter	3.9	2.3	1.9	2.1	1.4

1/ USBM Survey data
2/ Coal mine operator's samples
3/ During 1972, the "high-risk" occupation for auger-type continuous miners was changed to return-side jack setter

As of December 31, 1973, less than 175 underground sections were not compling with the 2.0 mg/m^3 standard compared to about 600 such sections on December 31, 1972.

MINE FATALITIES

Mr. DAY. When you are talking about man-hours, I think it's another interesting thing because the coal industry has had its ups and downs. For instance, to this day we have anywhere from 10,000 to 16,000 or 17,000 miners on strike in West Virginia.

When you talk about a year's statistics, you have to take into consideration these factors. This past year, 1973, showed again the lowest year with a frequency rate based on per million man-hours exposure. It was only 0.45 compared to 1972 of 0.56, and 1971 of 0.72; in 1970, of 1; in 1969, of 0.85.

If you noticed, 1970 had an extremely large number of fatalities in that particular year.

Mrs. HANSEN. Was that a year of high tonnage production?

Mr. DAY. I couldn't answer that off the top of my head.

Mr. SCHLICK. Tonnage is around 600 million tons a year plus or minus.

Mrs. HANSEN. The tonnage produced per year is relatively constant?

Mr. SCHLICK. Right. The key factor is how many man-hours exposure in the industry. As you can see, in 1970, one man was killed per million man-hours of exposure; in 1973, 0.45 or half as many people were killed per million man-hours of exposure.

Mr. DAY. We have also taken the position, Madam Chairman, of attempting to get away from the numbers game for a number of reasons. I think it's almost morbid for us to issue these statistics periodically. The only reason we accumulate them is to answer questions here.

I would hate to think that we are operating on the basis of trying to beat last year's record or that of 2 years ago. We should try and do the job. Even though last year was the best year in the history of coal mining, we still had 132 men killed or actually charged against the industry. We have even debated a number of these charges but we accept them.

For instance, I think this year we have already had 25 fatalities. When you look at these individual fatalities, there is no set pattern for them, with one exception—about 50 percent are in the State of West Virginia. This has concerned us.

Mrs. HANSEN. Why?

Mr. DAY. We are trying to determine this. We had a meeting with the representatives of the United Mine Workers and our district managers and determined that out of 12 fatalities I think 9 were from southern West Virginia. While we seem to be making inroads in Kentucky and Ohio and Virginia, we just haven't made any inroads in this particular area of West Virginia. We don't know the answer to this. We are looking for it and we are working with the United Mine Workers in an attempt to find out why.

IMPROVEMENT IN SAFETY RECORD

Mr. WYATT. In spite of your not wanting to emphasize numbers, your safety record has been improving rather dramatically, has it not, in the last few years?

Mr. DAY. Yes, I think we can say that. It's attributable to a number of programs. We started something about 9 months ago and it's

a program where we took any mine that had over 200 employees and evaluated their accident frequency rate. This amounted to approximately 140-some-odd underground mines out of a total of approximately 1,400 in the country. This is only 10 percent of the mines of the country, but it represented over 35 percent of the men working underground.

Any mine that has an accident frequency rate over the national average, we inspect on a daily basis. The reason we do this is we feel that inspector presence is a very important thing in mining. It's just like having a cop on the beat. If you have a man on the beat, it's less likely you are going to get a violation of any type law.

I think the statistics show this. The first quarter they had an accident frequency rate of 115.55. The second quarter was 106.75. The third quarter was 74.20. This is a tremendous reduction. It has really helped our statistics, if we are playing the statistics game. Better than that, we have just lowered the number of accidents.

Mr. EVANS. Would the gentleman yield there?

Mr. WYATT. Yes.

Mr. EVANS. With such a decline in injuries and accidents with an inspector being present, I would suppose you would be able to detect or have some knowledge about practices that didn't occur when the inspector is there that would have occurred had he not been there. Have you made any such judgment?

Mr. DAY. There are so many things that can be done in mining for unsafe practices when you are not there that it's difficult to pinpoint any particular item. Would Mr. Crawford care to discuss that? He is our Assistant Administrator for Coal.

Mr. CRAWFORD. As Mr. Day mentioned, these conditions do vary. I am sure there are times when our people do find circumstances that would possibly have existed had they not been present. The thing that we are finding is, as he stated, that our presence there is causing these things not to occur that would maybe have occurred otherwise. We are reducing accidents by our presence.

Along with that, we are trying to improve the job safety analysis techniques of the people actually working while we are there and trying to cause them to work in a safer manner. And it's paying off.

Mr. EVANS. Do miners suffer any possible penalties for violating the safety rules?

Mr. DAY. The only penalty they can suffer is——

Mrs. HANSEN. Death?

Mr. DAY. Death or serious injury. They can be fined for carrying smoking materials underground. Other than that, there are no penalties that we can administer.

UNION PROGRAM ON ACCIDENT PREVENTION

Mrs. HANSEN. Don't they also have a program in their union, that makes them very accident conscious? At least you do in the logging industry.

Mr. DAY. They have some programs with the union. We have extensive union cooperation ourselves by means of education and training activities and through the Home Safety Association. The Home Safety Association, in cooperation with the company and the union,

meet on these things. We have been working and meeting quite regularly with the union, conducting seminars with their safety coordinators and safety committeemen. The vast majority of these meetings have actually been on Saturdays and Sundays when they could meet with us. This has been helpful. We have been teaching them accident prevention and safety methods and the requirements of the act itself, which is like a bill of rights for safety conditions.

Mrs. HANSEN. Yesterday there was a picture in the paper of some of the West Virginia miners in a truck. They were all very young. Are you giving extra accident prevention training to these people who have not had much experience in a mine?

Mr. DAY. Unfortunately, Madam Chairman, under our present standards we cannot force these people to come to us and say, "We will take the training." However, we are promulgating mandatory safety standards at this time. We are talking to the union and industry about them. We hope in the very near future to require that all newly employed miners be trained in accident prevention, first aid, roof control, evacuation, self-rescuers, and items like this. This will be a requirement before they can work in a mine. They will have to go through this course.

We are studying this problem. We don't want to promulgate a regulation at this time that we cannot enforce and cannot do anything with. So we are talking to the States to determine what they can do. We are talking to industry. Most of your large corporations would like to have their own training programs because of the different conditions from mine to mine. We are determining what is left over that we will have to take care of from those States which do not want to have a program. In those areas where small mines exist we will have to fill this void. We are looking at this. We think this is extremely important. The Barry report of a number of years ago showed that a high percentage of the accidents and fatalities in mining involved new employees or the men who had only been on the job for a short while and also the men who have just changed jobs from operating a shuttle car to a continuous miner for example. So we will have training on these individual pieces of equipment, also.

We feel this is extremely important and we will be up before this committee probably for the next fiscal year with a sizable increase in our budget in education and training. I don't know how many millions it will be, but it will be strictly on this particular program of giving miners at least a 2-week course in mine safety. We feel this is a good protection and there will be periodic retraining once a year.

I think awareness is extremely important. Almost every accident you look at, a man took part in at some stage of the proceeding.

Mr. VEYSEY. You have stated your dislike to play a statistics game here, but accident statistics are important to all of us. Can you relate either the fatality or the number of accident records to a per ton of coal, per hundred tons of coal or thousand tons of coal, rather than to the man-days?

I ask that because there is a very dramatic chart in this publication which shows a significant increase in productivity per man-shift from 1950 to 1970, about three times over in that period of time. Then there

is an extremely rapid drop thereafter. What has that done to the accident figures?

Mr. DAY. We cannot correlate that. Mrs. Hansen asked that question before you walked in. We will attempt to supply that for the record.

Are you referring to productivity per man-hour in addition to this?

DECLINE IN COAL PRODUCTION

Mr. VEYSEY. This is per man-shift, actually.

Mr. DAY. Per man-shift. This is going to be something that is going to be raised in the very near future. In fact, it's a subject of litigation in the courts right now between a number of coal companies and suppliers. Because they have not met the demands of their contract, the coal companies are being sued. One of the reasons they are giving for not meeting the demands of their contracts is the Coal Mine Health and Safety Act of 1969. They are saying requirements of this act have cut down on production. I think that is true. They have cut down on production. No one at this table will deny that. I think the number of tons of the percentage is quite different.

We are requiring under the law, in fact Congress is demanding by legislation, that certain things be done. You must make preshift examinations. You must have roof control plans. You must examine for rock dust. You must do this—maintain your equipment. You must take menthanometer readings. All of these things take time, money, and equipment. Naturally the production will go down per man-hour. We hope, so will the number of injuries and fatalities.

Mr. CRAWFORD. The period for which you gave the figures is after this dramatic drop in the output per man-shift.

Mr. DAY. Yes. It's leveling off.

Mr. VEYSEY. What time did the change take place? Was it in 1969?

Mr. CRAWFORD. The dramatic drop came in 1969 and 1970, somewhere in that period.

Mr. VEYSEY. This chart shows the drop. I was referring to the chart on page 19 of this publication which shows the drop being from 15.6 tons of coal per man-shift in 1969 to 12.0 in 1973. That is a pretty rough drop. It shows very dramatically on the graph.

Mr. SCHLICK. But that leveled off.

Mr. VEYSEY. You don't have much after 1973, I suppose.

Mr. SCHLICK. That is 1970. For 1971 and 1972 you have something else.

Mr. VEYSEY. It says 1973. That may be an error.

Mr. DAY. I have seen figures like this. We could supply them for the record.

Mr. VEYSEY. I think that would be most interesting to see what relationship that does have.

[The information follows:]

RELATIONSHIP OF ACCIDENT RATE WITH PRODUCTION

Year	Tons per man shift [1]	Accident frequency rates [2]	Fatality rates [3]
1965	14.00	44.73	1.04
1966	14.64	42.85	.96
1967	15.07	41.84	.92
1968	15.40	41.12	1.33
1969	15.61	41.76	.85
1970	13.76	44.04	1.00
1971 [4]	12.03	45.84	.72
1972 [4]	11.91	45.74	.56
1973 [4]	12.00	43.06	.45

[1] Underground coal mining productivity.
[2] Nonfatal disabling injuries per million manhours worked.
[3] Per million manhours worked.
[4] Preliminary figures.

Mr. VEYSEY. I can see some rather small amount of manpower required with no increase in productivity in the items you mentioned. But I don't think it could possibly explain that sort of shift.

Mr. SCHLICK. The drop in the last year has been very small. This is misleading because the drop in 1972 was dramatic and then in 1973 it more or less went parallel. So that was the year we think things were pretty well established.

Mr. VEYSEY. In other words, you have lowered that much?

Mr. SCHLICK. Yes. But the drop from 1972 to 1973 was very small.

Mr. VEYSEY. On the next page I notice that these changes seem to have a very profound effect on the average price of coal, which seems to shoot up just exactly the opposite to the decline in productivity.

Mr. DAY. Coal started picking up in 1968.

Mr. SCHLICK. I am not so sure that the ton per man went down. The price of coal went up. I think the economic factors of the desire for coal had more to do with the escalation of the price.

Mrs. HANSEN. Mr. Day, please proceed with your general statement.

METAL AND NONMETAL MINES

Mr. DAY. I think I got side-tracked from my statement. I have mentioned a number of things I did want to discuss. I don't want to neglect metal and nonmetal, which we believe is a very, very important part of health and safety but which we feel has been neglected to a certain extent. We are just beginning to get on stream. One of the reasons is legislation. We need better legislation. The Department will submit a bill, we hope, within the next month which will give the act a little teeth in it, including civil penalties and provisions for hearings under the Administrative Procedure Act and other requirements that will help us enforce that law.

This is not to say we are not making improvements. Mr. Nelson's group is in the process of hiring the additional 75 inspectors authorized

in the fiscal year 1974 budget. As part of our budget request for 1975, he is asking for an additional 75 inspectors. We hope to increase our ability a great deal as far as health inspections are concerned. Not enough is being done. One of the reasons not enough is being done is because we don't have enough inspection personnel to do much about it.

Mrs. HANSEN. The Mine Health and Safety Academy is located in West Virginia. I would think it incumbent upon West Virginia to do a better job in the prevention of accidents.

Mr. DAY. Maybe that is why we need it there. I don't know.

Mrs. HANSEN. Why does West Virginia have such a large percentage of the coal mine related deaths?

Mr. DAY. We don't know the answer to that, Madam Chairman. We are actually attempting to make several studies. I wish I knew the answer.

MANAGEMENT CHANGES

Mrs. HANSEN. Mr. Day, since this is the first full year budget presentation for MESA, will you please review for us the important management changes which have been made since the formation of MESA?

Mr. DAY. We are in the process of making our biggest change as far as management is concerned, in that we will attempt to regionalize our operations in the very near future. I feel that the district managers, our regional managers or whatever they may be called, have the responsibility in the field. They have the direct contact with the mine operators and the people. I feel they should have more control and authority over what they do. There should be less control from Washington. The job of Washington should be pretty much limited to policy, drafting of standards and other matters. But the actual work is done in the field. I think this is an important change. We hope to have that in operation in a couple of months.

Another change we have made is increased emphasis on liaison activities with labor itself. I am specifically talking about the unions involved. One of the first appointments I made was assistant for labor relations.

I think this has helped us a great deal and we have been able to communicate much better and get a number of programs underway that are meaningful.

JUSTIFICATION MATERIAL

Mrs. HANSEN. We will insert justification pages 1 through 30 in the record at this point.

[The justifications follow:]

DEPARTMENT OF THE INTERIOR

MINING ENFORCEMENT AND SAFETY ADMINISTRATION

Highlight and Summary Statement

The Mining Enforcement and Safety Administration (MESA) was established May 7, 1973, by Secretarial Order No. 2953. The functions of the Administration are carried out under the authority of the Federal Metal and Nonmetallic Mine Safety Act of 1966 (80 Stat. 772; 30 U.S.C. 721 note), and the Federal Coal Mine Health and Safety Act of 1969 (83 Stat. 742; 30 U.S.C. 801 note), that deal with the inspection of domestic mines and enforcement of health and safety standards.

Programs are conducted to control health hazards and to reduce fatalities and injuries in the mineral industries. This is accomplished through mine inspections, field investigations, safety education, training and motivation, health studies, and devising and enforcing appropriate health and safety standards.

The fiscal year 1975 budget request for MESA is $68,146,000. After adjusting for increased costs because of Federal pay increases, the net increase is $8,433,000 above the amount available for fiscal year 1974. The request is divided into five program activities as follows:

	1974	1975	Net Change
Coal mine health and safety inspections	$35,663,000	$40,863,000	$+5,200,000
Metal and nonmetal mine health and safety inspections	8,009,000	10,739,000	+2,730,000
Education and Training	7,064,000	5,884,000	-1,180,000
Technical Support	7,588,000	9,144,000	+1,556,000
Program Administration	1,389,000	1,516,000	+ 127,000
Total	$59,713,000	$68,146,000	$+8,433,000

Program Changes

Increases totaling $9,933,000 are offset by a decrease of $1,500,000, for a net increase of $8,433,000. The increase includes $2,563,000 to reimburse the General Services Administration for rental of space; $787,000 to annualize pay increase costs granted in FY 1974; $28,000 to reimburse the employee compensation fund for payments made because of injury or death of employees; and $6,555,000 for program functions described below.

The $1,500,000 decrease mentioned above reflects the amount that was appropriated in FY 1974 to complete the construction of a Federal Health and Safety Academy.

Coal Mine Health and Safety Inspections - $40,863,000: The major objective of this program is to provide the safest possible working environment for the Nation's coal miners. Funds are utilized to conduct health and safety inspections of all coal mines, both surface and underground, and to enforce the provisions of the Coal Mine Health and Safety Act of 1969. In 1973, over 85,000 inspections, investigations, and surveys were made as compared to 65,000 during 1972. These inspections resulted in 72,000 Notices of Violations issued during 1973 compared to 76,000 during 1972. Though not subject to definite proof, the drop in fatalities in the mines from 156 in 1972 to 132 in 1973 is attributed to the increased presence of inspectors in the mines. In addition, the respirable dust levels in underground mines have continued to decrease since the revised standard of two milligrams per cubic meter dust level in mine atmospheres became effective on January 1, 1973.

A program increase of $3,220,000 is requested to further intensify the inspection program. In the Supplemental Appropriation Act for 1974, an additional $1,870,000 was appropriated for assessing civil penalties for violations as required under the Act. Specifically, the additional funds provided for the last six months of fiscal year 1974, for an increased work force of 263 people to assess civil penalties and for additional coal mine inspection personnel related to assessment operations. An increase of $1,930,000 is requested in fiscal year 1975 for continuation of this program on a full-year basis. The balance of the increase is requested to annualize increases previously granted.

Metal and Nonmetal Mine Health and Safety Inspections - $10,739,000: The major objective of this program is to reduce the risks to the safety and health of workers in the Nation's 13,000 metal and nonmetal mines which are complicated by the diversity of the operations and by the complex character of many underground diggings. These mines, quarries, and sand and gravel pits, and the mills serving them, are located in all 50 States, and employ more than 200,000 workers. They produce more than 80 different mineral commodities, ranging from asbestos to zinc.

The Federal Metal and Nonmetallic Mine Safety Act directs the Secretary of the Interior to develop and promulgate safety and health standards and to enforce the standards in order to protect these mine workers from occupational illness and accidental injury and death.

Development of Health and Safety standards is closely coordinated with their enforcement utilizing the advice and guidance of persons actively engaged in mining operations and mine inspectors engaged in enforcement supplemented by staff experts in all phases of mining.

Perhaps the most significant accomplishment in 1973 has been the reduction of fatal injuries in underground mines. In 1972, there were 234 fatalities compared to 165 during the first 11½ months of 1973. Although the number of fatalities in underground mines has been held down, it is greatly disturbing to note that the trend in surface operations has been upward. Metal and nonmetal open pits, crushed stone, quarries, and sand and gravel pits, have all experienced more fatalities in 1973 than in 1972. These figures probably reflect the special attention paid to underground mines, because those mines are inherently more hazardous than surface mines. But the statistics show quite clearly a need to increase the frequency of inspections of surface operations. The additions to the inspection staff requested in the present budget should enable MESA to move in this direction.

An increase of $2,100,000 is requested for continued implementation of the Act of which $1,100,000 is requested to employ an additional 75 mine inspectors. The added inspectors will bring the inspection force up to 300 and assist in achieving the program goal of inspecting each underground mine four times a year; each open pit metal mine two times a year; and each sand and gravel, crushed stone, and open pit nonmetal mine once a year. The requested appropriation would provide for the necessary spot and follow up inspections to ensure compliance with citations issued during regular inspections. The balance of the increase is requested to annualize increases previously granted. This includes the full salary cost of inspectors previously hired, grade promotions, within-grade salary advancements, and travel costs.

Education and Training - $5,884,000: The education and training program is directed toward improving mine health and safety by improving job skills and by creating an awareness of hazards and a positive attitude toward safer work habits.

To aid in achieving these objectives activities will continue to be directed toward expanding the safety training capabilities in industry. These activities will include the training, monitoring, and certification of industry instructors by personnel of the MESA Training Centers. Another aid will be the identification of training needs by the analysis of accident data to be followed by intensified training where high accident rates are identified.

An improved program for education and training recently has been established. This program includes an 8 to 10 week indoctrination course on inspection work for newly employed Federal Mine Inspectors (this course is to be taken before the start of on-the-job training and subsequent assignment of inspection duties); refresher courses of 2 to 6 weeks duration designed to update periodically the skills and knowledge of all inspection personnel; and an intensive 12 month course of study for inspector trainees. The new Federal Health and Safety Academy (now under construction) when completed will greatly enhance the education and training program.

The apppropriation request for this activity reflects a program decrease of $1,500,000 because of one-time funds appropriated in 1974 to complete the construction of the Academy at Beckley, West Virginia.

Technical Support - $9,144,000: Under this activity, MESA provides engineering services on health and safety problems to the mining industry as a whole, to individual mine operators, and to the manufacturers of mining equipment and supplies. Specifically, the major aspects of the technical support activity may be summarized as follows:

1. Provide answers to immediate mine health and safety problems that could be solved with existing technology, thus facilitating compliance with the Act.

2. Maintain continual review of currently promulgated standards in the light of new technologic development and recommend justifiable changes.

3. Develop standards for safety and reliability of both new and modified pieces of equipment and materials used in mining and test those items for which Bureau approval is required by law and other items as appropriate or requested by the industry.

4. Upgrade the Bureau's capability for rescue and recovery of entrapped miners, while maintaining the capability to deploy existing Bureau equipment for an emergency.

5. Maintain contact with health and safety research programs, communicate research results to enforcement groups, and keep the Bureau's research organizations informed of problem areas that need to be studied.

6. Train key engineering people in the Bureau in ventilation, roof support, and other technical specialties.

7. Collect, compile, and disseminate injury data and analyze injury experience in depth to identify the causative factors as a guide to education and training programing and to enforcement and research activities.

8. Develop and maintain a computerized mine information system and programs for use throughout the Health and Safety activities as an essential element of ongoing operations and as a tool for planning.

An increase of $1,235,000 is requested for additional personnel to assist in solving technical and engineering problems and equipment testing and to provide for short term investigations.

The Administration's effort in relation to the multitude of problems associated with metal and nonmetal mining needs to be stepped up. Personnel increases will enable technical assistance to have a significant impact on mine health and safety. This will provide for a closer coordination with the enforcement of standards and regulations in the areas of ground control, ventilation, industrial safety, and industrial hygiene. Mine wastes and tailings embankments are critical problem areas. Expanded engineering capability will permit the development of improved standards for embankment design and construction and on-site evaluation of critical embankments near populated areas.

Program administration - $1,516,000: This activity provides for the immediate Office of the Administrator and the key administrative staff that support the general administrative functions. The balance of the cost for administrative functions is charged to program funds. In addition, this activity provides funds to reimburse the Bureau of Employee Compensation, Department of Labor, for payments made because of injury or death of employees.

DEPARTMENT OF THE INTERIOR
MINING ENFORCEMENT AND SAFETY ADMINISTRATION

Salaries and Expenses

Appropriation, 1973		$64,623,000
Transferred from Geological Survey for increased pay costs		684,000
Transferred to "Operating Expenses, Public Buildings Service," General Services Administration		- 587,063
Total Available, 1973		64,719,937
Appropriation, 1974	$53,124,000	
Supplemental Appropriation, 1974	3,370,000	
Pay Cost Supplemental (January and October pay raises)	3,546,000	
Total Appropriation, 1974		60,040,000
Transferred to "Operating Expenses, Public Buildings Service," General Services Administration		- 327,000
Total Available, 1974		59,713,000

Summary of Increases and Decreases, 1975

	Base for 1975	Increase 1975	
Coal Mine Health and Safety Inspection:			
Annualization of Increases previously granted	$35,663,000	+$3,220,000	+ 3,220,000
Metal and Nonmetal Mine Health and Safety Inspections:			
Annualization of increase previously granted	--	+ 1,000,000	
Increased metal and nonmetal mine inspection program	8,009,000	+ 1,100,000	+ 2,100,000
Education and Training:			
Completion of Health and Safety Academy at Beckley, West Virginia	1,500,000	- 1,500,000	- 1,500,000
Technical Support:			
Increased effort in solving technical and emergency problems and equipment testing	7,588,000	+ 1,235,000	+ 1,235,000

	Base for 1975	Increase 1975	
Employee Compensation Payments	302,000	+ 28,000	+ 28,000
Annualization of October 1973 Pay Raise	--	+ 787,000	+ 787,000
Allowance for Leased Space	--	+ 2,563,000	+ 2,563,000
Net Increase, 1975			+ 8,433,000
Budget Estimate, 1975			68,146,000

SALARIES AND EXPENSES

Analysis by Activity

Activity	Fiscal Year 1973 Amount Available	Fiscal Year 1974 Total Appropriation	Pay Cost Supplemental	Transfers 1/	Amount Available
1. Coal mine health and safety inspections	$32,039,421	$33,604,000	$2,386,000	$-327,000	$35,663,000
2. Metal and nonmetal mine health and safety inspections	6,095,520	7,574,000	435,000	- -	8,009,000
3. Education and training	5,275,807	19,737,341	243,000	- -	19,980,341
4. Technical support	6,866,424	7,194,000	394,000	- -	7,588,000
5. Program administration	1,223,919	1,301,000	88,000	- -	1,389,000
Unobligated balance, start of year	- -	-12,916,341	- -	- -	-12,916,341
Unobligated balance, end of year	12,916,341	- -	- -	- -	- -
Unobligated balance lapsing	302,505	- -	- -	- -	- -
Total	64,719,937	56,494,000	3,546,000	-327,000	59,713,000

1/ Represents transfer to General Services Administration.

SALARIES AND EXPENSES

Analysis by Activities

Activity	F.Y. 1973 Amount Available	F.Y. 1974 Amount Available	F.Y. 1975 Estimate	Increase (+) or Decrease (-) 1975 Compared with 1974	Page Reference
1. Coal mine health and safety inspections ..	$32,039,421	$35,663,000	$40,863,000	$ 5,200,000	9
2. Metal and nonmetal mine health and safety inspections	6,095,520	8,009,000	10,739,000	+2,730,000	13
3. Education and training	5,275,807	19,980,341	5,884,000	-14,096,341	18
4. Technical support	6,866,424	7,588,000	9,144,000	+1,556,000	21
5. Program administration	1,223,919	1,389,000	1,516,000	+ 127,000	24
Unobligated balance, start of year	- -	-12,916,341	- -	+12,916,341	
Unobligated balance, end of year	12,916,341	- -	- -	- -	
Unobligated balance lapsing	302,505	- -	- -	- -	
Total	64,719,937	59,713,000	68,146,00	+8,433,000	

1. Coal Mine Inspections: Fiscal year 1974, $35,663,000; fiscal year 1975, $40,863,000; increase, $5,200,000. The increase consists of:

	Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1)	+ $3,220,000	--	--	--	Annualization of increases previously granted.
(2)	+ 477,000	--	--	--	Annualization of pay increase granted in FY 1974 (E.O. 11789).
(3)	+ 1,503,000	--	1,503,000	--	Reimbursement for space provided by GSA in accordance with P.L. 92-313.
	+ $5,200,000	--			

NEED FOR INCREASE

$1,290,000 is requested to provide for increased salary costs for inspection personnel being promoted to the full performance level of their positions. $1,930,000 is requested to provide for the full year costs associated with the employment of 263 coal mine inspectors, assessment officers, and clerical support authorized in the Supplemental Appropriation Act of 1974.

PROGRAM OF WORK

The major objective of the coal mine inspection program is to provide the coal miner with a safe and healthful environment in which to work.

The Federal Coal Mine Health and Safety Act of 1969 has provided both the responsibility and the authority to require that the necessary corrective action be taken while at the same time providing assistance to the operator in devising ways to correct existing hazards. The Act requires four complete safety and four complete health inspections be made of each underground mine to ensure a safe and healthful environment. In addition, one spot inspection of each mine classified as hazardous is required to be made every five working days, plus special inspections to include roof control, ventilation, electrical, transportation, and similar items are made as required by the individual mine. Although, the Act does not specify the number of inspections for surface mines, MESA requires at least two complete safety and one complete health inspection each and as many spot inspections as may be required to gain compliance with the Act.

In addition, thousands of special inspections are made in the mines to determine whether violations of the Act, as reported in notices issued, have been abated in the time set by the inspector, whether conditions or practices that caused the issuance of Withdrawal Orders have been abated to the extent that the orders can be revised or terminated, and whether Withdrawal Orders are being complied with.

Coal Mine Inspections

	Calendar Year 1973 (Forecast)	1974 (Forecast)
Underground Mines		
Complete safety inspections	7,000	6,000
Complete health inspections	7,000	6,000
Spot safety inspections	12,000	26,000
Spot health inspections	4,000	4,000
Spot safety inspections of hazardous mines	15,000	8,000
Other inspections and surveys 1/	10,000	10,000
Subtotal	55,000	60,000
Surface Mines		
Complete safety inspections	4,000	3,700
Complete health inspections	2,000	3,700
Spot safety inspections	2,500	2,000
Spot health inspections	2,500	2,000
Spot safety inspections of hazardous mines	1,500	1,000
Other inspections and surveys 1/	1,500	1,600
Subtotal	14,000	14,000
Investigations (Fatality, accident, violation follow-ups, etc.)	20,000	20,000
Total	89,000	94,000

1/ Includes all complete and spot electrical, roof control haulage, preparation plants, and river dock inspections.

The Act has committed both this organization and the industry to decrease not only the number of fatalities, but the number of injuries too. In an effort to accomplish this goal, several new programs have been added to better utilize our present inspection work force and strengthen the overall enforcement of the Act. In July 1973, a program of Accident Prevention Spot Inspections was initiated. The program consists of assigning an inspector to work permanently on a daily basis at a mine with a higher frequency rate than the national average and employing over 200 men. The purpose of this program is to give the inspector freedom to use his own initiative to bring about a decrease in the number of injuries at his assigned mine. Specialists in Accident Prevention and Investigation are being assigned to the district offices in order to provide a more indepth analysis of the cause and possible prevention of fatalities and serious injuries.

Past programs to be continued in the future include the "Winter Alert," aimed at decreasing accidents during coal minings most hazardous period, and the utilization of specialists in roof control, haulage, ventilation, and electricity in an effort to correct bad practices or systems and thereby reduce the number of mining accidents.

Inspection manuals on both health and safety for underground and surface mines are being updated frequently and copies are furnished to operators and mine workers organizations to apprise them of the application of the Act and thereby hopefully gain more safety through a thorough understanding of what is specifically required by the Act and other measures necessary for a safe and healthful mine.

MESA will continue to provide personnel and other assistance to the Interim Compliance Panel to enable it to carry out the functions under the Act. Essentially, the functions of the panel are to work toward the orderly implementation of the Act through authorization of temporary deviation from its mandatory provisions until required technology and equipment are available to correct the substandard conditions in a particular mine.

The Act also provides for assessing civil penalties for violations of the mandatory health and safety standards and other provisions. In carrying out these functions, violation citations are reviewed to insure that a violation did occur, ascertain the circumstances surrounding the violation, determine the degree of liability, establish the amount of penalty that is warranted, and review cases for formal adjudication.

The estimate includes $1,000,000 for grants to assist States in financing the cost of improvements in their mining safety programs as provided in the act. Specific objectives of the grants are to develop and enforce more effective coal mine health and safety laws and programs related to coal mine employment, and to promote Federal-State coordination and cooperation in improving health and safety conditions in coal mines. Section 503 of the Act directs the Secretary of the Interior to approve applications by the States for Federal grants if they meet certain criteria specified in the Act.

EXAMPLES OF RECENT ACCOMPLISHMENTS

Fatalities in coal mines have been reduced from 181 in 1971 to 156 in 1972 with a corresponding drop in the fatal injury frequency rate per million man-hours from 0.72 in 1971 to 0.56 in 1972. The corresponding number of fatals through November 1973 is 128 with a fatality frequency rate of 0.47.

Respirable dust levels in underground mines have continued to decrease since the 2 milligrams per cubic meter level became effective on January 1, 1973. As of November 1973 over 90 percent of the underground working sections are in compliance with the new standard and 60 percent of the underground sections are now at or below the 1.0 milligram level of respirable dust concentrations.

From the standpoint of work statistics, 26,000 inspections were made in 1971, 65,000 in 1972, and about 85,000 will be made in 1973. In 1971, 64,000 Notices of Violation were issued, in 1972, 76,000, and according to present trends, 72,000 will be issued in 1973.

The following are some of the significant programs which have been initiated to improve coal mine health and safety:

After the success of the campaign against roof fatalities which was initiated in July 1971, a similar program was developed for haulage fatalities. Revised guidelines were issued in August 1972 to increase the scope of the haulage program, and haulage fatalities have been reduced from 37 during the period January - November 1972 to 29 for the same period of 1973.

In the area of waste banks and silt retaining dams, Coal Mine Health and Safety moved quickly in cooperation with other Federal and State agencies to inventory potentially hazardous sites. These potentially hazardous sites have been and

are in the process of being evaluated for difficiencies, and recommendations are being given to all affected coal mine operators as to how to correct these hazards. Teams of qualified engineers have inspected over 200 sites in 5 states as part of this ongoing program. In addition, all Coal Mine Health and Safety inspectors have been trained to recognize the signs of instability in coal waste banks. A new program has been initiated to inspect all waste banks associated with active mines in conjunction with the complete inspection of the particular mine. An inspection manual specifically for coal waste deposits has been prepared to assist the inspection work force and any interested parties. New regulations have been drafted and are scheduled to be released in early 1974. The new regulations stipulate the requirements for design, construction, maintenance, and abandonment of all coal waste deposits which present a potential hazard to miners or mine property.

Regulations under Title 30 of the Code of Federal Regulations have been rewritten and published in the Federal Register. The revised regulations are designed to increase the effectiveness in programs such as the operators' sampling program for respirable dust, cabs and canopies to decrease the number of roof fall fatalities, and fire suppression devices. In addition to those regulations already promulgated, preparations are continuing for new regulations on diesel equipment and explosives.

A recent decision of March 19, 1973, by the Interior Board of Mine Operations Appeals ruled that all contractors that perform work on mine property and maintain supervisory control are required to comply with the Coal Mine Health and Safety Act of 1969. At the present time, MESA has issued identification numbers to over 300 contractors working on mine property who maintain supervisory control. This represents a substantial increase in the number of inspections to be completed each year, and Coal Mine Health and Safety has initiated efforts to inspect these contractors sites.

2. Metal and Nonmetal Mine Inspections: Fiscal year 1974, $8,009,000; fiscal year 1975, $10,739,000; increase $2,730,000. The increase consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1) + $2,100,000	+ 85	$10,269,000	456	To increase metal and nonmetal mine inspection frequency and annualization of increase previously granted.
(2) + 470,000	--	470,000	--	Reimbursement for space provided by GSA in accordance with P.L. 92-313.
(3) + 160,000	--	--	--	Annualization of pay increase granted in FY 1974 (E.O. 11789).
+ $2,730,000	+ 85			

COST FACTORS INVOLVED IN INCREASE

Of the $2,100,000 increase requested, $1,100,000 will provide for 75 mine inspectors and 10 support personnel for an average of 7 months at a cost of $840,000; personnel benefits, $71,000; travel, $59,000; supplies, equipment and other expenses, $130,000. The balance of $1,000,000 is to cover the annualization of salaries and costs of personnel and travel obligated under the increases previously granted.

NEED FOR INCREASE

The proposed increased funding is needed to enable MESA to strengthen and intensify metal and nonmetal enforcement programs in order to achieve a major reduction of injuries, occupational diseases, and deaths in metal and nonmetal mines.

$1,100,000 is requested to employ and train an additional 75 inspection personnel recruited in several stages during fiscal year 1975, thus increasing the inspection staff from 225 to 300 by year end. With these additions the total number of inspections would be increased from 17,500 forecast for fiscal year 1974 to 23,000 projected for fiscal year 1975. This would provide for regular inspections of each active underground mine at an average rate of 4 times a year, and for regular inspections of approximately three-fourths of all metal and nonmetal surface mining operations at least once during the year. It would also provide for the necessary spot and follow-up inspections to insure compliance with citations issued during regular inspections. In addition, the increase would provide for an expansion of the health inspection program; increased inspection frequency at those mines identified as having high injury rates or problems in standards compliance; accelerated health and safety standards development; increased inspector training; and the initiation of a job safety analysis program.

$1,000,000 is requested to meet the costs for a full year of the salaries for the personnel previously hired, plus travel costs and grade promotions, and the within-grade salary advancement required by statute.

PROGRAM OF WORK

The principal objective of the Federal Metal and Nonmetallic Mine Safety Act (P.L. 89-577) is to promote safe and healthful working conditions throughout all noncoal mines within the United States and its territories. To accomplish this objective, the Mining Enforcement and Safety Administration (MESA) has responsibility for the development and implementation of an effective inspection program for all metal and nonmetal mines to obtain compliance with promulgated health and safety standards.

The inspection program covers more than 13,000 active and an estimated 4,000 inactive mines and mills throughout the nation and involves observations and measurements of conditions and practices to determine compliance with mandatory health and safety standards. Notices of noncompliance or withdrawal orders are issued if violations of mandatory standards or imminent danger conditions are found, and follow-up spot inspections are made to determine if such violations have been corrected.

The Act requires only that each underground mine be inspected at least once annually; it does not specify the inspection frequency at surface mining operations. The inspection program to date has not resulted in the desired reduction of injuries and deaths in the metal and nonmetal mining industry. MESA believes that in order to achieve a significant lowering of injury and fatality rates, the inspection program must be expanded beyond the minimum requirements of the Act. We are now of the opinion that the minimum inspection frequency should be at least 4 inspections a year at each open pit metal mine, and one regular inspection annually of all sand and gravel operations, stone quarries, and nonmetal open pit mines. Inspection experience has shown that at least one follow-up spot inspection is needed for each regular inspection in order to achieve full compliance with citations issued for violations of health and safety standards or for imminent danger conditions noted during the regular inspection.

Thus far, nearly all health-related inspection work has been in the nature of screening to identify gross violations of mandatory standards. Fewer than 5 percent of all inspections have included dust measurements; less than half the underground inspections have included air quality measurements; and only minimal information has been obtained regarding miners' exposure to a wide variety of potential health hazards. The health inspection work will be expanded in FY 75. This expansion will constitute a significant step towards the MESA program of providing sufficient personnel for expanded health programs to eliminate the causes of diseases and physical impairments originating in the mines.

The development and promulgation of more comprehensive and effective health and safety standards will continue to be stressed. Because the preparation of good, practical standards and the revision of existing standards involves participation by a knowledgeable inspection force experienced in enforcing standards, we plan to continue utilizing the experience of our inspector force in the formulation of enforceable and appropriate health and safety standards. In order to maintain uniformity in the application of standards, work will continue on the development of guidelines and procedures to carry out the inspection program. Inspector training to keep the inspection force abreast of technologic changes in the mining industry, and to improve their effectiveness and efficiency is another important activity that will be expanded in fiscal year 1975.

As the inspection program is expanded and refined, more and more attention will be given toward identifying conditions and practices which might result in large loss of life. Those mines identified as having problems in standards compliance or which have high injury frequency rates will be inspected more frequently than others. Further, a job safety analysis program will be initiated. This program anticipates increased inspector presence at selected mines for the purpose of

32-043 O - 74 - 45

conducting special investigations and studies to detect and analyze specific problems and to develop strong counter-measures to eliminate the problems disclosed.

The Act provides that MESA may enter into agreements with the various State mine inspection agencies whereby the State agency maintains the primary responsibility for the enforcement of promulgated health and safety standards. Once a State has met certain requirements and has agreed to certain conditions, a State Plan Agreement is signed between the Department of the Interior and the State. Once this Agreement has been consummated, the role of MESA is one of monitoring the effectiveness of the State Agency's enforcement program. This is carried out through a joint Federal-State inspection program and a State report system. The State Agency must report to the Bureau on each State inspection indicating violations which are cited and conditions which have been corrected. State Plan Agreements are presently in effect with Arizona, California, Colorado, New Mexico, New York, and Utah. In these States our objective in FY 75 will be to conduct a minimum of one joint inspection (Federal and State) a year of each underground mine and each open pit metal mine, and a minimum of one joint inspection every two years of each sand and gravel, crushed stone, and open pit nonmetal mine. Follow-up spot inspections and special investigations will also be conducted.

MESA will continue to make inspections of explosives storage facilities at mines and mills on behalf of the Bureau of Alcohol, Tobacco and Firearms, Internal Revenue Service, under Part 181 of Title 26, Code of Federal Regulations. This is being done without additional compensation to MESA to prevent unnecessary duplication and overlap by Federal agencies.

MESA will also continue to make investigations of all mine-related fatal accidents, and to increase investigations of serious nonfatal accidents. The purpose of these investigations is to determine the causes and circumstances of such accidents and to institute the necessary corrective actions including development of new or revised standards designed to prevent occurrence of similar accidents in the future.

EXAMPLES OF RECENT ACCOMPLISHMENTS

Perhaps the most significant accomplishment in 1973 has been the achievement of a marked reduction in the number of fatal injuries inflicted on our underground miners. Although any fatal injury is a tragedy, and the inspectorate is striving to prevent these tragedies, a very significant decrease has been made in the number of fatal injuries suffered by the miners. In 1972, 234 men lost their lives in preventable mining accidents as compared to 165 fatalities during 11-1/2 months of 1973.

Experts in the fields of fire prevention, radiation, explosives, travelways and escapeways, man hoisting, haulage and other subjects that deal with the most hazardous of mining conditions, have been called to form standards development committees for the purpose of drafting new accident control standards and re-evaluating existing standards. These committees have expended thousands of man hours developing concise, meaningful standards, that when promulgated as regulations, will result in the conservation of life and property. Approximately 150 standards have been developed to date, and these are presently being considered for promulgation and publication in the Federal Register. Nine new mandatory standards were promulgated, 4 advisory standards were upgraded to mandatory status, and 3 advisory standards were revoked.

Four of the most important of these proposed mandatory standards, which affect the lives of mine employees, are being readied for promulgation. These vital standards provide for periodic evacuation drills, instruction in alarm signals, instruction in escape plans procedures and an accurate check-in and check-out

record system for underground mine employees. It is very significant to note that many mining operations are implementing the requirements of these 4 proposed standards which have not yet been promulgated.

The inspection program, the most important tool used in accident prevention, is rapidly expanding in numbers of mines inspected and in the quality of inspections. It is reaching its planned goal of an estimated 17,000 inspections to be made in 1973, compared to 13,000 inspections in 1972. This 45 percent increase in inspections was achieved with but a 20 percent increase in the inspector force. This represents a remarkable achievement considering that each new inspector had to receive three to four months of internal training before becoming a duly authorized inspector. During 1973, about 64,000 notices of mandatory standards violations were issued compared to 54,800 in 1972, an increase of 17 percent. The maturity of the inspectors is exemplified by the statistics relating to closure orders. Clear, unequivocal policy statements were issued in 1972 relative to fair, impartial, and uniform application of the law. As a result, the number of closure orders issued in 1973 will be approximately 1,000 compared to 210 orders issued in 1972, and only 56 orders in 1971. The inspectors are applying the standards intelligently and issuing the closure orders and notices on their own initiative, with but occasional recourse to the District Managers for guidance. Some 600 of the closure orders were issued because of conditions of imminent danger to workers in the mines. These orders had the effect of eliminating extrahazardous conditions that could have caused serious injury or death to one or more workers, or possibly multiple fatalities of disaster proportions.

A comparison of fatality statistics for the years 1973 and 1972 dramatically shows the necessity of more frequent inspections at all mines. The rise in fatalities in underground mines and mills over the past ten years has been sharply arrested, whereas fatalities in surface mines have increased drastically, almost 39 percent more in 1973 compared to 1972. The major thrust of increasing inspections of underground mines and related mills at the expense of reduced numbers of inspections at surface operations emphasizes the need for a substantial increase of qualified mine inspectors. The overall inspection program has been seriously affected because of too few inspectors to handle the workload, and inspect all mines at a rate necessary to significantly reduce the number of accidents. Fortunately, a 1.5 million dollar supplement was made available for hiring 75 additional inspection personnel. During FY 74, approximately 40 persons have been added to the staff, and the remaining 35 will be hired in the next 6 months. Incumbents in this group will be given a 6-week course of intensive training during January through April 1974 at the Mine Health and Safety Academy to expedite their qualification as duly authorized mine inspectors.

Basic procedures for monitoring and evaluating the effectiveness of States' inspection and enforcement capabilities have been developed and are undergoing improvement. Utah, in September 1973, became the sixth state to adopt a State Plan Agreement.

Enforcement of health standards was concentrated on two major health hazards, radiation and asbestos. One enforcement action resulted in a complete renovation of the dust collection system at an asbestos mill requiring an investment of about one half million dollars. Another operation with an asbestos dust hazard constructed a complete new mill utilizing a wet process to control dust.

Every underground mine was examined for radiation hazards. In addition to uranium mines, seven other mines were identified as having potential radiation problems. Most of these were readily controlled by ventilation but one large tungsten mine requested and was granted a variance to complete extensive additions to the ventilation systems.

A public symposium was held to obtain information on the toxic and mineralogical properties of talc and tremolite. The purpose of the symposium was to provide guidance and justification for health standards pertaining to talc and asbestos.

The one major obstacle to conducting complete industrial hygience inspections at an effective frequency is a lack of manpower. The same inspectors do both health and safety inspections. Because of the time required to do a complete industrial hygiene survey, we are able to do only a limited number while still maintaining the frequency of safety inspections. Therefore, most industrial hygiene work is simply a screening to identify particularly severe hazards. Additional personnel are being added to provide additional capabilities in the health program. These are technicians to perform the laboratory phases of dust weighing and instrument calibration. Additional inspectors are also being assigned to this program.

A revised management data system was put into operation. The system is now essentially free of errors and is capable of maintaining a historical record of inspection activities. It will not be a useful test for management decisions until immediate access to the information can be accomplished. Telecommunication terminals are being acquired for this purpose. State Plan inspection data is being collected by automatic data processing and this information is being returned to the State agencies for their use.

3. Education and Training: Fiscal year 1974, $7,064,000; fiscal year 1975, $5,884,000; decrease, $1,180,000. The decrease consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1) + $ 40,000	--	--	--	Annualization of pay increase granted in FY 1974 (E.O. 11789).
(2) + 280,000	--	$280,000	--	Reimbursement for space provided by GSA in accordance with P.L. 92-313.
(3) - 1,500,000	--	--	--	Amount appropriated for completion of Health and Safety Academy in Beckley, West Virginia.
- $1,180,000				

PROGRAM OF WORK

Greater emphasis will be placed on broadening the spectrum of services to: (1) assist the mining industry to meet Federal and State regulatory health and safety requirements for training of certified and qualified workers; (2) enhance MESA in-house capabilities, particularly for training new Federal Mine Inspectors, continue to upgrade the present inspection force, provide training in special safety programs for industry such as haulage safety; and (3) provide assistance to the mining industry on programs of education and training, where health and safety is the theme.

Promulgation of the Federal Coal Mine Health and Safety Act of 1969 has brought about a change in the attitude of the mining industry towards training. The need for health and safety training has been accepted and MESA is assisting the industry to provide the needed training.

Regulations are being promulgated which require men without previous mining experience to have safety training prior to working underground in coal mines. This will require additional training and training materials to be developed. An intensive training program for industry instructors will be required to make this program operational. Additional standards requiring mandatory training in underground metal mines have been promulgated. These new training requirements will eventually call for additional training personnel and supporting audio visual and training material services.

In order to respond to the need and to the many requests from industry for training assistance, MESA operates nine Education and Training Centers throughout the country. The Centers are staffed with instructors who provide the needed training when and where industry requests it. The programs offered through the Centers are primarily instruction in such areas as: Mine rescue, first aid, accident prevention, roof and rib control, haulage safety, and many others. Although relatively new, the training centers are having a significant impact and are constantly increasing their training capabilities.

In addition, Education and Training plans, develops, and disseminates health and safety training courses, course materials and training aids. These courses are designed to help qualified instructors both within the mining industry and at MESA's Training Centers to organize and present classroom training in various

health and safety subjects such as: mine ventilation, oxygen deficiency and methane detection, fighting mine fires, and safety management. To enrich and enhance course instruction and to meet specific requirements, motion picture films, television productions, and other audio-visual aids are developed.

An improved program for education and training in MESA has been established by the Federal Mine Health and Safety Academy at Beckley, West Virginia. This program includes, an 8 to 10 week indoctrination course on inspection work for newly employed Federal Mine Inspectors (this course is to be taken before the start of on-the-job training and subsequent assignment of inspection duties); refresher courses of 2 to 6 weeks duration designed to update periodically the skills and knowledge of all inspection personnel; and an intensive 12 month course of study for mine inspector trainees. The new Academy, when it's permanent facilities are completed, will also be able to accommodate a sizeable number of mining industry workers.

As the need for training intensifies, MESA will continue to coordinate and cooperate with State and Federal agencies and private organizations to accomplish the desired objective. Experimental programs for the upgrading of mine employees, or for the pre-employment training of prospective miners where health and safety is tied closely to skills development, are being conducted through a Federal Inter-agency Funding Agreement with the Department of Labor, and the Department of Health, Education, and Welfare. Cooperative training efforts with Labor, HEW, and the State of Arizona are being initiated to conduct a comprehensive training program for the Papago Indians in mining and related fields. The proposed construction and use of a simulated mine for training purposes, the investigation of the cultural and behavioral factors involved in mine health and safety education and training, and closer ties with State organizations are characteristic of the new and total effort of MESA to eliminate mine accidents and health hazards.

Education and Training is carried out as an integrated program serving both the coal and metal and nonmetal mining industries. It is estimated that the program costs are divided as follows: Coal $4,295,000; and metal and nonmetal, $1,589,000.

EXAMPLES OF RECENT ACCOMPLISHMENTS

To help meet meet the requirements for health and safety training of miners, as specified by the Federal Metal and Nonmetallic Mine Safety Act of 1966 and the Federal Coal Mine Health and Safety Act of 1969, personnel of the nine MESA training centers presented courses in such key subjects as first aid, accident prevention, roof control, electricity, and mine rescue to almost 75,000 coal miners and 15,000 noncoal miners. These figures represent increases of 25 and 50 percent respectively over those of the previous year. In this training, considerable emphasis was placed on the training and certification of industry instructors with a resultant doubling of the number of cooperative industry instructors. These certified cooperative instructors in turn trained 165,000 coal miners and 32,000 noncoal miners with the increases over the previous year being respectively 135 and 165 percent approximately.

Coinciding with the increased training effort among coal miners was a significant decrease in fatalities in coal mines from 260 in 1970, to 181 in 1971, and to 156 in 1972, with a corresponding drop in the fatal injury frequency rate per million man hours from 1.00 in 1970, to 0.72 in 1971 and to 0.56 in 1972. Fatalities in metal mines on the other hand rose from 56 in 1971 to 135 in 1972 as a result of the Sunshine Mine disaster.

Much of the increased training effort among metal miners occurred after the disaster and was concentrated in areas designed to reduce loss of life in the

event of fires in underground mines. In one limited area where a concentrated training program was carried out after training needs were identified from the analysis of accident data, a significant reduction in accident rates followed.

The training centers are staffed with 80 full-time instructors who can offer over 90 courses. To support the training program new courses were developed to provide job safety guides for six specific tasks, and the appropriate text books, manuals, and audio-visual aids were produced. Two motion picture films, one on noise hazards in underground coal mines and one on ventilation in metal and nonmetal mines, together with a series of seven films on first aid fundamentals, were completed. During 1973 MESA safety films were shown over 7,000 times to over 200,000 attendees. Moreover, MESA health and safety films shown on T.V. were viewed by an estimated 70 million people.

The Federal Mine Health and Safety Academy in Beckley, West Virginia, was opened in 1971 to train selected government and industry personnel to be professional mine health and safety experts. Toward this goal the Academy has offered a one year program for inspector trainees, a ten-week course for newly hired coal mine inspectors, a short retraining course for coal mine inspectors, and specialized short courses for industry personnel.

The first class of inspector trainees numbered 52. Of these, 26 were graduated in August 1972 and 19 in February 1973. In the past year 88 new coal mine inspectors took the 10-week course, 17 inspectors took a retraining course in electricity, and 44 industry personnel were trained in electricity. In addition, course material for the inspector trainee program was revised and updated in the areas of electricity, ventilation, roof control, mining methods, haulage and transportation.

Working drawings and specifications for permanent quarters for the Academy were completed. Site clearing and preparation work was also completed and a contract awarded for construction of the group of five contiguous buildings, which includes the dormitory wing, the administrative and support services core building, the academic wing with laboratories, the heavy equipment shop-laboratory, and the gymnasium.

Another approach to promoting health and safety in mining is furnished by the Holmes Safety Association, which consists of a National Council, State councils, district counsels, and local chapters. The objectives of the Association are to prevent fatalities and injuries and to improve health and safety among officials and employees in all phases of the mineral industries.

A major effort was made to expand the Association's activities among metal and nonmetal miners with the establishment of 55 new chapters. The Association also continued active work among coal miners, particularly by the introduction of safety notes based on fatal injury reports, and short safety talks on such topics as the law, safety regulations, etc., which were sent to mine foremen each month. The cooperative effort begun several years ago with the Department of Labor and the Department of Health, Education, and Welfare to utilize resources of the Manpower Development and Training Act program for pre-employment miner entry training programs continues. Special emphasis is being placed on the design and conduct of such programs in entry level training for new operations being developed on Indian lands for both open pit and underground mining and aimed at the development and employment of Indians.

In addition, programs to upgrade mine workers in mine supervision, electricity, mine rescue, machine maintenance and operation, etc., is being continued, and a program for improving communication for Federal Mine Inspectors has been included. Greater emphasis is being placed in coordination and promulgation of pre-employment training programs through state and local resources under Special Revenue Sharing guidelines. In all cases, mine health and safety is stressed.

4. Technical Support: Fiscal Year 1974, $7,588,000; fiscal year 1975, $9,144,000; increase $1,556,000. The increase consists of:

	Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1)	+ $ 750,000	45	$8,429,000	300	Additional personnel for solving technical and engineering problems and equipment testing.
(2)	+ 485,000	--	485,000	--	To provide for short term investigations and technical development not included in H & S research program conducted by Bureau of Mines.
(3)	+ 230,000	--	230,000	--	Reimbursement for space provided in accordance with P.L. 92-313.
(4)	+ 91,000	--	--	--	Annualization of pay increase granted in FY 1974 (E.O. 11789).
	+ $1,556,000	45			

COST FACTORS INVOLVED IN INCREASE

(1) 45 professional and support personnel, $472,000 (approximately 70 percent of the annual salary load reduced on the basis of estimated hiring lag); personnel benefits, $40,000; travel, $54,000; supplies, equipment, and other expenses, $184,000.

(2) Contractual services, $485,000.

NEED FOR INCREASE

(1) The degree and multitude of problems in Metal and Nonmetal Mine Health and Safety has caused technical assistance in this area to be little more than a "brushfire" approach, with minor impact for any significant improvements. Personnel increases will enable technical assistance to have a significant impact on Health and Safety. This will also provide for a closer coordination with the enforcement of standards and regulations in the areas of ground control, ventilation, industrial safety and industrial hygiene.

Mine waste and tailings embankments are an extremely critical problem area, a fact which has been confirmed by failures in New Mexico and Arizona. Present technical capability is grossly inadequate. Expanded engineering capability will permit the development of improved standards for embankment design and construction and onsite evaluation of critical embankments near populated areas. An excessively high incidence of serious injuries involving machinery can be expected to continue for as long as adequate technical and engineering criteria are lacking. An increase in accident analysis and technical assistance in this area will enable MESA to meet its responsibilities.

(2) Technical Support personnel, in its field work, often encounters unexpected problems requiring "quick fix" solutions that do not lend themselves to the timing of the normal budget cycle. With a relatively small level of funding such problems or solutions could be examined and dealt within a short time frame and thus provide an opportunity to conclude contractual arrangements for remedying health and safety problems expeditiously.

PROGRAM OF WORK

Technical Support serves in a technical advisory role to the Mining Enforcement and Safety Administration, the Department of the Interior, other Government agencies, and Congress in their responsibilities in making enforcement, management or statutory decisions. In addition to its technical advisory role, Technical Support provides engineering consulting services on related health and safety problems and where the problems are complex, technical investigations are conducted, followed by recommendations for corrective measures. Another important function of Technical Support is the collection and dissemination of accident data and the conduct of special studies on representative mine operations to identify specific hazards requiring greater attention and subsequent elimination.

In conjunction with the above effort, Technical Support also has the responsibility of reviewing existing mandatory health and safety standards and making recommendations for their improvement. A related function is the continuing evaluation and recommendation of standards and the testing and approval of equipment and materials meeting the standards for safe operation or use underground.

Technical Support has the important responsibility to assist in rescue operations at a mine site in the event of a disaster. Systems developed for post-disaster rescues are updated, maintained, and serviced in ready condition for immediate deployment through contracts with private firms. The overall direction of an emergency rescue operation is the responsibility of permanently assigned Technical Support personnel.

Technical Support is carried out as an integrated program serving both the coal and metal and nonmetal mining industries. It is estimated that the program costs are divided as follows: coal, $6,440,000; and metal and nonmetal, $2,704,000.

EXAMPLES OF RECENT ACCOMPLISHMENTS

Technical Support has continued to provide assistance on critical engineering problems affecting the health and safety of miners, including ventilation, roof and ground control, coal waste embankment stability, dust collection or abatement, and other related health and safety practices, techniques and equipment.

Since the coal waste embankment failure in West Virginia in February 1972, which caused the Buffalo Creek disaster, Technical Support has conducted a vigorous program to assure the safety of all similar embankments in the country. In the summer of 1972, an emergency investigation of about 140 sites was conducted and recommendations were made on sites considered as potentially hazardous. Because of the constantly changing conditions as embankment constructions continued, all significant sites have been evaluated on a continuous basis. Largely through contract support and the assistance of Bureau of Reclamation engineers, between 200 and 300 sites in the Appalachian area have been under this evaluation process since the initial emergency investigation in 1972.

In the meantime, to lay an important foundation for the development of coal waste embankment technology in order to solve the long-term problem of embankment design and construction, a detailed engineering analysis was conducted by contract

on the embankment failure in West Virginia. The report of this engineering study was released in early 1973. Several other major in-house and contract studies have also been initiated, all aimed at developing rational guidelines and criteria by which coal waste embankments can be designed, constructed, maintained, inspected, and evaluated on a systematic and engineering basis. As of early 1974, reports on these studies were under various stages of review and completion and scheduled for release during the year. A significant part of Technical Support's work of evaluating coal waste embankments and basic engineering studies was made possible by a special Congressional funding of $1 million in FY 1973.

As a result of an extensive evaluation program, resin-grouted bolts have been accepted by the coal industry and their use has been incorporated in approved roof control plans. Other significant achievements in the area of protecting against roof falls include improvements in roof bolt installation practices and the development of improved instrumentation to determine degree of anchorage and increased bolt load. A total of 140 field investigations were completed and 50 roof bolt and plate assemblies were evaluated in 1973 to determine their applicability for use in underground mines.

Regulations for the installation of cabs and canopies on underground equipment became effective in 1973. About 200 protective designs were investigated or tested during the year to determine their conformance to the specifications required.

Technical Support conducted or participated in over 250 field surveys in other areas of technical responsibility for the control of health and safety hazards in underground and surface coal, metal and nonmetallic mines. An outstanding example of these activities was related to a mine fire. The implementation of recommended techniques of utilizing ventilation pressure equalization in conjunction with effective sealants resulted in the confinement of this uncontrolled fire within a week.

In the laboratories, over 480,000 respirable coal mine dust samples were processed in 1973 to provide information for enforcement of the mandatory respirable dust standard. Analyses for specific components were also conducted on approximately 1,000 dust, 600 gas, and 160 industrial hygiene samples during the year.

A thorough review of brake performance on mobile equipment resulted in the development of criteria for testing brakes on new equipment at the factory as well as for systems installed on machinery at the mines.

Standards and regulations were either written or in the process of preparation for the use of diesel-powered equipment in underground coal mines, for illumination in working places, for approving material for use in underground mines, and for respirators.

The operation of a new coal mine accident and injury reporting system, implemented in early 1972, has begun to play an important role in MESA's effort to improve the safety record of the coal industry. Injury reports have been generated on a mine-by-mine basis and in a time frame that allows the enforcement and education and training organizations to direct greater efforts to accident prone mines. Reductions in accidents and injuries in some mines have apparently resulted from these increased efforts.

As part of Technical Support's accident analysis activities, special studies were conducted in electrical hazards, underground auger mining, roof bolting accidents, prediction of roof fall hazards, and front-end loader accidents. Reports on these studies were under review at year end.

5. Program Administration: Fiscal year 1974, $1,389,000; fiscal year 1975, $1,516,000: increase, $127,000. The increase consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1) $+28,000	--	$330,000	--	To reimburse the Employee Compensation Fund
+80,000	--	--	--	Reimbursement for space provided by GSA in accordance with P.L. 92-313
+19,000	--	--	--	Annualization of pay increase granted in FY 1974 (E.O. 11789)
+127,000				

NEED FOR INCREASE

Employee compensation payments--The increase of $28,000 is due, in part, to the higher salary levels which form the basis for compensation, cost-of-living increases, and the increased cost for medical care. In addition, new claims for compensation and long-term disability and death cases have increased.

PROGRAM OF WORK

General administration--The sum of $1,186,000 is requested to provide for the Office of the Administrator and the key administrative staff that support the general administrative functions. The balance of the cost for administrative functions is charged to program funds.

The Office of the Administrator provides executive direction in carrying out mine health and safety programs designed to control health hazards and to reduce fatalities and injuries in the mineral industries.

The general administrative functions include the development, presentation, and execution of budgets; administration of equal opportunity under civil rights laws and Executive Orders; planning, coordinating, and evaluating the Bureau's financial management program; maintaining payroll, retirement, and leave records; maintaining accounts for control of funds and recording assets, liabilities, and income and expenses, preparing financial reports; recruiting, training, placing, classifying, and servicing employees; management of ADP systems and programs; organization and staffing management; files, mail, and communication services; contracting for supplies, equipment, construction, research and development, grants, and other services; and recording, utilization, maintenance and disposal of Government property.

Costs of general administration are met from the Program Administration activity and from assessments against the four other activities. A breakdown of the source of funding is as follows:

	Amount Available 1974	Estimate 1975	Increase
Program Administration.....	$1,087,000	$1,186,000	$99,000
Other Administrative Funding:			
Coal mine health and safety inspections.....	760,000	790,000	30,000
Metal and nonmetal mine inspections.....	170,000	210,000	40,000
Education and training.....	120,000	120,000	--
Technical support.....	160,000	180,000	20,000
Total, administrative funding.....	2,297,000	2,486,000	189,000

Employee compensation payments--The $330,000 is to provide funds to reimburse the Employee Compensation Fund for payments made because of injury or death of employees under the jurisdiction of the Bureau of Mines, as required by Section 209 of Public Law 86-767.

PERSONNEL SUMMARY

	Actual 1973	Estimate 1974	Estimate 1975
Total number of permanent positions	2,493	2,865	2,995
Full-time equivalent of other positions	51	70	70
Average paid employment	2,444	2,750	2,980
Average GS grade	9.4	9.3	9.3
Average GS salary	$14,289	$14,048	$14,198
Average salary of ungraded positions	$9,943	$10,440	$10,960

ITEMIZATION OF ESTIMATE
(in thousands of dollars)

Department of the Interior
Appropriation Title: Salaries and Expenses

Mining Enforcement and Safety Administration

	Actual 1973	Estimate 1974	Estimate 1975	Increase (+) or Decrease (-)
Program and Financing				
Total direct obligations	$51,417	$58,213	$68,146	+ $ 9,933
Total obligations, General Services Administration	84	14,416	--	- 14,416
Unobligated balance, start of year	--	- 12,916	--	+ 12,916
Unobligated balance, end of year	12,916	--	--	--
Unobligated balance lapsing	303	--	--	--
Budget authority	64,720	59,713	68,146	+ 8,433
Budget authority				
Appropriation	64,623	56,494	68,146	+ 11,652
Transferred to other accounts	- 587	- 327	--	+ 327
Transferred from other accounts	684	--	--	--
Appropriation (adjusted)	64,720	56,167	68,146	+ 11,979
Proposed supplemental for wageboard increases	--	30	--	- 30
Proposed supplemental for pay act increases	--	3,516	--	- 3,516

	Actual 1973	Estimate 1974	Estimate 1975	Increase (+) or Decrease (-)
Direct Obligations by Objects:				
11 Personnel compensation	$35,356	$41,013	$45,327	+ $4,314
12 Personnel benefits	3,193	3,475	3,751	+ 276
21 Travel and transportation of persons	2,887	3,408	3,863	+ 455
22 Transportation of things	781	875	995	+ 120
23 Rent, communications, and utilites	1,673	1,580	4,513	+ 2,933
24 Printing and reproduction	248	279	284	+ 5
25 Other services	2,907	3,266	4,518	+ 1,252
26 Supplies and materials	951	1,070	1,312	+ 242
31 Equipment	1,738	2,046	2,382	+ 336
32 Lands and structures	174	195	195	--
41 Grants, subsidies, and contributions	1,502	1,000	1,000	--
42 Insurance claims and indemnities	6	6	6	--
Adjusted for rounding	1	--	--	--
Total direct obligations	51,417	58,213	68,146	+ 9,933
ALLOCATION TO GENERAL SERVICES ADMINISTRATION				
21 Travel and transportation of persons	--	4	--	- 4
24 Printing and reproduction	--	8	--	- 8
25 Other services	84	188	--	- 188
32 Land and structures	--	14,216	--	- 14,216
Total obligations, General Services Administration	84	14,416	--	- 14,416
Total obligations	51,501	72,629	68,146	- 4,483

MINING ENFORCEMENT AND SAFETY ADMINISTRATION

Explanation of Administrative Provisions

Certificates and Trophies. It is essential to promote active mineral industry interest and participation to achieve health and safety objectives within the mineral industries. Certificates and trophies serve as an inducement towards these ends. They are used to award special achievement by individuals, industries, organizations, and associations for participating in activities such as mine rescue and first aid contests and for outstanding reductions in injury and fatality records.

Contributions. Various mineral industry organizations and associations have expressed interest in MESA's health and safety activities and are at times willing to contribute funds, experienced personnel, special equipment, etc., towards accomplishing MESA's objectives for making the industry a healthy, safe place of employment. MESA encourages cooperation with industry whenever possible and authorization to accept such contributions is a distinct aid in furthering such cooperation.

Cooperative Programs. Federal and State agencies, industries, and associations have demonstrated interest in cooperatively funded education and training programs to promote health and safety in the mining community. Authority to conduct such health and safety education and training programs provides the opportunity to augment MESA efforts in this area.

Mine Rescue and Survival Operations. MESA is responsible for providing manpower, expertise, and specialized equipment in assisting rescue operations at mine sites in the event of a major disaster. Appropriate MESA program funds have been used in the past to cover costs associated with such disasters. This administrative provision provides authority for the Department to authorize use of other funds in the event that disaster costs exceed MESA's funding capacity.

OBLIGATIONS INCURRED BY THE MINING ENFORCEMENT AND SAFETY ADMINISTRATION
BY ACTIVITY AND SOURCE OF FUNDS, FISCAL YEARS 1973, 1974, AND 1975

	1973	1974	1975
COAL MINE HEALTH AND SAFETY INSPECTIONS:			
MESA Appropriation	$32,039,421	$35,663,000	$40,863,000
Reimbursements	6,181	10,000	10,000
Department of Labor	13,021	--	--
Total	$32,058,623	$35,673,000	$40,873,000
METAL AND NONMETAL MINE HEALTH AND SAFETY INSPECTIONS:			
MESA Appropriation	$6,095,520	$8,009,000	$10,739,000
EDUCATION AND TRAINING:			
MESA Appropriation	$5,275,807	$19,980,000	$5,884,000
Department of Health, Education, and Welfare	162,000	170,000	170,000
Total	$5,437,807	$20,150,000	$6,054,000
TECHNICAL SUPPORT:			
MESA Appropriation	$6,866,424	$7,588,000	$9,144,000
Department of the Navy	25,234	25,000	25,000
Total	$6,891,658	$7,613,000	$9,169,000
PROGRAM ADMINISTRATION:			
MESA Appropriation	$1,223,919	$1,389,000	$1,516,000
Department of the Interior	8,000	5,000	5,000
Total	$1,231,919	$1,394,000	$1,521,000

	1973	1974	1975
SUMMARY:			
MESA Appropriation	$51,501,091	$72,629,000	$68,146,000
Reimbursements	6,181	10,000	10,000
Other Agencies	208,255	200,000	200,000
Total	$51,715,527	$72,839,000	$68,356,000

32-043 O - 74 - 46

COAL MINE INSPECTIONS

Mrs. HANSEN. You are requesting an additional $5.2 million for coal mine inspections, for a total program of $49,863,000. What important changes have been made in your rules and regulations in the past year that would indicate the need for this increase?

Mr. DAY. Actually we first appeared here on a supplemental appropriation because of our assessment program. I think by far this has been the reason for the greatest increase. As you are aware, about a year ago the Department lost a suit, the famous Nicoa Morton suit, the suit that threw out our assessment program.

Recently this has been reversed by the court of appeals and the old assessments were valid. However, we feel that the procedures that we started in order to correct this thing are good procedures.

In fact we thought of many improvements to make the assessment system by itself a lot fairer to the operator. We feel that if a man is going to be penalized and be given a dollar amount he should have some inkling of why he is paying x number of dollars, and under the formula system he knows why we are assessing this particular amount, because it actually lists the formula plus the weights we give in each of the six statutory criteria so if he does want to object to it he may.

However, he has a good idea why. But what this did to us, this particular system, was require that we get better information from the mine inspectors, that the mine inspectors do a better job in writing a violation.

These violations, involving thousands of standards, just can't be checked off by blocks on a report form. You have to be able to summarize what the problem is, the reason for the violation, the seriousness, the gravity, whether there was negligence, whether the operator exercised any good faith in attempting to comply. This takes time.

As a result the number of violations issued dropped down for a short period and this was the reason. It was taking time to do this thing.

Frankly, it may even take more time. We feel this is an extremely important part of the enforcement procedure. It is not enough for a man to issue a notice of violation. We have to make it stick in a hearing or in court, and we do have to go to court, and this means he has to take notes, write a better summary, and be prepared to testify.

This takes manpower. On top of this, we had to almost double the number of our assessment officers in this particular field. With the supplemental appropriation that you granted I believe we had an increase of 30 or 40-some odd positions in the assessment office. I think we have filled all but seven or eight already.

The backlog that we had last year was around 60 to 66 thousand cases. The backlog now is down slightly below 40,000 and it will be eliminated by June 30. With the new system it is just going to take a little longer than originally anticipated.

Mr. MCKAY. Are these court cases that are pending, or just violations where you haven't been paid off?

ASSESSMENT BACKLOG

Mr. DAY. They are administrative hearings. We have a backlog right now of 40,000 that have not been assessed if that is what you are referring to.

Mr. McKay. How many do you have where the violation or fine is such a level that it doesn't warrant protesting it but they just go pay it and get it out of the way. Do you have a record of what that is?

Mr. Day. Unfortunately, not enough of them, Congressman.

Mr. McKay. They are all protested?

Mr. Day. The vast majority are protested and one of the reasons we are trying to turn out a better assessment is so they won't protest as many; they will understand it. When the assessment system first came about they received an amount, $50. "Pay it. That is the assessment."

They had no idea how Interior arrived at it. We are trying to explain to them how we arrived at it. On top of that we are going to put assessment officers in the field where, if you do have a complaint about our particular formula and feel that we made a mistake you as an operator will be able to go to that compliance officer and say, "Wait a minute. Ten men were not involved in this particular danger. It was only five. Therefore, I should have only two points against me," and items like this and they will be able to argue that.

The assessment officer there is to check the record and determine if we did make an error. I think we solve a lot that way. We must get to more formal adjudication because we are going to assess 80,000 to 85,000 violations this year and this involves a lot of people and a lot of paperwork, so we have to be fair and we have to be efficient.

In fact we have moved our entire assessment procedure to the field so it is closer to the assessors, so the assessment people can check the assessment with the inspector who gave the notice of violation, so the operator will be able to come in and challenge it informally and if he doesn't like it, doesn't get satisfaction, then he can have his hearing.

ASSESSMENT AND INSPECTION INCREASES

Mrs. Hansen. You are requesting an increase of $3,220,000 for "annualization of increases previously granted."

How much of this is for your assessment activity and how much is for actual inspection?

Mr. Day. You are asking how much is for assessment?

Mrs. Hansen. Yes, and how much for inspection.

Mr. Day. Out of those 263 positions I believe 43 were for assessment, so therefore 220 would be for inspectors and technicians and clerical support for the inspectors.

Mrs. Hansen. You have given us the current status of your assessment program and you say you will be on schedule by June 30?

Mr. Day. We are operating in accordance with our schedule that we set out several months ago and we feel that the normal operation will involve approximately a 3,500 violation backlog around the country.

In other words, you just can't maintain a zero balance all the time. You have to have work for your people constantly, and when we started out back in August it was 66,000. We are meeting our schedule. In fact we are approximately 3,000 ahead of schedule at this time.

INCREASED NUMBER OF INSPECTIONS

Mrs. HANSEN. You note an increase in total inspections from 89,000 to 94,000. How much of this is attributable to new mines being opened and how much to an increased inspection effort at present mines?

Mr. DAY. I think the vast majority is increased number of inspections that we are making and not the opening of new mines. I don't think that really had an effect on us yet. However, we can foresee this in the near future with the energy crisis and the need for more mines to be opened up.

Mrs. HANSEN. Do your new mines opening have a better safety record or do they open in such a way that there could be a better safety record?

Mr. DAY. Mr. Crawford.

Mr. CRAWFORD. They can be opened so they can have a better safety record without question, particularly from a disaster-type standpoint, better ventilation systems, better haulage systems, in these new mines.

Mr. SCHLICK. A new mine going into operation has to have all the plans, ventilation plans and so forth, approved before they operate. When the law was passed we were given this fiat to apply to the total coal mining industry of our country.

Mrs. HANSEN. Does your proposed 1975 budget provide you with an adequate capability to completely enforce the Coal Mine Health and Safety Act of 1969?

Mr. DAY. Unequivocally, yes.

METAL AND NONMETALLIC MINE INSPECTION

Mrs. HANSEN. You are requesting an increase of $2,730,000 for metal and nonmetallic mine inspection for a total program of $10,739,000. Please highlight some of the important differences between your coal and noncoal inspection and enforcement programs.

Mr. DAY. Mr. Nelson, would you like to briefly discuss your coal operation?

Mr. NELSON. The magnitude of the programs is one of the greatest differences, and, of course, the nature of the acts, too, is quite different. We do not have some of the features that the Coal Mine Act has in the Metal and Nonmetallic Mine Act. We have no standards that are part of the act. We do not have the penalty clauses of the same nature that coal has. There are a number of differences in the acts.

But in the magnitude of the program we have somewhere between 13,000 and 14,000 actual mines falling into the metal and nonmetallic mine category. As of the end of February we had 149 inspectors. This number, as authorized, will be up to the 225 level by the end of this fiscal year.

So there is just no way that we can be in the mines enough to take over management's responsibility for the safe conduct of the programs for the safety of the workers or to supervise the workers themselves.

Our main effort, in addition to enforcing our health and safety standards, will be to work with management and with the unions and other worker organizations to motivate them to work safely—get them to generate an attitude that will result in working safely.

Mr. McKAY. What is the safety record, Madam Chairman, if you will yield, compared to coal in noncoal areas?

Mr. DAY. If you want to compare statistics, I think the disabling injury rate in coal this past year was 40.42 million man-hours and in metal and nonmetal it was 22.58. It was a safer record, but there are a number of other problems we do have with this act and, yes, it is a lot different.

The act is a little skimpy. It doesn't have the meat that the Coal Act does. For instance, part of the activities of the inspectors in metal and nonmetal are trying to locate so many of these sand and gravel pits and rock quarries around the country before we can inspect them. Under coal, we know where they are immediately. There are permits required. The day they open we can be there. The way these sand gravel pits and stone quarries operate, often we don't know where they are.

If we did find out and we go there the wrong week or the wrong month, they are not there. This is another problem we face in the field.

Mrs. HANSEN. Contractors are continually moving their locations.

Mr. DAY. This is another reason. If you are building a highway you could probably open up three and four gravel pits without us knowing it.

Mr. McKAY. But then you have not just the gravel pits and those movable contractor types; you also have some deep mines, some lead, and zinc, and silver, and those kinds that aren't moving around. How does their accident rate compare with the coal mines, which would be on a comparable basis, different from the gravel pits and so on? Do you have any figures to show that?

Mr. DAY. This is the figure I am quoting you.

Mrs. HANSEN. But that included gravel pits.

Mr. DAY. Yes.

Mr. McKAY. Which would tend to wash down your figures to a better figure in the noncoal.

Mr. DAY. What we are trying to do is, we are attempting to adopt the standards set forth in the Coal Act itself and for all underground mines inspect them at least four times a year. The act only requires once, but we are going to attempt, with this increase in inspectors, to do it four times a year, and we feel this would help. We don't have enough inspectors to go to a daily inspection, and some mines probably deserve a daily inspection because they have a poor record, such as we have done in coal mining to reduce the number of disabling injuries.

Mr. McKAY. You have a tough act for coal mines but apparently you are a little loose on the other.

Mr. DAY. That is correct.

Mr. McKAY. Yet you have a lower accident rate, if it appears comparable, in the other mines, and why should it be that much or isn't it? Are we just deceived by the figures?

Mr. DAY. I think the underground metal mines run about the same as coal.

Mr. McKay. It is about a comparable figure?
Mr. Day. About 40 to 45.
Mr. McKay. Even without the mine safety act; is that right?

INCOMPLETE STATISTICS FOR METAL AND NONMETAL MINES

Mr. Day. Going to surface mines, 1972, with 18.9, so the surface mines actually brought it down. However, this figure, too, may be misleading because there is no penalty provisions for noncompliance with mandatory reporting system under this act. We can't force these people.

What we do is beg and cajole, and everything else to report their disabling injuries and their man-hours. So all we are giving you here is about 70 percent or 60 percent of the industries' figures. We can't even make them report under the act.

Under the Department's bill that we will be sending to you I hope in the very near future, we will have this authority to penalize them if they don't report, but we are also giving you these statistics that we don't know what some of them are doing.

Mr. Nelson. We do have definite reporting on fatalities. On nonfatal disabling injuries, the reporting has been sketchy.

Mr. McKay. Do you know where the present mines are, underground mines? That is aside from gravel pits and so on.

Mr. Day. Oh, yes, we have a good knowledge of that.

Mr. McKay. So you have figures on that?

Mr. Day. That is correct, although we are running into a few problems right now because of the energy crisis and the price of gold. Last year there were two fatalities in an abandoned mine, where two young men were looking for gold in a gold mine. They were not operating the mine. We just had one last month in Arizona in another abandoned gold mine involving people supposedly with mining experience. I don't think they were experts in mining. They started to rework a mine and there was a fatality. We didn't know about the mine being reopened until after the fatality. But, on your regular operating underground mines, we have a good handle on that and the industry does cooperate.

Mr. McKay. I guess what it comes down to is, if we are getting about the same fatality and disabling injury rate in the underground mines as you are in coal, where you don't have the severe penalties, what good is the law that we have with the coal mines that we are reducing the rate?

Mr. Day. In reporting in the Coal Act, so we are getting a much better figure in the Coal Act than we are in the Metal and Nonmetal Act.

DIFFERENCE IN COAL AND METAL AND NONMETAL MINES

Besides, in my opinion there is all the difference in the world in the two different types of mining. You don't have all the dust problems and you don't have methane gas and things like that as in all your coal mines. Coal mining is a lot different and a lot more hazardous than most metal and nonmetal mines.

Metal and nonmetal mining is altogether different, depending on your area, or what you are mining. It could be a shallow mine, could be an extremely deep mine, all types of variables, but as a general rule

I think you would have to say that coal mining is a little more hazardous because of the day-to-day conditions that exist.

Mrs. HANSEN. How will your 1975 budget proposal address the problem of increasing deaths and accidents to surface noncoal miners, and are the budget resources you have requested adequate to do the job?

FRONT-END LOADER ACCIDENTS

Mr. DAY. Yes. Part of our inspection program as far as metal and nonmetal is concerned is to increase our capabilities at the surface operation, especially sand and gravel, and the quarries. On top of that we have found out that one of the greatest killers in surface operations is the front-end loader.

Mr. Nelson, working with education and training, has recently devised an accident prevention training program on this vehicle alone. It is a 6-hour course and we have a team that starts out, I believe next month, around the 8th, all over the country that will be giving this course to all the safety committee men, safety coordinators, the various companies and the unions involved, mainly the United Steel Workers of America and the Operating Engineers, in an attempt to make them aware of the dangers of this vehicle. On top of that we will be requiring, by standards this year, rollover protection and falling objects protection which we feel will help a great deal.

Mr. MCKAY. On the front-end loader, is this a toppling or tipping over or what causes the fatalities in the front-end loading?

Mr. DAY. Mr. Nelson, would you like to discuss that. It is your program.

Mr. NELSON. There are a number of things. What you mentioned is one of them. The loaders are out of balance, particularly when loaded and the load is raised. At other times the operators have control of the loaders and they hit something as they are moving.

Mr. MCKAY. For instance?

Mr. NELSON. For instance, some loader accidents have been caused by improper maintenance. Others occurred while maintenance work was being performed on them; the loader moved when the bucket was propped in a raised position and it came down and hit people. So there is a whole variety of causes, but I think the main one is the one that you mentioned, the instability, the lack of balance, when it is loaded and moving.

Mr. EVANS. Would the gentleman yield there? What do you do about that in the regulations? What does the regulation say?

Mr. NELSON. What we are going to shoot for in our regulations is to have rollover protection. We are working with the manufacturer, too, to see if there isn't some way to overcome the engineering, the design problem.

Mr. SCHLICK. Another problem with the front-end loader, so our health and safety people in Denver tell us, is in essence the people are using it wrong sometimes. Any time you use a piece of equipment wrong then you are more liable to fatality and injuries.

For instance, a front-end loader is supposed to dig up dirt and move it. It is not supposed to be raised with some chap standing on top of it to fix a wire or something. We find out that quite often the front-end loader is not used for what it is designed for but for something else

that is convenient, just like you and I using the screwdriver the wrong way. That is the first step of an accident.

So the education and training program we are featuring deals strictly with using the front-end loader for what it is designed to do and I think this is working out.

Mr. McKay. That gets into some problems, too. American ingenuity is pretty hard to curb and with rules and regulations to get the job done, I have had some complaints around here from building contractors, aside from the mining, where they complain, "Look, by the time I get all the equipment you require that is specialized to get up here to put the eave on that roof I have spent twice the price of the roof to get all that equipment to be sure it is the specified kind. In the meantime I can run this front-end loader up there without any trouble and I am long gone."

Mr. Schlick. On the other hand, if you know now that the front-end loader is a very dangerous piece of equipment and you know most fatalities happen from improper use maybe you will treat it with a little more respect than you would if you didn't know, and that is the essence of our training program.

Mr. McKay. No argument there.

Mr. Day. And another thing, the groups that we are trying to reach are the operators, the various unions, the operating engineers, and we are trying to encourage them, "If it is an unsafe practice, don't operate it. You don't have to commit an unsafe act to keep your job." The unions will support their workers. I think we are getting excellent cooperation in this field.

STATE AGREEMENTS

Mrs. Hansen. You note that you have State agreements with six States. Do you anticipate that additional States will enter such agreements in the near future?

Mr. Day. I believe it was 3 weeks ago I signed a seventh agreement with the State of Virginia. How many do you have in the works right now in the metal that will come about this fiscal year?

Mr. Nelson. I don't believe any more of them are going to make it this fiscal year.

Mr. Day. We don't know how much interest there really is on the part of the States and there are an awful lot of them, I think, since the "Sunshine" disaster, who don't want the responsibility. In talking to a number of States I have run across that.

Mrs. Hansen. What major changes in your rules and regulations for this program have been made in the last year?

Mr. Day. For the State plan?

Mrs. Hansen. Yes.

Mr. Day. There have been no changes as far as State plans.

REVIEW OF STANDARDS ON METAL AND NONMETAL MINES

Mrs. Hansen. What change have you made in your regulations in regard to metal and nonmetal mines?

Mr. Day. Art, would you like to speak to that?

Mr. Nelson. Yes.

Since the Sunshine mine fire we have made a tremendous effort in reviewing our standards, promulgating some new ones, modifying some. There were a number of standards that the Secretary announced in his initiatives following the Sunshine mine fire. They will soon all have been promulgated.

The last four, the ones that were protested and had to go to public hearings, are finally all cleared and will be promulgated within a week or two.

Mr. DAY. I think one of the big steps we are beginning to take that Mr. Nelson's staff is working on was a pet peeve or project of mine in that there were approximately 317 advisory standards on the books. In my opinion if a standard is worth being advisory it is worth enforcing as mandatory, so we are reviewing all the advisory standards and will recommend in the very near future they be made mandatory. This is a big project. We are also working on other standards which we feel are extremely difficult to enforce and interpret and hope to have them out in the near future, such as the requirement for secondary escapeways.

I felt that a lot of interpretations of the standard for secondary escape-ways have been inadequate in the past and we are just trying to improve it. We feel this is an extremely important thing, not for day-to-day accidents, but in the case of a disaster.

Fortunately, we don't have too many disasters in mining, but when we do, they generally involve an awful lot of men being killed and one of the prime reasons is the inability of workers to escape from a mine, and so we have to work on that standard to make it feasible.

Mrs. HANSEN. Wasn't that one of your problems at Sunshine?

Mr. DAY. That was one of the problems. There was one adequate hoist-serviced escape-way, the No. 10 shaft, and unfortunately that became contaminated with CO and most of the men stood in the precise spot they shouldn't have been standing in. That was the most heavily contaminated area.

Mrs. HANSEN. Had you had an inspection of the Sunshine Mine close to the time that the disaster occurred?

Mr. DAY. I believe there was an inspection.

Mr. NELSON. There was a complete mine inspection in November 1971.

Mr. DAY. November and then a followup spot inspection to check for abatement of violations on January 12 and March 22, 1972. But the prime cause of deaths in that particular disaster was all men died of carbon monoxide, the reason being the fire caught them unaware and they could not escape in a timely fashion. The hoist operator, in hoisting the men, died before they could all be gotten out of the mine. He did not have sufficient oxygen to work with or any kind of other self-contained breathing apparatus. This is being changed.

Another reason many men died is they did not know how to operate their self-rescue devices. This is another standard we have since promulgated and will be one of the four that is coming up. It is now a requirement or will be in the very near future, and I am happy to report that since the Sunshine disaster at least 90 percent of your underground mines recognized this shortcoming and went out and purchased the self-rescuers on their own. They weren't even taught the proper use of the self-rescue equipment and if this little $35 item may

save your life some day it is incumbent upon you to know how to operate it. I feel this was a contributing cause for many deaths in the disaster.

ADDITIONAL METAL AND NONMETAL MINE INSPECTORS

Mrs. HANSEN. You are requesting an additional 75 inspectors. What assurances do you have that you will be able to recruit this many?

Mr. DAY. Mr. Nelson.

Mr. NELSON. I am certain that we will be able to. We were authorized 75 in this fiscal year and our recruiting program is going very well and we have reopened the announcement for metal and nonmetal mine inspectors. We are getting a lot of younger people applying. They do have the qualifications, 5 years of experience and other requirements. I don't think we are going to have any problem.

Mr. DAY. We are ahead of schedule right now on that.

Mr. EVANS. Madam Chairman, may I inquire what kind of requirements do you look for in a mine inspector?

Mr. NELSON. They must have 5 years of mining experience.

Mr. EVANS. What does that mean? What kind of mine experience? Underground?

Mr. NELSON. Yes. Well, we do not make any differentiation between underground and surface. We do not have inspectors for underground mines and other inspectors for surface mines, and the act also says that we should try to get these with local experience, so if you are recruiting in an area where most of the mining activity is surface mining and a man has 5 years of experience working in that surface mine, he would qualify as a mine inspector.

Mr. EVANS. All your people have previous mining experience?

Mr. NELSON. Yes, sir.

Mr. EVANS. Thank you.

EDUCATION AND TRAINING

Mrs. HANSEN. You are requesting a decrease of $1,180,000 for education and training, for a total program of $5,884,000. The decrease you are requesting is due primarily to a nonrecurring cost for the Beckley Academy. What is the status of this facility?

Mr. DAY. We visited the site just about a month ago and construction is underway and a report from GAO just the other day says that they are within schedule. It still means another 2 years though for completion before we are in operation.

Mrs. HANSEN. Could you have completed this facility earlier if you had spent the $1,180,000?

Mr. DAY. I doubt it very much, Madam Chairman.

Mrs. HANSEN. Insert a concrete statement in the record in this regard.

Mr. MCDADE. You better do more than doubt it. We want to know.

Mrs. HANSEN. Yes.

[The information follows:]

FEDERAL HEALTH AND SAFETY ACADEMY

Prior to fiscal year 1974, a total of $14,500,000 had been appropriated for design and construction of a Federal Health and Safety Academy at Beckley,

W. Va. Engineering, design and site preparation commitments aggregated $1,600,000 leaving an available balance of $12,900,000 for construction work.

Four lump sum bids were received for Academy construction. Because of the sharp increase in construction costs by a factor of approximately one-third during the last 3 years, all of the bids were in excess of funds available. To stay within the amount available, certain features were deleted. A construction contract was then let to the J. W. Bateson Co. of Merrifield, Va., and Dallas, Tex., in the amount of $12,716,000.

During appropriation hearings before the Senate Subcommittee on Appropriations for Interior and Related Agencies on the supplemental appropriation request for fiscal year 1974, it was brought out that an additional $3,082,000 would be required to complete the Academy as originally planned and designed. Specifically, additional funds would be needed to furnish adequate technical construction supervision, to cover the normally anticipated contingencies and change orders, and to construct the omitted shed-garage, security gate house, and to complete physical fitness facilities.

The Congress appropriated $1,500,000 in the Supplemental Appropriations Act, 1974, to provide for some of the items previously deleted. It is now estimated that an additional $1.5 million will be required to complete construction of the Academy as planned. An itemization of the total estimated costs is as follows:

	Amount
Contract awarded—J. W. Bateson Co. (Nov. 15, 1973)	$12, 716, 000
Add for rolling doors	35, 000
Add for swimming pool	200, 000
Add for shop building	300, 000
Add for gatehouse	16, 000
Subtotal	13, 267, 000
Contingency reserve 10 percent (change orders, etc.)	1, 327, 000
Reservations (shop cranes)	36, 000
Training aids (expense provision for equipment selection)	100, 000
Total construction cost	14, 730, 000
AE amend (phase I supervision) (due consulting architect)	9, 600
AE amend (due design architect)	8, 200
AE option (shop drawing review)	50, 000
AE option (supervison and quality inspection)	775, 000
GSA management and inspection	290, 000
Material testing	40, 000
Travel (GSA)	15, 000
Subtotal	15, 917, 800
Obligations through Aug. 1, 1973 (site preparation, design, etc.)	1, 582, 200
Total project cost	17, 500, 000
Funding available (including $1,500,000 appropriated in the Supplemental Appropriation Act, 1974, approved Jan. 3, 1974	16, 000, 000
Balance needed to complete Academy construction	1, 500, 000

Mr. WILES. Madam Chairman, they will have spent that money. It is nonrecurring because it is construction, not rebuild it twice, but the money will have been spent for the Academy.

Mrs. HANSEN. Yes, but there is still more work to be performed to complete the Academy, so the question is, if additional funds were provided could you complete construction at an earlier date?

Mr. WILES. I don't believe so, Madam Chairman.

[Discussion off the record.]

EDUCATION AND TRAINING PROGRAM COSTS

Mrs. HANSEN. In your education and training program for your industrial personnel, what kinds of costs are generally paid by industry and what costs are paid by MESA?

Mr. DAY. As a general rule industry pays the salaries of the employees and the travel for the courses that we conduct. However, the vast majority of costs of in-house training done by the larger corporations is paid for by them. They bear all the expense in that. What we do is we train the trainers for the various companies and certify that they are capable of conducting these courses and periodically monitor them; so, therefore, they are doing all the training and providing all the materials, conducting the courses, and paying the men while they work.

TECHNICAL SUPPORT PROGRAM

Mrs. HANSEN. You are requesting an additional $1,556,000 for technical support, for a total program of $9,144,000. Please explain the $485,000 item for "short-term investigation."

Mr. DAY. Basically this is what we call this quick fix or state-of-the art development, and we require this money because of our own standards and requirements that we levy or the particular standards we are attempting to enforce.

For instance, we had to in this past year develop a type of dosimeter to measure noise while a man was wearing it. Such an item was not available. We felt we could readily adapt such an item; so what we do is go out and design it and develop it on our own, plus other such materials of this nature.

Do you think of any others, Don?

Mr. SCHLICK. We did some work on respirable dust monitoring devices. We did some work on respirable dust abatement. For the calendar year 1975 we have taken that $500,000 roughly and broken it down into three categories.

We think we will spend about $120,000 on health, and about $280,000 on safety items, and about $100,000 on particular metal and nonmetal problems.

It is a little bit early right now to break it down further than that.

Mr. DAY. One of the major items we probably will spend some of this for is cabs and canopies. Our particular standards vary from OSHA. We insist on retrofitting the older equipment. So this represents a problem as far as industry is concerned and we feel obligated to assist, especially the small mine operators.

ACHIEVEMENTS OF TECHNICAL SUPPORT PROGRAM

Mr. MCDADE. What have been some of your achievements under this program? You had $7.5 million last year. List a couple of things that this technical support program has produced.

Mr. DAY. Basically the technical support works on a daily basis with the mine operators in a number of ways. Let us talk about ventilation.

If an inspector issues a notice of violation or an imminent danger order relative to ventilation to a particular operator or the operator can't make his ventilation come up to our standards, we will assist in helping him come up to these standards by providing advice and counsel if he so desires.

We have some of the best ventilation people in the country. This is true as far as roof control is concerned, also if a particular mine is having extreme difficulties in complying with the standard as far as

roof control is concerned, the easiest thing to do would be to issue a notice of violation or close him down, but that is not the answer.

That doesn't really help anyone so we go in and assist him with his problem by providing engineering capabilities. Another thing technical support does is to approve all the permissible equipment that is used. It is the job of technical support to evaluate equipment that goes underground and we must approve it before it is utilized underground. This is another large function.

One of the large functions that costs us close to $1 million a year is our standby facilities for mine rescue operations managed by technical support. Whenever there is a mine disaster around the country, we have facilities in Salt Lake City and in Charleston and we can be, we hope, most any place in the country in a matter of hours to assist in the rescue of trapped miners.

They also do work in dust. Technical support analyzes the dust samples under the respirable dust program which may result in various notices of violation. It also monitors and has the analysis for the radiation in metal and nonmetal.

Mr. McDade. That is helpful. Elaborate on that. This is a lot of money and we would like to know exactly what you are doing. Let us know what you are doing with the money.

[The information follows:]

TECHNICAL SUPPORT ACTIVITIES

Technical support serves as the engineering arm of the Mining Enforcement and Safety Administration. In the enforcement of standards and regulations, difficult and complex problems of compliance are often encountered that require a variety of technical expertise to develop solutions. A related activity is the development of improved regulations and standards. Technical Support also performs certain routine functions, such as approval and testing of equipment and materials and activities associated with dust sampling, which are necessary for the administration and enforcement of the Coal and the Metal and Nonmetallic Mine Health and Safety Acts.

Significant recent accomplishments are presented in the fiscal year 1975 congressional justifications. To illustrate the extensive work performed by technical support, the following sections present in a quantitative manner the major activities of the three field centers of technical support in calendar year 1973.

A. PITTSBURGH TECHNICAL SUPPORT CENTER

With a staff of approximately 150 people, the work of the Center is directed primarily to the coal industry.

1. Roof control group.—Engineering assistance on roof control and protection against roof fall accidents conducted at 47 coal and 5 non-coal mines; on-site assistance on cabs and canopies given to 11 manufacturers; cabs and canopy equipment analysis conducted for 9 manufacturers and 2 mining companies; tests on roof support materials made for 18 manufacturers and suppliers.

2. Ventilation group.—Engineering assistance on face ventilation and methane control provided to 8 mining companies; absolute mine pressure-air quality surveys and pressure projections made for 5 mining companies; face ventilation for methane control for integral mounted dust scrubbers conducted on equipment of 7 manufacturers.

3. Industrial safety group.—Flammability and related tests conducted on 129 materials for 40 manufacturers and 2 mining companies; special assistance on dust explosions given to 18 organizations, including manufacturers, universities, mining companies, and the Department of Labor; technical assistance on explosives and blasting agents to 4 mining companies, the National Park Service, and city and State agencies.

4. Noise group.—Noise evaluations conducted and control measures developed for 12 manufacturers, suppliers, etc., and for 24 mining companies.

5. Dust group.—Respirable dust sampling conducted and dust control procedures developed for 8 companies; special surveys to evaluate airborne contaminants and air quality in mines of 39 companies; analysis of approximately 500,000 respirable dust samples with additional special analysis for 11 companies; dust scrubber efficiency evaluated for 3 manufacturers.

6. Approval and testing group.—2,263 approval actions taken for 134 companies; special surveys for 3 companies and 4 State agencies.

7. Mine emergency operations group.—Assistance in rescue operations was provided to 3 mining companies.

B. DENVER TECHNICAL SUPPORT CENTER

With a staff of about 60 people, the work of the Center is directed largely to metal and nonmetal mines and mills.

1. Ground support group.—Onsite engineering evaluations in ground stability problems conducted for 28 metal and nonmetal mine operators and 72 coal mine operators (coal waste embankment work); similar services were provided to 8 manufacturers and suppliers.

2. Industrial safety group.—Engineering assistance on safety problems related to mining procedures provided to 9 metal and nonmetal mining companies, 5 coal mining companies, and 82 manufacturers and suppliers.

3. Ventilation group.—Engineering assistance in mine ventilation provided to 40 metal and nonmetal mining companies, 7 coal companies, and 56 manufacturers and suppliers.

4. Industrial health group.—Engineering assistance or consultation on dust, noise, and industrial hygiene problems provided to 53 mining companies and 80 manufacturers and suppliers.

5. Radiation group.—Engineering assistance in the measurement and control of radon and radon daughters provided to 30 uranium producers and 9 manufacturers and suppliers of equipment and instruments.

C. HEALTH AND SAFETY ANALYSIS CENTER

The Center is responsible for the collection, compilation, and analysis of accident and injury data of the mining industry as a basis of defining hazards and trends requiring special attention. The Center has a staff of about 60 people.

In 1973, the Center processed 120,000 injury and employment reports, compiled special quarterly injury reports on a mine-by-mine basis, and similar mine-by-mine data for 20 major coal-producing companies, responded to 181 special requests for injury information, conducted several special hazardous analysis studies, and published coal mine injury information on a monthly basis.

Mr. DAY. Actually we are quite proud of our technical support staff because we think we have accomplished a lot more there than people would like to give us credit for.

[Discussion off the record.]

COAL WASTE EMBANKMENTS

Mr. DAY. These gentlemen actually cure a lot of the defects that exist in the mines and it is a lot more important to cure these defects than issue a notice of violation and let someone continue.

This group was the group that was responsible for our evaluation and research in coal waste embankments after the Buffalo Creek disaster and I think roughly spent in excess of $2 million on this.

We have done this in cooperation with the Bureau of Reclamation but after the Buffalo Creek disaster we evaluated and looked at every coal waste dam we could find in West Virginia, Kentucky, and Virginia. We categorized these as to whether potentially hazardous or not. So those that were potentially hazardous we put on weekly inspection and some of them are still on a weekly inspection basis.

During rainy seasons we increase our number of inspections. Problems are evaluated and recommendations made through field surveys

by technical support personnel. These dams were not constructed but happened by dumping of materials in the particular area involved. They have to be monitored by professional people.

Mrs. HANSEN. How many dams of this nature do we have?

Mr. DAY. Slightly in excess of 1,000.

Mrs. HANSEN. Is there any possibility of eliminating some of the dams that have the worst potential for an accident?

Mr. DAY. We have closed about 11 or 12 of the dams, made them pump the water out, made them compact them, put out the fires, and did a number of things. In fact you wouldn't recognize some of them today from what they were 2 years ago.

Mr. MCDADE. Are they still only classified as very hazardous? They are still existing.

Mr. DAY. Yes, they are.

Mr. MCDADE. Why are they still existing?

Mr. DAY. Because they are being improved and one of the debates is we may consider them hazardous but no one else does.

Mr. MCDADE. It is your responsibility then clearly, is it, to decide whether or not they are hazardous and if you determine that they are to remedy the situation?

Mr. DAY. Well, we don't have a standard that can set out the criteria to evaluate these dams.

Mr. MCDADE. First answer my question. Is it your responsibility to evaluate those that are hazardous?

Mr. DAY. Yes.

REMEDY OF HAZARDOUS DAM CONDITIONS

Mr. MCDADE. And is it your responsibility to remedy the hazardous condition if you find it there?

Mr. DAY. It is to cause the condition to be remedied by the operator.

Mr. MCDADE. That is your responsibility?

Mr. DAY. Yes.

Mr. MCDADE. Do you have the authority to make him do something?

Mr. DAY. We will close him down.

Mr. MCDADE. Why do we have hazardous dams around at all then? If you have the authority to close him down or correct the situation why should we permit one hazardous dam to exist?

Mr. DAY. We consider them potentially hazardous. If anything happens and there is the slightest change one way or another we consider it hazardous because no one has the technology and no one can come up and say to me as a matter of fact it is not hazardous.

We haven't had anything happen in the past to a dam like this because when in doubt we consider it potentially hazardous.

Mr. MCDADE. What do you do?

Mr. DAY. We go to the operator and make him fix and bring it into what we think is the proper criteria, and they all cooperate.

Mr. MCDADE. I understand your testimony to be that there are hazardous dams still existing.

Mr. DAY. Potentially hazardous.

Mr. MCDADE. A thousand of them?

NUMBER OF POTENTIALLY HAZARDOUS EMBANKMENTS

Mr. DAY. Oh, no, I think it is down to about less than a dozen right now. We evaluated about a thousand of them and found approximately 140 that were potentially hazardous in the beginning and since then we have reduced them to about a dozen. We are working with these people and we have inspectors there constantly to help bring them into line.

Mr. SCHLICK. During the rainy season which we now have in West Virginia, we have inspectors go out right away and watch these things and rain it may, as you well know, in some of those places. That work is still going on.

Mr. MCDADE. Of course, when you do that your remedy is to warn the people that they may lose their homes and lives if they don't evacuate if the dam begins to give away.

Mr. SCHLICK. More or less.

Mr. MCDADE. You are down to 12 and we mentioned getting down from 140 to 12. What can we say about those 12. They are not going to sit there as a potentially hazardous backups of water, are they?

Mr. DAY. Every one is being worked on at this particular time.

Mrs. HANSEN. But any one of these 12 could cause a disaster.

Mr. DAY. If the conditions change, they could. However we are trying to eliminate all the potentially hazardous dams.

Mr. MCDADE. If you have one you identify as potentially hazardous, what justification is there to let the water sit there and endanger lives and property when you could under your authority say to pump the water out.

Mr. DAY. But we don't let them keep the water in there. We make them pump it out.

Mr. MCDADE. In the potentially hazardous——

Mr. DAY. In ones potentially hazardous it could rain and the water could build up and, if allowed to build, it could be potentially hazardous.

Mr. MCDADE. Are the ones potentially hazardous now engaged in receiving water from an operating mine?

Mr. DAY. Some of them are and some aren't.

Mr. MCDADE. If they are potentially hazardous why should they receive water from an operating mine?

Mr. CRAWFORD. Receiving water may not necessarily increase the hazard. While these dams or these impoundments are receiving water we are doing things such as requiring ditches to be shot in the rock around them to take the runoff from the side of the hills.

This in itself isn't a hazard but it could be with an accumulation of both the water say from the mine and a rainfall of a certain amount. As Mr. Schlick mentioned, however, our inspectors go out during the rainy season and they may tell the operator of the mine not to put any more water in the dam during this period.

They may increase the flow of water out of the dam at that time, in other words, to reduce the water level. But just the mere fact that the dam exists and we say it is potentially hazardous, it is only

potentially hazardous under extreme conditions of high water. However, these are things that can be taken care of by proper drainage, spillways, more earth put on the dam itself, things of this nature.

We are calling them potentially hazardous which I think was a category we arrived at to make sure that we cautioned both the operator and ourselves about all conditions that the dam could be subjected to.

Mr. McDade. Are you able to tell the committee today that those 12 that you have identified as potentially hazardous dams do not today pose a threat to the life and safety of the people who live around there?

Mr. Crawford. I think the dams we have listed in the category that we have as being potentially hazardous, if we considered them to be just that in any period of time, we would have to take action other than that which we have taken, and our action is predicated upon a certain amount of work being done over a certain period of time and that work is ongoing and if we weren't satisfied with that work that was being done we would have ceased the operation of that particular mine.

EFFECTS OF WEATHER CONDITIONS

Mrs. Hansen. Supplementing Mr. McDade's comments, supposing weather conditions would cause an extra pressure on these dams prior to the completion of your ditches, would you then move to close these before the condition became hazardous?

Mr. Day. Oh, certainly.

Mr. Evans. Madam Chairman, may I ask a question?

Mrs. Hansen. Yes.

Mr. Evans. You said that you keep track of the weather and when the weather appears to be of certain intensity you send your men out. In this regard do you have a set of regulations that you issue for the management of each one of these, tailoring the regulations to each particular dam that you consider hazardous? Is there a standard procedure that you advise these people to follow?

Mr. Crawford. These dams have all been looked at by engineers that are experienced in dam construction, by engineering companies, not by MESA alone, but by engineering companies.

Mrs. Hansen. And they are independent engineering firms?

Mr. Crawford. Yes, ma'am. They are evaluated in all aspects and that evaluation is what we base our notices of violation that we have put on the dam and give the operator periods of time to correct.

Now, everything is taken into consideration, the amount of water, the average rainfalls, and all that could occur or has occurred in that area and this is all evaluated to make a final determination, of whether or not one can continue to use that impoundment or cannot continue to use it.

Mr. Evans. Let us refer to the dams that Mr. McDade was talking about. Your engineers go out and make a study and come up with a conclusion and a recommendation that they give to you, is that correct?

Mr. Day. Yes.

Mr. Evans. You require certain work to be done on that particular dam based on the engineering study, is that correct?

Mr. Day. Yes.

32-043 O - 74 - 47

Mr. EVANS. If that work is done that meets your approval, is that correct?

Mr. DAY. Yes.

Mr. EVANS. Thereafter, is a particular dam such as that subject to limitations of use? For example, do you issue a regulation saying, "You shall not store any more than a certain amount of water, and the water level shall not be over a certain amount under any circumstances?"

Mr. DAY. Yes.

Mr. CRAWFORD. We have done that in a number of cases. We have said that the water level can't reach a certain height. A certain acreage of water cannot be impounded behind the structure. We have said that in a number of instances. This is all predicated upon the evaluation that is made on the soundness of that impoundment.

Mr. DAY. I may add this was done in cooperation with the Corps of Engineers and the Bureau of Reclamation.

Mr. EVANS. And after you have had a dam assessed by the engineers, and after the necessary work has been done on the dam that you have required, and after you set up the rules on operation of that dam, thereafter, from time to time, you make inspections to make sure that your rules and regulations and requirements are met, is that correct?

Mr. DAY. That is correct.

Mr. EVANS. Thank you, Madam Chairman.

Mrs. HANSEN. Mr. McKay.

CLOSURE OF COAL MINES FOR NONCOMPLIANCE

Mr. MCKAY. I have some questions and maybe they will have to be answered for the record. I am going to have to leave in a minute or two, but I will give you the thrust of it, anyway.

On March 30 you have indicated at this important meeting the shutting down of at least 324 coal mines, including at least 5 in Utah, for noncompliance with the Federal Coal Mine Health and Safety Act of 1969.

The relevant statutory provision, section 305(a)(2), provides that certain electrical equipment standards be met within 4 years of the effective date of the act unless a permit of noncompliance has been granted. The closure will result in the likely unemployment of some 3,600-odd miners and the loss of annual coal production of 16 million tons, estimated to be the equivalent of about 64 million barrels of oil.

The estimate of 324 closures is low and the number may be as high as 500 coal mines, closures, with corresponding increases in unemployment and loss of coal. Most of the mines are small operators or with short useful life remaining and it is not economical to put the required equipment in. The cost of the equipment, $350,000 or $400,000, is prohibitive for some of these small mines and with very few years of mining potential left. I have about five questions here that you might respond to.

1. Your office says that 80 percent of the applications for certification of noncompliance will be rejected. Why is this figure so high?

Mr. DAY. This is a rejection by the Interim Compliance Panel, not MESA, but from what I have heard from the Interim Compliance Panel it is because the operators have not even shown that much good

faith in attempting to comply or attempted to order the permissible equipment to replace the nonpermissible equipment, and after 4 years of this particular act being in effect and having 4 years' warning the argument of most of these is that they are working and that they are small mines and they would only be in existence for a year or two before they would close is really erroneous and fallacious because they have already had 4 years to comply.

Mr. McKay. If some of these are small mines and they are really operating on near margins—you indicated you had a technical division—have your people been working with them to provide alternate means or means whereby they could comply rather than just saying, "Well, you haven't complied. You haven't come over and beat us on the backs or helped so you are through."

Mr. Day. Yes, sir, in fact in fiscal year 1972, we had 294 approvals for permissible equipment and in 1973, 254 approvals on field equipment. A lot of these operators have not come to us, Congressman, and asked permission to make their equipment permissible or for technical advice on this.

Mr. McKay. Of course you wait on their request.

Mr. Day. We are not too welcome in all those mines in Kentucky and West Virginia.

Mr. McKay. I don't know where these are. I know five of them are in my State and most of those are small, little family operators who are——

Mr. Day. This equipment can be very expensive for a small operation, that is true.

Mr. McKay. And you have some alternative proposals?

Mr. Day. We have done everything we feel we can do. We have warned them about this for several years. They know they can come to us for technical assistance. We offer technical assistance and some of them just have not come to us.

Mr. Evans. Would the gentleman yield there?

Mr. McKay. Sure.

MODIFICATION OF REGULATIONS FOR SMALLER MINES

Mr. Evans. Once you promulgate regulations nationwide for coal mines you have yourself in trouble right off the bat, I think, because one system for everything is like prescribing the same glasses for everybody.

Now, how much of this can be modified for these smaller mines that my friend from Utah is talking about? I have some of these small mines in Colorado, the mines are owned or operated by families or they are old people and couldn't begin to pay——

PERMISSIBLE EQUIPMENT

Mr. Day. Colorado has two that are affected by this. First of all, this particular standard comes straight out of the new law, section 305(a)(2). We did not promulgate the standard. This is part of the statute itself. It can be modified under certain conditions.

If they are nonpermissible, equipment can be made permissible, or if the operator comes up and asks for a modification which will provide no less than the same protection for what he has now, in other words,

anything else that he does to replace this equipment, it must provide at least the same safety as the standard does, and this is very difficult for them to do. Our hands are tied as far as the law is concerned.

Mr. McKay. Along with that the equipment must be "permissible," which means approval by MESA as being constructed so as to minimize the possibility of a mine explosion or fire. What are the standards under which MESA approves equipment, and could these standards be safely reduced?

Mr. Day. We feel they could not be safely reduced. Permissible equipment is designed—I think you must have my statement there—to minimize the possibility of an explosion because of an ignition by the equipment arcing no matter what else you do, whether you put in methane monitors or anything else, it is extremely difficult for you to prove to MESA that what you are doing is as safe as not having this dangerous piece of equipment in the mine in the first place, and this law applies to small mines whether you have 2 employees or 500 employees. A disaster can happen in a small mine and it can happen in a large mine.

It's quite difficult in most areas, Utah and Colorado, because of the gas you have there. I think the biggest argument as far as Kentucky is concerned, especially eastern Kentucky, is their so-called mines above the water table which they call nongassy under the definitions of the old act, which no longer exist under the 1969 act. They cannot make a distinction between a gassy and nongassy mine. Congress saw fit to eliminate that distinction. We are supporting that distinction.

Mr. McKay. Which could be part of the problem we are facing here in one mine versus another on various types of equipment which could operate safely otherwise.

Mr. Day. However, to bring that distinction back into effect, it would take you gentlemen to act on it in Congress, rather than the Department of the Interior.

CLOSING OF MINES

Mr. Evans. Have you kept any figures on the number of mines that have closed because of their inability to comply with the law and your regulations?

Mr. Day. No, we have not. It's extremely difficult for us to gather these statistics, in that we don't always know the reason a mine closes. We had a good example from Pennsylvania: the closure of the Glenn Nan mine last week. In fact, we had the Governor of Pennsylvania visiting the Secretary and me. The main reason it appeared in the newspapers was because of the Federal Coal Mine Health and Safety Act of 1969. What they failed to mention was the tonnage production had dropped from 13,800 tons per day to 5,600 a day. It was also costing the operator over $60,000 a month just to pump the water out and keep the water levels dry. You never really know what causes the closure of a mine. Generally it's economics.

Mr. McKay. What has caused that drop in production per man-hour? I noticed that on the chart this morning. Do you have any idea? Maybe that is not your field.

Mr. Day. You mean in the last 4 or 5 years?

Mr. McKay. Yes.

Mr. DAY. I would venture to say a great deal has to do with health and safety and probably a little bit of the labor force, too. As far as health and safety are concerned, this act and our standards added a number of requirements to the general mining cycle. As far as that statistic that was mentioned earlier, it was the man-shift. You have a lot more men now who are doing other things than production work. You have preshift examinations, where before any shift can go in to work, a certification or testing for ventilation or menthanol, et cetera is made. In production, a continuous operator cannot operate it 24 hours a day. He has to stop and take menthanometer readings and rock dust examinations, et cetera. What we have done in the act and in the standards has made the operator do a number of nonproductive things for the sake of safety and health.

Mr. MCKAY. And it has affected his man-hour production?

Mr. DAY. Yes, it has affected his man-hour production.

Mr. MCKAY. It's my understanding that the coal industry in 1972 had about a 4-percent profit margin. Would you comment on how expensive it has been for the mining companies to comply with the Federal Coal and Safety Act? If you have other things you could add for the record, please do.

Mr. DAY. We will attempt to find you something.

ASSISTANCE TO SMALL OPERATORS

Mr. MCKAY. Do you have any opinions as to what can be done to assist some of these smaller operators to comply, other than just say, buy that equipment for $400? Are they staggering? I don't know but what you fellows, who are professionals in that, maybe ought to help more than any. Or are we going to let the little miner go out of business?

Mr. DAY. Unfortunately, most of this equipment far exceeds $400. We are talking anywhere from $75,000 to maybe $400,000 for some of these mines, although the $400,000 applies to some other larger so-called small mines.

We have attempted to work with a number of these people.

In fact, last week I had another group in my office from the anthracite region. They are in trouble, the same as some of these small mines, because of other conditions and other inabilities to meet the requirements of the act. We will go so far as providing our technical support people to assist them in obtaining variances. We will look at their equipment and bend over backwards to make sure they comply with the law. Because we feel this is the name of the game in issuing a notice of a violation. If they come to us we will give every piece of technical advice we can in order to help them comply with the law. However, we cannot supply them with the equipment. This is another problem because most of this equipment they need in order to comply has a lead-time of anywhere from 6 months to a year and a half.

Mr. MCKAY. I will give you these questions and you can add to them whatever you can for the record beyond that.

[The questions follow:]

Question. Your office says that 80 percent of the applications for certificates of noncompliance will be rejected. Why is the figure so high?

Answer. The 80 percent denial rate of applications for permits of noncompliance with the electric face equipment standards of the act was a projection made by the Interim Compliance Panel based on its area consideration of a limited

and random number of the approximately 400 applications received. Subsequent actions by the Panel indicate that the figure may be slightly high as denials are now running about 72 percent. This is based on ICP's consideration of over half of the applications received.

The Interim Compliance Panel informs me that the principal almost sole, reason for ICP denial of permits of noncompliance is the fact that the mine operators have made little or no diligent effort to meet the mandatory electric face equipment standards in the grace period since March 30, 1970, and have provided the ICP with no firm plans for meeting the standards in the future. In those cases where the mine operators have shown diligence during the past 4 years and have presented a firm and reasonable plan for continuing such efforts, the ICP has granted permits of noncompliance with the standards.

Question. The equipment must be "permissible," which means approved by MESA as being constructed so as to minimize the possibility of a mine explosion or fire. What are the standards under which MESA approves equipment and could these standards be safely reduced?

Answer. In accordance with the requirements of section 305 of the Federal Coal Mine Health and Safety Act of 1969, all electric face equipment shall be permissible after March 30, 1974.

Permissible is defined in section 318(i) of the act as follows:

> "318(i) 'permissible' as applied to electric face equipment means all electrically operated equipment taken into or used in by the last open crosscut of an entry or a room of any coal mine the electrical parts of which, including but not limited to, associated electrical equipment, components, and accessories, are designed, constructed, and installed, in accordance with the specifications of the Secretary, to assure that such equipment shall not cause a mine explosion designed and constructed, in accordance with the specifications of the Secretary, to prevent, to the greatest extent possible, other accidents in the use of such equipment; and the regulations of the Secretary or the Director of the Bureau of Mines in effect on the operative date of this title relating to the requirements for investigation, testing, approval, certification, and acceptance of such equipment as permissible shall continue in effect until modified or superseded by the Secretary, except that the Secretary shall provide procedures, including, where feasible, testing, approval, certification, and acceptance in the field by an authorized representative of the Secretary, to facilitate compliance by an operator with the requirements of section 305(a) of this title within the periods prescribed therein;"

The requirements for approving, as permissible, electric motor driven mine equipment and accessories are covered in 30 CFR 18.1 through 18.99 (schedule 2G). The specifications for field approvals on such equipment are included in sections 18.90 through 18.99.

These approval standards were evolved over many years from research, experience, and demonstrations and as such are minimum requirements.

Question. It is my understanding that the coal industry had only 4 percent profit margin in 1972. Could you comment on how expensive it has been for mining companies to comply with the Federal Coal Mine Health and Safety Act of 1969?

Answer. As far as cost to comply with the act is concerned, we have no way of knowing, but we can say that it did cause an increase in operating costs and capital investment. Coal companies had to acquire many new detecting instruments, update their mining equipment, and provide additional service personnel to meet the requirements of the act. However, there are other factors to be considered such as the efficiency of management at the mine.

Question. Do you have any figures on the reduction of injuries and deaths since the enactment of the act?

Answer. [See following table:]

Year	Fatalities	Number of nonfatal injuries
1969	203	9,917
1970	260	11,552
1971	181	[1] 11,380
1972	156	[1] 12,273
1973	132	[1] 11,067

[1] Preliminary figures.

Question. Do you have any opinions as to what can be done to assist smaller coal mining companies comply with the act?

Answer. This is a difficult question to answer because the requirements of the act must be adhered to by both small and large mines. However, from the operative date of the act, Federal engineers, inspectors, and their superiors have attempted to assist small mines in complying with the act by offering their expertise in mine ventilation, roof control, electricity, and education and training. These services have been available on a continuing basis in order to assist small mines meet the requirements of the act.

ADDITIONAL PERSONNEL FOR TECHNICAL SUPPORT

Mrs. HANSEN. Is the $750,000 and 45 additional personnel exclusively for the noncoal program? If so, do you believe your technical support program in the coal area is adequate?

Mr. SCHLICK. Those 45 positions and the $750,000 is broken down between coal and noncoal. Roughly, we are going to put 14 of those positions in our Health and Safety Analysis Center in Denver. They are going to do work in noncoal work, special studies and that type of thing; 20 of those positions will probably go into our Denver Technical Support Center, of which 90 percent of its activities go into the metal and nonmetallic field. The remainder of those positions, which is about 11, will go into our Pittsburgh Support Center which does largely coal work.

PROGRAM ADMINISTRATION

Mrs. HANSEN. You are requesting an increase of $127,000 for Program Administration, for a total program of $1,516,000.

You say in the justifications:

In addition, new claims for compensation on long-term disability and death cases have increased.

Will you explain what this entails?

Mr. SCHLICK. We have very stringent physicals for our coal mine inspectors. As time goes on and the men get older, they flunk those physicals and go on compensation. Once we had 225 inspectors. Now we have over 1,000 already. As those people who work in mines get older, we require a physical after 50 years of age every year. It's a very stringent physical. A lot of them are flunking the physical due to work injuries and therefore they apply for compensation. That is a growing figure.

Mr. DAY. We do have a pretty tough physical. I think the reasons are obvious. It's a tough thing for some of these men to do at that particular age. I noticed your figures, Jack, there were seven disabled because of black lung last year. Our miners having previous experience in coal mining also pick up black lung and that disables them from previous employment.

ADMINISTRATIVE PROVISIONS

Mrs. HANSEN. You are requesting two new administrative provisions, one dealing with cooperative programs and one dealing with mine rescue and survival operations. Please provide for the record your specific legislative authority for each one.

[The information follows:]

ADMINISTRATIVE PROVISIONS—LEGISLATIVE AUTHORITY

1. The Mining Enforcement and Safety Administration is authorized to promote health and safety education and training in the mining community through cooperative programs with States, industry, and safety associations.

30 U.S.C. 734–735; 30 U.S.C. 953

30 U.S.C. 734 provides for programs of education and training of employers and employees in recognition, avoidance, and prevention of accidents or unsafe or unhealthful working conditions in mines.

30 U.S.C. 735 provides that: In order to promote sound and effective coordination in Federal and State activities in metal and nonmetallic mine safety, the Secretary shall cooperate with the official mine inspection or safety agencies of the several States.

30 U.S.C. 953 provided that: "The Secretary . . . is authorized to make grants in accordance . . . to promote Federal-State coordination and cooperation in improving the health and safety conditions in coal mines."

2. That any funds available to the Department may be used, with the approval of the Secretary, to provide for the costs of mine rescue and survival operations in the event of major mine disasters.

NO SPECIFIC AUTHORITY

In mine disasters MESA provides manpower, expertise, and specialized equipment in assisting rescue operations at mine sites. Appropriate MESA funds are available to cover costs associated with such disasters. This provision provides the Secretary authority to authorize the use of other funds in the event the disaster costs exceed MESA's funding capacity.

PERSONNEL STATISTICS

Mr. MCDADE. On page 26 your personal summary indicates on board anticipated for fiscal year 1975, 2,995 people up in the right hand corner. How many Federal coal mine inspectors have you on board now?

Mr. CRAWFORD. There are 1,223 right now.

Mr. MCDADE. What was your statutory authority? How many were you authorized?

Mr. DAY. There is no authority for coal mine inspectors per se. We just have a requirement for a number of inspections.

Mr. MCDADE. Have you met the requirement? Can you describe your inspectors as being 100 percent on board now, apart from normal conditions?

Mr. DAY. Except for the supplemental that you granted last time, we are in process of hiring those people now. In fact, the interviews are going on.

Mr. MCDADE. How many more will that be?

Mr. DAY. There will be 187. That is included in the 2,995 figure.

Mr. MCDADE. So you will have in a very short time completed those hires and you will for all practical purposes be fully staffed?

Mr. DAY. Yes, sir.

COAL MINE ASSESSORS

Mr. MCDADE. How many people do you have operating now in your assessments office as coal mine assessors?

Mr. DAY. We have 66, of which 20-some-odd are borrowed from Coal Mine Health and Safety. But this will be a continual process. In fact, we are going to consider this part of the training of the coal

mine inspectors, especially the supervisory inspector, that he has to be able to know how to properly write the notice and make the assessment to understand the overall program.

Mr. McDade. Can you describe that program as fully staffed now?

Mr. Day. Except for 6 or 7 slots, yes, that is correct, which will be filled by April 1.

Mr. McDade. By April 1 you will be fully staffed in your assessment program?

Mr. Day. Yes.

Mr. McDade. Every time we have had this budget we have given you a 100-percent budget request. I want to review it just to make sure we have total assurances that you are fully staffing up.

You have indicated that with the new decision by the courts that you feel that you are going to get your assessments pretty well cleaned up by the end of the fiscal year?

Mr. Day. Yes.

AMOUNT OF ASSESSMENTS

Mr. McDade. Can you hit that for me in dollars? What is the total number of dollar assessments that you have made so far since the program began? The follow-up question would be how much of that assessment have you collected?

Mr. Day. Since the beginning of the program, we have assessed $38,424,999.80. So far to date we have collected $6,074,751.96.

Mr. McDade. And the balance has been uncollected for what reason?

Mr. Day. The vast majority of the balance, roughly $25 million, was because of the NICOA suit, the National Independent Coal Operators Association suit, which caused all the operators to hold back and meet payments under the old system. We feel, and we have seen in the past month, a slight change in this since the decision. Just in the past month we received over $80,000 for payments. This is close to double what we had been receiving over the past few months.

Mr. McDade. There is still a very large outstanding balance.

Mr. Day. That is correct. NICOA has appealed the case.

Mr. McDade. To the Supreme Court?

Mr. Day. No, they have asked for a rehearing in the court of appeals. This may hold up the operators from paying again for a little while. Justice is still waiting to prosecute the 2,600-some-odd cases involving over 30,000 violations. Until this matter is resolved, they are in the hands of Justice. As soon as it is resolved in the courts, they can collect this money.

Mr. McDade. But then, of course, it will not be by the end of this fiscal year.

Mr. Day. I think we will see this resolved in fiscal year 1974. No, we will not get all of this money.

Mr. McDade. By June the assessments will still be pending and awaiting the outcome of the courts?

Mr. Day. What we are doing now is operating under interim procedures, and have for about 7 months. The vast majority of money we are collecting right now is under interim procedures. In other words, what we have done in the past 6 months is just started from scratch. We are doing a much better job in that field than under the old system, which seems to remain stagnant.

Mr. McDade. The new system being to indicate precisely what you believe a violation is and why it has occurred and why the dollar evaluations is placed upon it?

Mr. Day. Yes.

COLLECTION OF ASSESSMENTS

Mr. McDade. Could you offer us any kind of expectation with respect to the $25 million? What does that look like? There were a lot of assessments made and a lot of people in the field attempting to police the act. There have been a lot of assessments made, but very few payments. How can you assess the future for us?

Mr. Day. I think we have an excellent opportunity to start making it work as soon as the NICOA case is finally resolved. We have our entire assessment system out in the field with our ability to negotiate settlements or correct our own mistakes out in the field. I think that is when we will start really collecting money. It will also permit Justice to go in and enforce the collection of over 30,000 of these violations immediately. These cases are prepared and they are sitting on the attorney's desk. All we have to do is get a good decision out of the court of appeals.

Mr. McDade. You are confident that the interim procedure, apart from the decision the court of appeals might render, is a new system that takes care of the problem of due process and other legal problems in a way that permits you to collect assesments promptly?

Mr. Day. That is correct. We see a couple of items in this system that we think are unfair and could be better clarified. We are in the process of correcting these and will come out with a modified system in the very near future, as soon as we get rid of our backlog, if not sooner. We feel this again will be a lot fairer to the operator. It will take into consideration more factors than we did last time. Again, it's just a matter of fairness. The original formula system was put together in a couple of weeks because we had to do something. We couldn't let those notices build up.

We have had a chance to see a well-written opinion of the court of appeals which upheld us. We feel we are on pretty good ground right now. In fact, we feel we are on excellent ground. We think we will be able to turn out a better assessment system.

Mrs. Hansen. That is a great improvement over what it was.

Mr. Day. I think we are beginning to make headway with the operator. I think they understand we are trying to be fair. An awful lot of this was your smaller companies. They tied us up in litigation a lot better than the larger companies did. We haven't lost any suits to the larger companies, but it's the smaller companies. It's hard to get country lawyers.

POSSIBLE LEGISLATIVE CHANGES IN ORGANIC ACT

Mr. McDade. At one point you mentioned there was a possibility of a legislative change in the Organic Act.

Mr. Day. Yes, I don't know where the department's bill is. I thought it would be up to you by now. It does recommend a change in the Organic Act in a number of instances.

First of all, we have asked the amendments for discretionary authority, whether or not to issue an assessment for each and every violation. We feel we should have the authority and the ability to issue first a warning ticket to somebody new in the business who has never violated this particular provision and it isn't that serious. I think there is a built-in antagonism that goes back and affects the collection system when you have to issue a civil penalty for every little item that comes up.

Another item is the requirement that there be a de novo review in the district courts of the United States. We have asked for a correction of this. It is my understanding that the Federal Court District in eastern Kentucky has complained about this to the Judiciary Committee, that they don't want to be bothered with these $30 and $40 fines.

Mr. McDade. You tell the Federal Court District in Kentucky that a couple of years ago the Congress gave those people paid employees which are called Federal magistrates. You tell the district court to put those magistrates to work.

This committee is looking for one thing. This committee wants absolute assurances from MESA that this assessment program is going to be carried out vigorously with teeth in it. You are one of the few that gets 100 percent of budget every time you have been up here. We are encouraged by the fact that the mines seem safer. That is what we are all after.

We also want to be assured that the coal operators are not just being flagrantly able to get away with assessments that are made against them as a result of safety violations.

INCIDENCE OF BLACK LUNG

Mrs. Hansen. Is there any decrease in the Black Lung incidence?

Mr. Day. I don't believe I am able to answer that.

Over the past 3 years we have seen a fantastic drop in the amount of residue in underground mines. You may not see the statistics this year or next year, but 5 or 10 years down the road you may see the statistics coming out. In fact you should see the statistics coming out because there isn't that much dust in the area anymore.

Mrs. Hansen. Thank you very much, Mr. Day, for a very good presentation and a very frank one. We also appreciate your staff's participation.

Mr. Day. Thank you very much, Madam Chairman.

WEDNESDAY, APRIL 3, 1974.

JOINT FEDERAL-STATE LAND USE PLANNING COMMISSION FOR ALASKA

WITNESSES

JOSEPH P. JOSEPHSON, STATE COCHAIRMAN DESIGNEE
THEODORE G. BINGHAM, EXECUTIVE DIRECTOR

Mrs. HANSEN. We now have the Joint Federal-State Land Use Planning Commission for Alaska. We have as the principal witness, Mr. Theodore G. Bingham, Executive Director.

I am sure you have a prepared statement. Will you summarize your statement for the committee.

INTRODUCTION OF ASSOCIATES

Mr. BINGHAM. Might I apologize for Mr. Silcock's not being here. Last week we were informed of the scheduling change of the subcommittee, and he had a prior commitment in Denver. He will be in town in about 7 more hours.

Mr. Josephson, the State cochairman, designee, is with me, as is Mr. Culp, the technical adviser from the Bureau of Land Management.

We have filed our statement.

STATEMENT OF BURTON W. SILCOCK

Mrs. HANSEN. We will place it in the record at this point.

[The statement follows:]

STATEMENT OF BURTON W. SILCOCK, FEDERAL COCHAIRMAN, JOINT FEDERAL-STATE LAND USE PLANNING COMMISSION FOR ALASKA

Madam Chairman: Section 17 of the Alaska Native Claims Settlement Act (85 Stat. 688) and companion legislation by the State of Alaska (AS 41.40.010) established the Commission and sets forth our basic guidance and responsibilities.

Last year before this subcommittee the Commission's program was presented in six broad categories. I would like to again summarize our activities by these categories and leave with you copies of our annual report which expresses our activities in more detail.

1. Make recommendations concerning areas of Alaska which should be retained in Federal ownership as parks, wildlife refuges, forests, and for other public uses.

While this necessarily relates to overall land use planning, the time frames set by subsection 17(d) of the Alaska Native Claims Settlement Act require somewhat separate actions.

The Commission undertook a study of land uses on the so-called 80 million acres of national interest lands in Alaska. Resulting from extensive hearings (17 hearings in remote rural and urban locations in Alaska and San Francisco, Washington, D.C., Seattle, and Denver) and technical review the Commission recommended land uses or controls for these lands.

The Secretary of the Interior has submitted to Congress his legislative proposal for these lands. The Senate Interior and Insular Affairs Committee has requested our further involvement and advice on this legislation. A similar, but informal, request has been received from the House Committee. Action and recommendations will be developed through our ongoing planning process.

In conjunction with this study are two others. One referred to the Federal Mining Laws, and the other related to subsistence use of fish, game and other resources. Seminars involving experts in these fields have been concluded on

both issues and we are now preparing legislative proposals or policy papers for submission to both the National and State legislative and administrative branches to effect changes we believe are necessary.

2. Make recommendations to insure that economic growth and development are orderly and planned, are designed to insure the economic and social well-being of the Native people and other citizens of Alaska, and are cognizant of environmental quality.

This planning methodology is proceeding on a four-phase approach: Inventory, planning policy, planning application, and management analysis.

Inventory

The Commission has completed its inventory of resources in Alaska and through cooperation with the State of Alaska is proceeding to have this information made available to interested parties. In this respect, the State has agreed to publish our inventory together with other relevant data in six "Regional Profiles" or summaries.

The detailed information is available in our office as well as on file with the Alaska Resource Library, maintained by the Department of the Interior.

Planning Policy

By the end of calendar year 1974, the Commission will have developed planning policy guidelines covering matters of concern such as environmental quality; kind, level, and location of economic activity; population change and location; utilization of renewable and nonrenewable resources; and transportation.

Planning Application

The Commission intends using the above policies within regions or complexes in Alaska to provide detailed recommendations to the Federal, State, and Native interests on land use.

Management Analysis

To continue planning and to implement planning decisions requires management agencies. This ongoing study is reviewing Federal and State agencies planning methodology and their implementation of planning decisions. Resulting from Commission recommendations will be an integrated planning structure and appropriate management groups.

3. Make recommendations concerning lands available for selection by the State and Natives under the Statehood and Settlement Acts.

The planning function is expected to unravel the apparent conflict between State and Federal interests.

In connection with Native selections we have completed our analysis of each Native region's "selectable" lands. This week we are meeting with the Department of the Interior to attempt to resolve the last region with problems in this area.

Direct assistance to Native villages and regions is being provided by resource information; socio, economic, and technical rationale for possible land selections; and alternative discussions. These approaches are being undertaken by meetings with regional people and regional village discussions. While these activities are going on with all regions concurrently, we are presently engaged in detail with three regions covering one-half of Alaska and approximately one-third of the Native population.

4. Make recommendations concerning possible changes in the laws, policies, budgets, and programs affecting Federal and State agencies managing lands in Alaska.

With the exception of the above-mentioned activities relative to mining and subsistence use our activities are generally geared toward review and comment on changes proposed by Federal and State agencies. Among such items covered have been (1) implementing Alaska Native Claims Settlement Act regulations, (2) off-road vehicle use, (3) processing of Native allotments, (4) environmental regulations, (5) processing administrative appeals, and (6) recordation of land transactions in Alaska.

5. Recommended the reservation of interests in lands granted to Natives which are necessary to guarantee international treaty obligations and to insure the right of public use and access of docks, transportation, and utility purposes, and other public uses.

Later this month we are conducting public hearings in Alaska concerning additional needs to the State's existing backbone transportation system. Needless

to say, this raises controversial feelings as high as those that existed over the Trans-Alaska Pipeline.

Additionally we are progressing with easement recommendations on lands currently being selected by various Native entities. The acceptance of our process to date can probably be best illustrated with the Kenai Native Association's selection of lands, under section 14(h) of the Alaska Native Claims Settlement Act. While not a requirement under the Alaska Native Claims Settlement Act the Kenai Native Association has agreed to accept the property with a road easement that will facilitate public use and private development of both the Native property and adjacent lands. The deed to this property was issued to the association last week.

6. Be available to advise and assist in the development of land-use plans for lands selected by the Natives and the State of Alaska.

Selections by Native entities are just now beginning to occur. Much assistance is occurring through phases discussed above and will occur through development of our planning methodology. The importance of this phase to the Native people is increasing as they review and understand the many complexities in the selection process.

In cooperation with the Alaska Federation of Natives, Regional Corporations, and State and Federal agencies we are now completing a handbook dealing with land use planning in the immediate village area with emphasis on the "reconveyances" required by subsection 14(c) of the Alaska Native Claims Settlement Act.

For fiscal year 1975, we are requesting an appropriation of $694,400 for the Federal share of the anticipated cost of the Commission. Under the terms of our enabling legislation, neither the United States nor the State of Alaska is responsible for paying more than 50 percent of the expenses of the Commission.

I appreciate the opportunity to appear before the committee and will be pleased to answer your questions.

SUMMARY OF COMMISSION ACTIVITIES

Mr. BINGHAM. The statement is very similar in format to the statement presented to you last year. I shall try to highlight it for you.

Basically, we are continuing our relatively narrow program which, unfortunately, becomes wider as we take things on. The Commission has certain basic commitments to look at Alaska and develop a viable land planning process, and also to assist in the implementation of the claims settlement.

FEDERAL AREA DESIGNATIONS

The one sector of our charge dealing with the Federal interest has been primarily structured around the so-called 80 million acres of section 17(d) lands, which comprise the areas recommended for new parks, forests, wilderness, wildlife refuges, et cetera.

Since appearing before you a year ago, the Commission undertook an extended schedule of hearings throughout Alaska and in four other locales—Seattle, San Francisco, Denver, and here in Washington, D.C., in which we developed land use recommendations for the areas under study, and we presented those recommendations in preliminary form to the Secretary of the Interior last August.

He has subsequently submitted to Congress, as a requirement under the act, his recommendations for the creation of new parks, forests, wildlife refuges, and so forth.

Since that time the cochairman has been in consultation with Senator Jackson of the Senate committee, and Congressman Young of Alaska and others in the House, concerning further activities of the Commission in this field. We have a request from Senator Jackson's committee requesting our participation in terms of comments

and recommendations on legislative approaches. We are in the process of trying to develop these in conjunction with the overall planning process in the State.

INVENTORY AND PLANNING POLICY DEVELOPMENT

This basically moves us to the next segment of our program, which is the planning process to insure future economic growth and development in an orderly manner. The inventory phase of our planning effort is complete at the present time. We have developed category inventories covering the entire State on what is referred to as the 1 to 250,000 scale. This is available. We have provided copies of this map inventory to the Natives, regional corporations and the State, to assist them in their planning and selection of land.

We have an agreement with the State of Alaska, under which the State is proceeding to publish this inventory in six regional profiles which, hopefully, will be completed by the end of this calendar year.

The Commission is presently developing the planning policy from which some of the major planning decisions, hopefully, can be made. We have been in contact with a number of States that are developing State land use planning procedures and policies. Basically, we are running into what I find is a problem in that in various States that have developed a statewide land use plan or planning methodology. The methodology developed is on the basis of the governing body directing or controlling subsidiary governing bodies, in the counties, municipalities, et cetera. My experience so far has been that in this type of system the implementation is left to discretion at the upper level and mandatory actions are carried out at the lesser level. We perceive some problems of our own when, on top of this type of structure, we try to insert national interest in attempting to rationalize viable planning policies that can be accepted across various levels of Government.

Hopefully, we will come to a conclusion on it in the not too distant future and develop something there.

Mrs. HANSEN. You do not have the same type of local-level structure in Alaska as does the average State in the lower 48?

Mr. BINGHAM. No. There are some variations. In some respects it is an advantageous difference, and in other respects it is not. We have the borough system in Alaska, where the established boroughs function very similar to counties in the lower 48. The unorganized boroughs, which constitute about 65 or 70 percent of the State at the present time, are somewhat a thorn in the side since there is no local organization with which to work.

We have held meetings and consultations and discussions on benefits or disadvantages of incorporating the boroughs. There is currently legislation at the State level which may result in mandatory borough action.

That local level of government, we believe, is a necessary instrument in planning and the implementation of planning.

Almost concurrently but following behind some of the policies is the actual application of land use planning. We are necessarily going to have to develop and apply a planning system to start answering

some of the more difficult questions of how much wilderness there should be in Alaska; how many, where, and what size parks there should be, national or State type, et cetera.

RECOMMENDATIONS TO CONGRESS AND FEDERAL AND STATE AGENCIES

Indications are that at this time next year, the Congress will be definitely considering the Secretary's legislative proposals. We anticipate being able to react to Senator Jackson's request in providing recommendations of the Commission as to legislative action.

We are also engaged in the process of analyzing the existing management functions of Federal land managing agencies and State land managing agencies as to their ability to make planning decisions in a coordinated manner, and their ability to implement the planning decisions after those decisions have been made.

We have a feeling that the existing conditions in Alaska and the structural aspects of some of the present agencies, not only Federal but State, too, do not quite fit, and that some sort of restructuring or coordination system is necessary.

Historically in Alaska, decisions have too often been made by an outgoing Secretary of the Interior or an outgoing Governor, or something of this nature, which resulted in long-term impacts as far as land and resource uses are concerned.

In this connection, we are looking to the recommendation of either a system of coordination or perhaps even restructuring of some present agency methodology.

ASSISTANCE TO ALASKA NATIVES

In dealing with the Alaska Natives, we have supplied them with our inventory of natural resources within the State. We have worked with the Natives in educating them and informing them on how to use this information. We have conducted a number of training sessions, both at the regional level and with cooperation at the village structure level.

The requests of the Native groups are increasing to have us assist them in explaining primarily the economic side of natural resources in Alaska. We find the Natives are extremely knowledgeable on those resources that they use to live by—fish and wildlife, and things of this nature—but they are seeking our assistance in explanation of alternative rationales behind the timber industry, the minerals industry, and things of this nature.

We are presently involved very closely with three of the regions which cover slightly over half of the State of Alaska and approximately one-third of the Native population of Alaska. We have made certain recommendations, primarily to the Interior Department and to some extent certain agencies of the State of Alaska, concerning their ongoing regulatory activities. The principal ones we speak of in the State are regulations relating to the Claims Act itself and such things as the use of off-road vehicles, and certain environmental regulations.

We discussed with the State legislature at one time a survey bill. We have had discussions relative to a Mandatory Borough Act, and a few other items of this nature.

ACCESS FOR PUBLIC PURPOSES

In the field of section 17(d) of the act, which requires the Commission to identify those measures necessary to guarantee certain rights across Native land, we have completed our study as to areas where reservations may be necessary to satisfy international treaty obligations. This involves such things as the FAA's need to have sites in northern Alaska for international air travel, navigation, and things of this nature; or, in the case of marine fisheries, Federal responsibilities under the Fur Seal Act concerning the Pribilof Islands and the same or similar activities in the North Pacific Fisheries Treaty and the need to maintain the Bristol Bay salmon.

IMPACT OF FOREIGN FISHING ON ALASKA FISHERIES

Mrs. HANSEN. I would urge you to talk to the State Department about developing an agreement with the Koreans and the Japanese, who are using gear and ships to the detriment of the salmon industry of Alaska.

Mr. BINGHAM. Alaska is well aware of this.

Mrs. HANSEN. The State Department should be assisting Alaska to maintain its resources.

I think the State Department should take a more firm position. We provide military assistance to Korea and have many agreements with Japan. I think the State Department should work out a conservation treaty for the salmon.

Mr. BINGHAM. Last week the Japanese paid a fine of $300,000 for fishing in territorial waters. The price tag is going up in that respect.

Mr. MCKAY. That is not much compared to what they take. That is just a token tax.

Mrs. HANSEN. That is correct. Our Government should sit down with Korea, Japan, and Russia, and work out conservation measures and programs that would say to those countries they are to do the same kind of conservation effort that we are trying to maintain.

You certainly cannot compare the fishing fleet of Alaska, with the kinds of ships that are from Japan and Korea. If you look where the spawning streams and lakes are, they are in Alaska.

Mr. JOSEPHSON. Last year the Governor asked the legislature to pass legislation which would limit the entry to the Bristol Bay fisheries. As you know, that bill did pass the legislature, and it was to take effect this year, whereby the State would begin to limit the amount of American gear in the waters of Bristol Bay.

The bill is controversial.

We now find it is somewhat a moot question because, for reasons of preserving the runs, the whole fishery, which was once the largest in the world, may have to be closed a large part of the season.

Mrs. HANSEN. The coast of my State and the coast of Mr. Wyatt's State have suffered similar problems. They are fishing offshore to the extent of depleting all of the hake, for example, and depleting the salmon runs at various times. All people are asking the Russians, Koreans, and the Japanese to do is to adopt measures of conservation.

I do not think the State Department is going to get out of those striped pants long enough to talk to fishermen.

32-043 O - 74 - 48

I hope they read this.

Mr. BINGHAM. The Commission is having a look at this type of question in developing its planning policies, as to the impact of some of these international situations, be it the fisheries situation or the Migratory Bird Treaty Act, or things of this nature, which have substantial impacts on the Alaska livelihood and economy.

Mr. JOSEPHSON. One of the impacts, if the bays and offshore areas are depleted, people turn landward to use the resources of the land. The effort is to maintain those resources on the same basis.

Mrs. HANSEN. If the Natives cannot sustain themselves by fishing, they are going to move inland onto the refuges.

Mr. BINGHAM. It is a matter of the tradeoff of one resource to the use of the other.

POSSIBLE CLOSURE OF BRISTOL BAY

Mr. YATES. What happened in Bristol Bay? I understand it may close for a season? Is that because of the fact there is no fish?

Mr. BINGHAM. The situation is that professionals estimate the number of fish that must escape upstream to spawn in order to maintain adequate quantities of fish. You are getting offshore or at-sea fishing by the foreign fisheries which are eliminating the larger size run in there. By the time they get in to Bristol Bay, the numbers of fish are down to the point where the regulatory people say they ought to be allowed to go up to spawn.

This is what is involved there.

Mr. YATES. How far out to sea does this occur?

Mr. JOSEPHSON. The extension line was set up in a treaty theoretically to avoid Japanese capture of American-spawned high sea salmon. It was a rough line. I think scientific information since that treaty was adopted suggests that the line was inadequate.

One of the arguments, I think, the State Department would make in its defense is that the treaty comes up for renewal annually, and some treaty is better than none at all. If negotiations broke down, the 165 degree extension line would vanish. It is not totally effective because our evidence is that fish travel beyond that line.

Mrs. HANSEN. But there is an international responsibility for conservation.

Mr. YATES. Are all the fish they catch only in American waters? Are there any other runs out of Siberia or Japan?

Mr. BINGHAM. There are runs out of Siberia and out of Canada, but the predominant red salmon, for instance, in the North Pacific are Bristol Bay salmon.

Mr. JOSEPHSON. This is not just a matter of conservation practice. It is also a matter of the reduced technology of our fishery industry vis-a-vis the fisheries of other nations.

Mrs. HANSEN. Is not part of the problem that everybody owns their own boat or else are under lease to a cannery? You are operating with a relatively small type of operation. Whereas the foreign fishermen are operating with a big mother ship and trawlers.

Mr. JOSEPHSON. As you know from your own experience in Washington, it is very difficult to talk to Americans, who see the fish being depleted, about their own responsibilities when they see others are de-

pleting the resource that they would like to preserve. The closing of the Bristol Bay area is a dramatic change.

Mrs. HANSEN. That will affect every cannery and every fisherman who goes there from the Northwest. You are going to have economic repercussion.

Mr. JOSEPHSON. Beyond the economics, I think if Alaska is to be a fine State in the future, it should be based upon more than the petroleum resource.

SURFACE TRANSPORTATION SYSTEMS AND LOCAL ACCESS REQUIREMENTS

Mr. BINGHAM. We have completed a staff study which is basically an analysis of possible surface transportation construction in the next 20 to 30 years, including 8 or 9 routes which would be additional to the existing backbone of the road system which the State has. We are going to hold public hearings at the end of this month to get public reaction to these possible public transportation routes and modes. The results will be a Commission position as to major transportation systems within the State which, for purposes of comparison with the lower 48, I have referred to as comparable to the Interstate Highway System. There is much controversy.

Mrs. HANSEN. Have you ever built a road anyplace without a little controversy?

Mr. BINGHAM. Yes, but not very far.

The third area has to do with local easements. These have to do with the principal powerlines or access roads into or out from Native villages. This is being conducted on a village-by-village study in cooperation with the village people themselves. That is producing very excellent results, to date.

ASSISTANCE TO NATIVES ON PLANNING ACTIVITIES

In working with the Natives on land use planning, we have conducted one seminar involving some 50 Native representatives that we brought together, plus others who were able to come themselves, to discuss the planning process and the advantages and disadvantages of planning, the need for local government or not.

We have also prepared in the first draft stage, a handbook dealing with land ownership and planning within the immediate village areas, with special emphasis on what is referred to as the reconveyances required under section 14(c) of the act.

That is a relatively quick overview, not only of what has gone on, but what is going on.

I brought with me, to try to beat the Post Office, copies of our annual report for each member of the subcommittee, which expresses in more detail what we have done during the past calendar year.

Mrs. HANSEN. We will insert the justifications at this point in the record.

[The justifications follows:]

JOINT FEDERAL-STATE LAND USE
PLANNING COMMISSION FOR ALASKA

Salaries and Expenses

Appropriation, 1973	$708,000
Total Available, 1973	708,000
Appropriation, 1974	$694,400
Transferred to "Operating Expenses, Public Buildings Service", General Services Administration	- 81,700
Total Available, 1974	$612,700

Summary of Increases and Decreases, 1975

	Base for 1975	Increase 1975	
To provide for space and related services in GSA facilities per Public Buildings Act Amendments of 1972 (P.L. 92-313)	----	$81,700	
Net increase, 1975			81,700
Budget estimate, 1975			$694,400

Analysis by Activity

Activity	Fiscal Year 1973 Amount Available	Fiscal Year 1974 Total Appropriation	Fiscal Year 1974 Transfers 1/	Fiscal Year 1974 Amount Available
Salaries and expenses	$662,143	$694,400	$-81,700	$612,700
Unobligated balance lapsing	46,657	----	----	----
Total	$708,800	$694,400	$-81,700	$612,700

1/ Represents transfers to General Services Administration

Salaries and Expenses

	Fiscal Year 1973 Amount Available	Fiscal Year 1974 Amount Available	Fiscal Year 1975 Estimate	Increase(+) 1975 Compared to 1974	Page Ref.
Salaries and expenses	662,143	612,700	694,400	+81,700	2
Unobligated balance lapsing	46,657	- -	- -	- -	
Total	708,800	612,700	694,400	+81,700	

Salaries and expenses: FY 1974, $612,700; FY 1975, $694,400; and increase of $81,700. The increase consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1)$81,700	--	$81,700	--	To provide for space and related services in GSA facilities per P.L. 92-313
Total 81,700	--			

Cost Factors Involved in Increase

(1) Rent, communications and utilities, $81,700

Need for Increase

(1) GSA Space Cost +$81,700

This increase will provide for payment to the General Services Administration for Commission-occupied space in Anchorage Alaska in fiscal year 1975 in accordance with the Public Buildings Act Amendments of 1972 (P.L. 92-313). The amount requested is based on the rate supplied by GSA, which approximates commercial equivalent rates in Anchorage. The same space was financed by an appropriation transfer in 1974. The change in the method of financing space costs requires an increase in 1975 as compared to the adjusted appropriation in 1974. However, on a total appropriation basis, the $694,000 requested for fiscal year 1975 remains unchanged from the fiscal year 1974 amount.

Program of Continuing Work

The Joint Federal-State Land Use Planning Commission for Alaska was established in accordance with Section 17 of the Alaska Native Claims Settlement Act (Public Law 92-203) and by Act of the State of Alaska (AS 41.40.010). It began its activities in June 1972 with the establishment, by the Co-Chairman, of an office in Anchorage, Alaska. In July 1972 the Governor of Alaska and the Secretary of the Interior appointed the remaining eight Commissioners and assisted with the organizational meeting of the Commission.

In FY 1975 the Commission will continue a program of land use planning and submission of recommendations to the State and Federal governments on disposition and use of lands as required by Section 17 of the Alaska Native Claims Settlement Act of 1971. The program for FY 1975 will contain the following:

- Land use planning including identification and making recommendations with respect to areas best suited for retention in Federal ownership such as parks, game refuges, etc.; areas to be made available for disposal; and uses to be made of lands remaining in Federal and State ownership.

- Advising Native village and regional corporations on land use plans for selected lands.

- Reviewing existing public land withdrawals and making appropriate recommendations to the President of the United States.

- Holding public hearings on land-use planning programs and establishing a committee of land use advisors.

- Recommending appropriate program and budget levels for Federal and State land managing agencies to the President and the Governor. Also recommending changes in Federal or State laws, policies, and programs as deemed appropriate.

- Making recommendations to improve coordination and avoid conflict between the Federal and State governments and the Native people in land selection and land use decisions.

- Identifying necessary public easements across lands selected by village and regional corporations.

- Reporting to the President, the Congress, the Governor, and the State Legislature on the Commissions' activities.

For data gathering and research activities on Alaskan resources and present and projected land uses, the Commission is utitizing the services of a multi-discipline team consisting of resource specialists from various Department of Interior Bureaus, the Department of Transportation, the Forest Service, and the State of Alaska. Initially established as the North Alaska Planning Team under the jurisdiction of the Bureau of Land Management, this group provided an organization-in-being which could provide the Commission with resource data and professional expertise without the necessity for recruiting an entirely new staff of resource specialists. The team assignments are received from the Commission, but for administrative purposed the team members will continue to be employees of the various Federal Bureaus and the State of Alaska. Salaries of most of the Federal employees on the team, and other team expenses including administrative support costs, but excluding the salaries and related expenses of State employees assigned to the team, are paid by the Commission on a reimbursable basis. The State of Alaska pays the salaries and expenses of its employees who are team members, and these costs are considered as part of the 50 percent share of total commission expenses paid by the State.

In FY 1974, the Commission's immediate staff consist of 16 permanent employees including an Executive Director, Co-Counsels, an Economist, a Coordinator for Native Affairs, a Planner, and clerical support. This staff, together with the Federal Co-Chairman and the Governor's Representative, total the current 18 full-time employees of the Commission. Fiscal Year 1975 will see some change in emphasis in the Commission's program causing a decrease in the multi-discipline team and an increase of one Commission position (Regional Planner) for a total staff of 19 permanent employees.

A total budget of $694,400 is requested for the Federal share of Commission expenses in Fiscal Year 1975. The State of Alaska has indicated that an equivalent amount consisting of $500,000 in cash support, and $194,400 of in-kind support is included in the State's preliminary budget budget plans for FY 1975. The States's fifty percent share of Commission expenses is reflected in the estimate for Cooperative Funds on page 5.

Personnel Summary

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions.....	9	14	15
Full-time equivalent of other positions...	2	1	1
Average paid employment.....	8	15	16
Average GS Grade.....	10.5	10.5	10.6
Average GS Salary.....	$17,402	$19,100	$19,500

ITEMIZATION OF ESTIMATE

Joint Federal-State Land Use Planning
Commission for Alaska
Salaries and Expenses (Federal share)

	Actual 1973	Estimate 1974	Estimate 1975	Increase (+) Decrease (-)
Program and Financing:				
Total obligations.....	$662,143	$612,700	$694,400	+$81,700
Transferred to other Accts..	---	81,700	---	---
Unobligated balance lapsing.	46,657	---	---	---
Appropriation:	$708,800	$694,400	$694,400	---
Obligations by Objects:				
11.0 Personnel compensation.	142,000	295,000	305,400	+ 10,400
12.1 Personnel Benefits: Civilian Employees.....	39,000	70,000	70,000	---
21.0 Travel and Transportation of persons.....	20,000	56,000	60,000	+ 4,000
22.0 Transportation of things.....	---	5,000	5,000	---
23.0 Rent, Communications, and utilities.....	46,000	19,000	60,000	+ 41,000
24.0 Printing and reproduction.....	---	10,000	15,000	+ 5,000
25.0 Other Services.....	385,143	139,700	160,000	+ 20,300
26.0 Supplies & Materials...	28,000	16,000	17,000	+ 1,000
31.0 Equipment.....	2,000	2,000	2,000	---
Total Obligations.....	$662,143	$612,700	$694,400	+ $81,700

Cooperative Trust Funds
(State Share)

Section 17 (a) (9) (A) of the Alaska Native Claims Settlement Act, Public Law 92-203, limits the Federal share of the expenses of the Joint Federal-State Land Use Planning Commission for Alaska to 50 percent. The State of Alaska provides for the remaining 50 percent of commission expenses through a combination of (1) assignment of State employees to the Commission's professional resource staff and (2) cash payments. The total estimated contribution for FY 75 is $694,400 of which $194,400 will be provided in-king through assignment of State employees; the remaining $500,000 will be a cash contribution as reflected in this account.

Personnel Summary

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions.....	9	4	4
Full-time equivalent of other positions..	2	1	1
Average paid employment.....	8	5	5
Average GS Grade.....	10.5	10.5	10.6
Average GS Salary.....	$17,402	$19,100	$19,500

ITEMIZATION OF ESTIMATE
Joint Federal-State Land Use Planning
Commission for Alaska

Cooperative Funds

	Actual 1973	Estimate 1974	Estimate 1975	(+)Increase (-)Decrease
Program and Financing:				
Total obligations	$400,000	$500,000	$500,000	---
Appropriation.....	$400,000	$500,000	$500,000	---
Obligation by Objects:				
11.0 Personnel compensation.....	$122,000	$ 83,000	$ 83,000	---
12.0 Personnel Benefit: Civilian Employees.....	33,000	27,000	32,000	+ 5,000
21.0 Travel and Transportation of persons.....	20,000	46,000	56,000	+10,000
22.0 Transportation of things...	---	5,000	5,000	---
23.0 Rent, Communications, and utilities.....	28,000	60,000	60,000	---
24.0 Printing and reproduction..	---	10,000	15,000	+ 5,000
25.0 Other Service.....	178,000	251,000	230,000	-21,000
26.0 Supplies & Materials.....	17,000	15,000	16,000	+ 1,000
31.0 Equipment	2,000	3,000	3,000	---
Total obligations.....	$400,000	$500,00	$500,000	---

TIME SCHEDULE FOR COMMISSION ACTIVITIES

Mrs. HANSEN. What is the current status of your work? Are you on schedule?

Mr. BINGHAM. I would say at this stage, very definitely we are generally on schedule. We have before us some very tight time schedules. We have fallen behind the schedules set on the easement or transportation study. However, the other groups involved, the Natives on the one hand and the Department of the Interior on the other hand, are moving equally slow, so we find we are really not so far behind.

I am very optimistic that we will meet our time schedules. I must say we are on schedule.

MAJOR PROBLEMS

Mrs. HANSEN. What do you consider your two chief problems?

Mr. BINGHAM. The development of a resource use or planning policy, if I may use that terminology, that is acceptable at multilevels of government, Federal versus States versus private, and that can be utilized horizontally through bureaucracies at both levels of government. This is an extremely difficult task unless you want to talk in very broad generalities such as "The environment is nice. The economics are nice."

That does not help us in making planning decisions. I would say this is probably our worst problem.

Mrs. HANSEN. What is your other basic problem?

Mr. BINGHAM. The second one is basically the ability to communicate throughout Alaska. This relates more to time than langauge barriers.

Much of our work is going to involve face-to-face discussions. The ability to get around or to bring people together in Alaska is limited without getting into endless money problems and things of that nature.

Mr. Josephson may have some different views here.

Mr. JOSEPHSON. I think Mr. Bingham gave an excellent answer. From my standpoint, perhaps the problem, as we try to respond to each task that Congress and the legislature give us, and all the requests presented by various agencies, Native groups, and so forth, is also to keep abreast of our overall job of furthering the planning process and working with the agencies in the public and private sector.

Internally, we have to keep aware that we have a limited amount of time; that we are a temporary agency. While we want to be responsive, we have some broader mandates.

COMMISSION MEMBERSHIP

Mrs. HANSEN. Please insert in the record a listing of the current membership of the Commission.

Mr. BINGHAM. I can give you that for the record. It is also contained in the annual report. There are four appointed by the Governor and four appointed by the Secretary of the Interior. Mr. Silcock was appointed by the President.

[The information follows:]

FEDERAL-STATE LAND USE PLANNING COMMISSION FOR ALASKA COMMISSIONERS

Federal appointees: Mr. Burton W. Silcock, Federal Cochairman; Miss Celia Hunter, executive secretary, Alaska Conservation Society. Dr. Richard Cooley,

economist. Mr. Joseph H. Fitzgerald, former chairman, Federal Field Committee for Alaska. Mrs. Tay Thomas, author.

State appointees: Mr. Josepht P. Josephson, State Cochairman Designee. Dr. Max Brewer, State Commissioner of Environmental Education. Mr. Charles Herbert, State Commissioner of Natural Resources. Mr. James Hurley, Mantanuska Valley farmer. Mr. Harry Carter, formerly executive director, Alaska Federation of Natives.

COMMISSION MEETINGS

Mrs. HANSEN. How many formal Commission meetings have you held to date?

Mr. BINGHAM. That is rather difficult to say without going back and adding them up, because some of the meetings that we held last summer in working on (d) (2) were spread over a 2-month period, but it was formally one meeting.

The Commission formally meets on an average of about once every 5 to 6 weeks. This would be, say, 10 formal meetings a year.

Mr. JOSEPHSON. We utilize our Commissioners between meetings.

For example, one of our Commissioners has been very active in the Subcommittee on Assistance to Native Corporations. He travels constantly to Nome and other locations, working with the Native villagers in this process.

Members can be more involved than just attending formal meetings.

Mr. BINGHAM. I might expand that a little bit.

We have at present three subcommittees which work in subcommittee groups, much similar to this subcommittee and the full Appropriations Committee. The Commissioners are working at other times other than the full Commission meetings.

The most active subcommittee to date has been the Native Assistance Group. In addition to Commission meetings, almost every month the Commissioners are spending another week out of the month on subcommittee work.

FISCAL YEAR 1973 UNOBLIGATED BALANCE

Mrs. HANSEN. You had an unobligated balance of $46,657 lapsing at the end of fiscal year 1973. Why did this occur?

Mr. BINGHAM. For two reasons.

One, we were still in the learning process and did not acquire our full staff as quickly as anticipated.

Second, we had anticipated some additional publications that did not reach the stage of being published in fiscal year 1973.

OFFICE SPACE COSTS

Mrs. HANSEN. Your appropriation for fiscal year 1974 and your estimate for fiscal year 1975 are the same, $694,400. Yet, in the justifications you show an increase of $81,700. Will you please explain this situation.

Mr. BINGHAM. I will attempt to, and then, if that is not satisfactory, I will ask Mr. Culp to explain it.

In both cases we are dealing with $694,400. The system utilized in acquiring space through GSA caused the increase requirement. That $81,700 is our annual space rental. In 1974 it was handled as an

appropriation transfer reducing our net appropriation; in 1975 it will be handled as a payment which means we need the transferred amount restored to the appropriation. It is the rent of the two floors of the building we occupy.

Mrs. HANSEN. Is that not a sizable amount to pay for rent?

Mr. BINGHAM. It is average or slightly under average. It figures out to be about $10 per square foot per year. Space in Anchorage is now going at about $14 a foot a year, with the demand for new office space for the pipeline consortium.

Mrs. HANSEN. The oil companies have had an effect on the rental costs?

Mr. BINGHAM. Yes. We have the possibility that in the latter part of 1975 this rent may reduce. We have an option in the lease to decrease some of the space. We have a question mark as to whether we will need or not need that space, an option not available to us until about midyear.

REQUESTED INCREASE OF ONE POSITION

Mrs. HANSEN. You are requesting an increase of $10,400 for one Commission position. What are the details?

Mr. BINGHAM. The thing one must look at here is that on the State funding side of it a comparable amount will be paid. We have asked for and received from OMB approval to request an increase of one permanent position on the staff which will be a regional planner. Incidentally, I realize there are two males and one female sitting across the table from us. Our regional planner presently on the staff is a very excellent female.

Mrs. HANSEN. Good. I am glad to see we have equal rights in Alaska.

AMOUNT PAID BY THE COMMISSION FOR RESOURCE PLANNING TEAM

Please insert in the record the amount paid on a reimbursable basis for fiscal year 1974, and your estimate for fiscal year 1975, of the work performed by the multidiscipline team. Indicate in the tabulation the agency involved, the number of people, and the duration of the work.

Mr. BINGHAM. I will have to supply that for the record. I can give you a round figure at present if you wish.

[The information follows:]

REIMBURSABLE COSTS FOR RESOURCE
PLANNING TEAM

Reimbursement to the Federal agencies whose personnel are assigned to the Resource Planning Team is provided for through an annual agreement between the Commission and the Bureau of Land Management, U.S. Department of the Interior. The Commission reimburses BLM which in turn reimburses the other involved agencies. Actual 1973 and estimated 1974 and 1975 reimbursable costs paid by the Commission are as follows:

FY	Agency	Total Man Years	Permanent Man Years	Temporary Man Years	Miscellaneous* Man Years	Reimbursements**
1973 Actual	BLM	12.31	6.89	5.03	0.39	$310,609.85
	USGS	2.00	2.00			64,600.00
	BSF&W	1.00	1.00			26,000.00
	BOM	1.00	1.00			24,300.00
	Total	16.31	10.89	5.03	0.39	$425,509.85
1974 Est.	BLM	8.40	6.00	2.00	0.40	$267,000.00
	USGS	1.75	1.75			52,000.00
	BSF&W	0.80	0.80			21,000.00
	BOM	0.75	0.75			20,000.00
	Total	11.70	9.30	2.00	0.40	$360,000.00
1975 Est.	BLM	9.00	6.75	2.00	0.25	$323,000.00
	USGS	1.00	1.00			27,000.00
	Total	10.00	7.75	2.00	0.25	$350,000.00

* Miscellaneous time from agency people not specifically assigned to Team.

** All payments by Commission made to BLM, other agency amounts estimated from billings or anticipated billings from BLM.

BLM: Bureau of Land Management
USGS: Geological Survey
BSF&W: Bureau of Sports Fisheries & Wildlife
BOM: Bureau of Mines

STATE SHARE OF COMMISSION FINANCING

Mrs. HANSEN. Do you foresee any difficulties in the State of Alaska being able to provide their 50-percent share?

Mr. JOSEPHSON. The answer to that question can best come from me, Madam Chairman. I think the answer is that we do not see any difficulties. We have enjoyed very strong support from the Governor and his administration. There may be some small difference when the legislature gets through. Action on the State appropriation will be completed in April, so the Congress will know very soon.

Mrs. HANSEN. Will you inform us of any change as soon as possible?

Mr. JOSEPHSON. Yes. Speaking of that, Mr. Bingham made reference to the publication of atlases or profiles, and said that was by contract with the office of the Governor. That, we think, is a very exciting project. By July we will have available to you and other Members, the first volume of the six-volume series. It will be useful to the Congress as well as to our own Commission and people in all walks of life.

CONSULTANT CONTRACTS

Mr. WYATT. Are you spending any money on grants for outside counsel or professional advice?

Mr. BINGHAM. For 1974, the answer currently is "No."

Mr. WYATT. What do you plan for 1975?

Mr. BINGHAM. For 1975, there is a possibility. We are talking with two or three consulting firms about the possibility of some assistance in the planning phase. Until we get further into those discussions, there is a question of whether or not we will.

I might mention one other area that could be called a consultant. We have presently out a bid request for a publication which would include artist-type work. This is a normal contract-type approach.

Mr. JOSEPHSON. With regard to the question about the interdisciplinary team, our answer will be supplied for the record.

In regard to Mr. Wyatt's question, the point is that as our resource team completes the basic inventory, the data base, in the planning process, we are exploring the possibility of making some shifts to get help out of our own shop from those who have been involved in regional and statewide land use planning, as in the case of Colorado. We are going to have to make an assessment of whether we should do that or maintain the kind of staff structure we have now, because we are entering a new phase building on the data base we have accumulated.

AVOIDING LAND MANAGEMENT PROBLEMS RELATED TO LAND OWNERSHIP PATTERNS

Mrs. HANSEN. This comment should be taken as a warning. As your land withdrawals proceed I would hope that you are not placing the State of Alaska in the difficult position, as developed in the past in other States, with checkerboard management. The State of Alaska is so huge and its management problems are so great, particularly as you try to safeguard the resources and at the same time provide for the economy of Alaska.

It is a greater task than has ever confronted an area before.

For instance, in a refuge area, you are usually contemplating caribou trails, moose grounds, and so forth. On the perimeter of that land you have State lands. Then into this confusion you have your Native villages. I can see that the State of Alaska can be left with a very sad situation as far as land management is concerned.

Mr. JOSEPHSON. You have identified the third major problem, Madam Chairman. I have spoken out on this, sometimes to the dismay of my colleagues on the Commission. We want to be sure, from our point of view, about the Federal proposal especially, because in the land use planning proposals and in the Secretary's own proposals, there will be certain controls or sanctions on the areas adjoining the proposed parklands, even though they are non-Federal lands.

There is nothing wrong with that in principle, but we want to be sure in the designation of those areas' so-called environmental concerns of the Federal establishment, those designations are reasonable, and also there is reciprocity, that the Federal Government is willing to be a good neighbor in its own management in the interest of State lands.

This is a very difficult problem.

Mrs. HANSEN. Yes. In a State like mine, for example, we had the problem of the granting of lands for the railroad rights-of-way. Some of those lands adjoined State lands, and some were in private hands.

When you manage, for example, a block of timber, it is a very difficult problem to have to go across somebody's land without much provision for access or responsibility.

The same thing is true in fire management. Alaska has had a particularly bad history with fires because they occur yearly, and they cause a lot of damage.

I just want to say on behalf of the people of Alaska and particularly the government of Alaska, I hope you will be as thoughtful and considerate of the State as you are of the Federal Government. You cannot operate the Federal Government to the exclusion of the well-being of the State.

Mr. JOSEPHSON. We have a better understanding of these problems. For example, we have been informed the Assistant to the Secretary, Mr. Hughes, and Mr. Kenneth Brown will be with the Commission at the April 16 meeting to discuss how transportation issues may affect proposed parks and refuges. We look forward to that, because they will get our perspective.

USE OF VIDEOTAPES

Mr. YATES. Last year the Commission requested an increase of $14,000 for other services. Part of the money was to be used for videotapes of public hearings and field hearings in villages.

Did you use that money? How did it work out?

Mr. BINGHAM. We have used the videotape. The problem we have developed with its use is that it is a rather time-consuming and expensive process to convert a lot of this tape down to some usable proportions.

It has been quite useful in reviewing deliberations in that many of the Native peoples better express themselves visually, perhaps, than by the written word or the oral word.

We have found, however, I am afraid, that the cost of producing videotape under bush conditions is——

Mr. YATES. Prohibitive?

Mr. BINGHAM. In ranking it in priority of spending our money, yes.

Mr. JOSEPHSON. We have taken some of those tapes to the Department in Washington to show. We have shown them in meetings outside Alaska where people had not experienced what bush life was like.

Mr. BINGHAM. We have gone more to better utilization of audiotape.

In the planning and selection seminar we put on for the Native groups last fall, the radio station of the University of Alaska assisted us in taping that entirely. We have now produced six 1-hour tapes which have been sent out to the bush radio stations, and they are now being played out there, so local people are receiving them.

RESOLUTION OF CONFLICTS

Mr. YATES. The Commission makes recommendations to improve coordination and to avoid conflict between the Federal and State governments and the Native people in various land selection and land use decisions. Have the problems been resolved generally? Do the Natives usually acquiesce? What has been your experience?

Mr. BINGHAM. Actually, I would say in most cases it has been a sharing of the concerns and mutual acceptance.

Mr. JOSEPHSON. We have a meeting this week in Washington with the Alaska task force on what is the last remaining land selection problem in terms of a regional Native corporation which we feel has not had adequate withdrawals made for selection purposes. We are often able to review those proposals and give some independent input to the Department, and also convey some of the concern in Alaska over these problems. I think we play a useful, maybe therapeutic role.

I know I was contacted personally by some of the Native corporations which were upset over State protests on issues of Native village eligibility. We were instrumental, I think, in removing those protests. In most of the situations, we reexamined the cases and confined the protests to a few of the more serious ones. We played a role in this.

Mrs. HANSEN. Mr. McDade.

COMMISSION PROCEDURES

Mr. MCDADE. Does the Commission in reaching its decisions customarily vote on proposals?

Mr. JOSEPHSON. Yes.

Mr. MCDADE. Do you do it all in public?

Mr. JOSEPHSON. We have had probably hundreds of rollcall votes. For example, we act on subcommittee reports and Commission amendments and proceed under formal rules of order.

Mr. MCDADE. We could look at the record today as an indication of what kind of cooperation exists.

Mr. BINGHAM. Actually, during the deliberation last summer, the press was very insistent on getting these rollcall votes. They were looking at State versus Federal, and so forth. The press was very unhappy that it could not find that the interest of the individual

Commissioners was the only thing that showed up. If you did not know the individual and simply looked at the record, I doubt that many people could guess which appointing authority they came on by, State Governor or the Secretary of the Interior.

RELATIONSHIP TO 701 PLANNING ACTIVITIES

Mr. McDade. How can we be sure, for example, we are not duplicating the 701 planning function? That money is for a comprehensive planning effort stimulated with Federal funds. In this instance, we have this unique agency. I am sure it is needed. How can you give us assurance we are not duplicating?

Mr. Josephson. As I understand it, HUD funds have not been utilized by the Division of Planning and Research of the State of Alaska in its contracts with us. There is a very strong relationship that has been established with the office of the Governor.

Mr. Bingham. Another point involved here, too, is that a lot of the individual areas of planning are local community planning projects which are in essence in much greater detail than the Commission gets into. It is more detailed at the lower governmental level.

Mr. McDade. How do you interface with that, for example, in terms of the State Governor's office?

Mr. Bingham. We have very direct relations with the State department of community and regional affairs which handles that. In fact, in the planning survey, that department is actively working with us on that handbook and, in turn, is encouraging various villages to request 701 money so they may as an entity, do their own individual planning.

Mr. McDade. Do villages get 701 funding in Alaska?

Mr. Bingham. Not too many as yet.

Mr. Josephson. Beyond that, the State department jointly sponsored our Native planning and selection seminar for us for Natives on land selection issues.

Then in the prospectus that Mr. Bingham and Chairman Silcock and I will be presenting this month to the Commission, we propose a regional planning effort to go directly to local governments that have planning authority and Native organizations. So, they are actively participating in the process.

We do not want 10 people coming down from the mountain with tablets of stone.

Mr. McDade. One of the purposes of 701 money is to help the local communities. I hope it is working as well as it sounds. It is reassuring to me.

Thank you.

APPRECIATION OF COMMITTEES ASSISTANCE

Mrs. Hansen. Thank you, very much.

Mr. Josephson. I know the Commissioner and Governor Egan would want me to thank you for your help to Alaska over the years, and to wish you well in your new career.

Mrs. Hansen. Thank you.

Mr. Bingham. When I was visiting at BLM, they have a brandnew map of Alaska out in case you want one, which is updated and colored.

Mrs. HANSEN. Very good.

Mr. JOSEPHSON. We brought our woman commissioner with us last year. We have two now.

Mrs. HANSEN. I thoroughly enjoyed my visits to Alaska. I wish I could have returned.

Mr. BINGHAM. We are still there. I hope you will have more time for yourself here one of these days.

Mrs. HANSEN. I hope so.

Thank you again. Give my best wishes to the Governor.

WEDNESDAY, APRIL 3, 1974.

OFFICE OF WATER RESOURCES RESEARCH

WITNESSES

WARREN A. HALL, DIRECTOR
JACK C. JORGENSEN, ACTING ASSOCIATE DIRECTOR
F. WILLIAM KOOP, EXECUTIVE OFFICER
JACK O. HORTON, ASSISTANT SECRETARY, LAND AND WATER RESOURCES, OFFICE OF THE SECRETARY
WILLIAM BETTENBERG, DEPUTY DIRECTOR OF BUDGET, OFFICE OF THE SECRETARY

Mrs. HANSEN. The committee will come to order.

We now have the Office of Water Resources Research and our principal witnesses are Mr. Jack Horton, Assistant Secretary, Land and Water Resources, and Warren A. Hall, Director.

INTRODUCTION OF WITNESSES

Please introduce the people with you today Mr. Horton.

Mr. HORTON. Yes, Madam Chairman, I will do that and say that I have no formal statement for the committee. I would like to make a few introductory remarks. I have, as you have noted, the Director, Warren Hall, and the Acting Associate Director, Mr. Jack Jorgensen, and the Executive Officer of OWRR, Mr. Bill Koop.

I want to say with respect to both Dr. Hall and Pat O'Meara that I enjoyed in the last year a very rewarding experience working with these two gentlemen. I have the highest respect for their professional and personal capabilities.

Their budgets have been cut back somewhat due to the posture of the administration with higher priorities in other areas.

Nonetheless, I think that they both have a very bright future and we are regrouping at the moment to determine the types of water research that will be necessary for the development of our energy position in the administration.

WATER FOR ENERGY

We have formed, for your information and that of the committee, an action group in the Department called Water for Energy, and Dr. Hall and Mr. O'Meara both sit on that along with the Commissioner

32-043 O - 74 - 49

of Reclamation, representatives of the Director's office of the Geological Survey and the Director of the Bureau of Land Management. This committee is not a study committee. It is an action committee designed to anticipate the types of water demands that will be necessary for energy development, particularly in the Northern Great Plains for coal and the Piceance Basin for oil shale.

They meet on a regular basis, in addition to which we have a staff subcommittee or a working group which works to support the policy committee on recommending to the Secretary the types of actions on water that will be necessary for energy development, and this includes quality problems as well as quantitatve problems.

I am very pleased to be present, Madam Chairman, this morning.

Mrs. HANSEN. Have you read the article in this morning's paper on water in Leningrad?

Mr. HORTON. I didn't see that.

Mrs. HANSEN. They have a parasite in the water supply of Leningrad. It was a very interesting article.

Mr. HORTON. I was in Leningrad in January of 1967 and all the water there was in solid form. I would assume the parasites also would have been in solid form. It was 40 below zero.

Mrs. HANSEN. Apparently this is some new thing that has happened.

STATEMENT OF DIRECTOR HALL

Mr. Hall, you have quate a lengthy general statement. Please insert it in the record and summarize it for the committee.

Mr. HALL. Very good.

[The statement follows:]

STATEMENT BY WARREN A. HALL, DIRECTOR, OFFICE OF WATER RESOURCES RESEARCH, U.S. DEPARTMENT OF THE INTERIOR, BEFORE THE HOUSE SUBCOMMITTEE ON APPROPRIATIONS FOR THE DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES

Madam Chairman:

It is an honor and a privilege to appear before you and other members of this Committee to present the appropriation request for the Office of Water Resources Research (OWRR) for fiscal year 1975.

The purpose of this statement is to summarize and in some instances supplement the narrative statements included in the budget justifications document. It provides information as to the current status of the program being conducted under provisions of the Water Resources Research Act of 1964, and summarizes plans for the 1975 program.

Program Management

Because of technical problems involved for OWRR in dealing effectively with Water Resources Research Institutes in each of the several states and because of the general similarity of water resource problems of states in a cohesive and contiguous hydrographic region, the State Institute Directors have formed formal regional associations. Through these regional groups common problems can be pooled for purposes of defining important problems and for analyzing those problems to determine problem oriented research needs. These associations also serve to assure the conduct of research in the most effective way possible under the financial constraints imposed, and the prompt dissemination of the results to those who need them. OWRR has encouraged the formation of these associations and utilizes them as a management structure to further improve the program and its accomplishments.

In addition to focusing on the most urgent national problems, OWRR also has a special responsibility for assuring that State, local and regional water problems are not ignored and that the States through adequate research attention to those problems will be able to resolve them. This is not simply altruistic Federal assistance, since national problems, as a generality, consist of the aggregate of those problems which State and local levels of government are not able to resolve with their own resources. In the pursuit of this cooperative Federal/State program the States have recognized their responsibility and are making contributions that exceed the Federal funding in the Sec. 100 allotment program as well as the Sec. 101 matching grant program. Table I illustrates the approximate funds supplied by the States for the 1973 Title I program.

Research Program Structure

Our research program is structured to support five current major program objectives. These are: (1) resolving the water and related

resource problems of energy production, conversion and conservation; (2) preserving the quality of the environment; (3) providing the scientific basis for acceptable land management practices; (4) developing, preserving, utilizing and otherwise conserving the Nation's water resources; and (5) assisting the Indians in resolving those special water and water related land use problems which may inhibit achievement of their full self-determination. These are all high priority areas and are not listed in order of importance. The water resources objective has been further subdivided to permit special emphasis on improving water use efficiency, particularly irrigation in the West, facilitating achievement of water reuse at maximum practicable levels and for resolving urban area water and water related problems. Table 2 illustrates the approximate distribution of OWRR research funds to research problems associated with these objectives.

Program Development

During the past year changes in program development procedures have been made to permit OWRR to focus positively on program objectives relating to major water and water-related problems confronted by this Nation. We believe we have accomplished this without losing the fundamental beneficial characteristics which have made this program effective in the past. We have heeded the Congressional admonition that "all wisdom does not reside in Washington." We are utilizing the "consultation and collaboration" requirements proposed by the Administration and approved by the Congress to assure that we identify the detailed characteristics of the Nation's water and water-related problems with the advice and assistance of local, state and regional water officials and concerned private parties as well as university and Federal government experts. We recognize that no single individual, or even a Federal office, can possibly have sufficiently broad knowledge to provide the wisdom and innovation needed to define research requirements relating to the broad spectrum of important local, state, regional and national water and related resource problems which was mandated to the Secretary of the Interior by Public Law 88-379.

The nature, scope, and severity of water resources problems varies from state to state and from region to region. Similarly, quantity and quality of the research competence that can be used effectively to perform research relating to these problems is not distributed equally among the several states. For these reasons there is considerable variation in the amounts of OWRR research funds that are provided to research institutions and organizations within the states through research grants and contracts. The estimated state and regional distributions of OWRR's 1974 Title I and Title II research funds are set forth in Tables 3 and 4.

1975 Budget Request

OWRR's request for 1975 is $12,700,000, a decrease of $989,000 from the 1974 appropriation and $529,000 under the amount available for obligation in 1974. The request includes:

(a) $4,539,000 for "Assistance to States for Institutes" in support of research, research results dissemination actions, and related activities by 51 water resources research institutes that were established and are operating at one university in each State and Puerto Rico under the authorization set forth in Title I, Section 100, of the Act. This amount is $1,101,000 below the 1974 appropriation, and $561,000 under the amount available for this program in 1974.

(b) $3.0 million for "Matching Grants to Institutes" in support of research on a cost-sharing basis as authorized by Title I, Section 101, of the Act. This $3.0 million is identical to the 1974 amount appropriated and available for obligation.

(c) $3.17 million for "Additional Water Research" relating to the mission of the Department of the Interior and carried out by qualified public and private organizations and academic institutions under the Title II provisions of the Act. The $3.17 million is the same amount appropriated and available for obligation for obligation in 1974.

(d) $940,000 for operation of a "Scientific Information Center" for the collection, retrieval, and dissemination of scientific and technical water resources information, which is $6,000 above the amount appropriated and available in 1974.

(e) $1,051,000 for "Administration" to support program development, management, operating and related administrative costs, an increase of $106,000 over the amount appropriated and $26,000 over the amount available for obligation in 1974.

Annual Report

Copies of our 1973 Annual Report recently were furnished the Committee. That report provides more detailed descriptions of the various aspects of OWRR program operations than are contained in this statement or in the budget justifications document. In addition to covering research results and their dissemination and application, the report discusses manpower training and public involvement aspects of the program. It also devotes separate sections to highlight reports from each of the State institutes and to activities of OWRR's Water Resources Scientific Information Center.

Distribution of Appropriation

Significant elements of the five budget activities which are included within the 1975 request for the OWRR water resources research program are as follows:

(1) Annual Allotments of $89,000 will be provided to each of the original 51 water resource research institutes located at a State university in each of the 50 States and Puerto Rico, pursuant to Section 100 of

the Act. Three additional institutes authorized by the P.L. 92-175 amendment to the basic Act continue to be unfunded.

* This allotment provides basic and essential financial support to each of the 51 institutes to assist them: (a) in conducting their water research programs as approved by OWRR; (b) in the training of potential water resource personnel through the participation of selected students as research assistants; (c) in the dissemination of research results; and (d) in carrying out consultation and collaboration actions to involve water officials within the States.

* Though not required to match Federal annual allotment funds, the States are contributing approximately $5 million to the annual allotment program each year as indicated in Table 1.

* The program ties together the university programs of all states, and thus serves to achieve effective coordination, avoid duplication, and encourage cooperative efforts.

* Based largely on the annual allotment program, institutes have assumed State leadership roles in providing advisory, consultant and research services directed toward developing solutions to urgent water-related problems. The State institute directors have also taken positive action to consult and collaborate with leading water officials within the States in the development of their annual programs, as required by the December 1971 amendments to the Act.

* The annual allotment program provides the base Federal/State resources to explore innovative ideas developed by highly qualified and competent experts that, without the program, would remain dormant. Research successfully launched under modest annual allotment projects has often attracted financial support from other sources, including private industry, and has resulted in expanding projects with good payoff.

* With the 1975 Federal funds, supplemented by non-Federal contributions, the State institutes will carry forward research at an average of approximately six to eight modestly funded projects per institutes.

* In addition to the 51 State institute universities, from 25 to 35 other universities are expected to participate in the 1975 program, thus increasing the competence available to the State institutes.

* Approximately 1,000 students have received training annually by participation as research assistants on these projects.

* Over the past 9 years the Nation's professional competence and capability in water resources has been significantly upgraded, due in large part to opportunities and interest sparked by the OWRR program including this annual allotment program and the matching grant and Title II programs discussed below. This capability has then become available to the states

(1) Annual Allotments (Continued)

in solving their own problems, thus benefiting the Nation. Federal and local water organizations, of course, also utilize this new competence.

(2) Matching Grants totaling $3 million in Federal funds will be awarded to the State water resources research institutes pursuant to Section 101 of the Act.

* This program provides the State institutes with up to 50% of the funding necessary to conduct water resources research projects which could not otherwise be undertaken.

* No set amount is granted each State. State institutes, involving universities where the institutes are located and other universities as well, compete for Federal matching funds by submitting research proposals to OWRR. Competition between institutes is keen, with 323 proposals requesting over $12 million having been submitted for 1975 consideration of which approximately 100 will be selected for support. This competition permits OWRR to assure that funded projects will be of high quality. The 323 proposals received had already been screened for technical merit and relevance to important problems by the State institutes with consultation and advice from leading water officials within the states.

* Research proposals are reviewed and selection is made based on their overall merit as reflected by the contribution the research can be expected to make toward the solution of important regional and other high priority water problems. Assistance in project review and establishment of research priorities is regularly obtained from water resources scientists and specialists in other Department of the Interior bureaus and in other Federal agencies to supplement evaluations made by the OWRR staff.

* Training is also an integral part of this program. More than 750 student engineers and scientists currently are receiving training in water resources research disciplines while serving as research assistants to experienced project leaders.

(3) Contracts and Grants for additional water resources research work, totaling $3.17 million in Federal funds, will be awarded to competent public and private academic and nonacademic organizations and individuals pursuant to Title II of the Act.

* Under this program the services of outstanding research organizations and individuals, in addition to those eligible to participate under the Title I university institute research program, are available to carry out research to fill voids in the overall research program and to carry out research directed toward the solution of water problems of urgent national concern related to the mission of the Department of the Interior as prescribed by law.

(3) Contracts and Grants (Continued)

* Projects are reviewed and selected by OWRR based on their merit and relevance to research voids in major water resources problem areas. As in the matching grant program, OWRR obtains outside review and evaluation assistance from Department of the Interior bureaus, other Federal agencies, and others having special competence and interest in the water resources areas proposed for research attention.

* For the 1975 program a total of 295 research proposals requesting $36 million have been submitted for funding consideration. It is expected that approximately 50 or 60 of these proposals will be approved.

* Title II funds have been about equally divided between academic and nonacademic entities. During the 1968-1973 period, 89 projects were conducted by private industry, 21 by nonprofit research groups, and 19 by State or local public agencies. The remaining 150 projects were carried out by academic institutions.

(4) Water Resources Scientific Information Center (WRSIC) operations provide an effective means for collecting, retrieving, and disseminating scientific and technical information concerning water resources research and developments to meet the needs of organizations and individuals working in the water resources field. The Center's services improve the coordination of research, increase and facilitate communications among persons within the Nation's water resources community, speed the application of research results, and reduce undesirable duplicative research efforts.

* The Center will acquire more than 12,000 abstracts in 1975 reflecting the results of completed research and will process and publish these abstracts in its "Selected Water Resources Abstracts" journal. Over 3,000 copies of each semi-monthly issue are made available to serve some 15,000 persons throughout the Nation's water resources community.

* Ten "literature centers of competence" will be supported in 1975 to provide scientific information base materials. Expanded cooperation of Federal, State and other water resource organizations, to provide additional information, will be encouraged.

* The Center also will publish: an annual "Water Resources Research Catalog" that identifies and provides summary descriptions of approximately 5,500 to 6,000 recently initiated and uncompleted water resources research projects; state-of-the-art reports; and several topical bibliographies in special subject areas in response to requests from users of the WRSIC system.

* In 1975 a computer-supported search and retrieval system, which uses the Center's machine-readable information base to respond to specific information requests and for the economical production of topical bibliographies, will be further refined and improved.

(4) Water Resources Scientific Information Center (WRSIC) (Continued)

* Established about 6 years ago, WRSIC's machine-readable information base now contains 70,000 items including abstracts and appropriate keywords and indexing terms relating to completed research and research results, all or any part of which can be readily retrieved as needed. Hence, the Center continues to increase its capacity to respond effectively and comprehensively to the technical information needs of the Nation's water resources community. The information base, kept up to date by prompt acquisition by WRSIC, now permits a person who can describe his high priority water resources problem area information needs with appropriate and specific keywords, to quickly obtain bibliographical references and abstracts of research results and related information pertinent to that problem. Members and staff of this Committee are invited to consider using the WRSIC retrieval system whenever they desire to obtain information about recent research developments in the water resources area.

(5) Program Administration and Management activities will continue to be carried out by a small staff.

* Staff responsibilities include the development of plans, programs, and budgets; identification of water research priorities; review, analysis, and selection of projects for support; monitoring progress of research projects; coordination of research activities including the conduct of meetings, field visits, and providing liaison between officials of Federal agencies, State institutes, and others; and providing normal housekeeping activities required for program conduct.

* The administration, management, and program development and monitoring workload handled by the OWRR staff continues to increase each year. In part, this expanding workload is due to an increasing national awareness of the urgency of finding solutions to various water-related problems such as those which concern energy development, environmental protection, and land use, and to the fact that an ever-increasing number of agencies, organizations, and individuals are gaining knowledge of and developing an interest in the research and related activities of this relatively new program. A further increase results from the introduction of new program management practices for improved identification and definition of the most critical research needs and the development of cost-effective research programs to meet those needs. It is expected that these workload increases will be absorbed through administrative efficiencies.

* For 1975, 46 positions are proposed of which 8 are assigned to the Water Resources Scientific Information Center. This is identical to the 1974 staffing plan.

Research Results from the Program

Examples of research results stemming from the OWRR program are set forth in each of the budget justification document narrative statements relating to the annual allotment, matching grants, and Title II programs. Scores of additional useful results are mentioned in each of the OWRR

annual reports issued over the past several years. Significant, also, is the fact that the OWRR program has provided the "seed money" to support initial research on many new ideas for contributing to water problem solution and, when the research produced promising results, other agencies became interested and applied their resources to carry on the work. A further contribution or advantage of the OWRR program stems from the relative absence of program bias in determining specific research to be undertaken and research procedures or methodology to be followed. Researchers involved in the OWRR program are encouraged to be totally objective in developing findings and recommendations even though such findings and recommendations may suggest changes in current or accepted policies, positions or practices of a Federal, State or local water development or management agency.

Effect of 1975 Budget Request

The requested appropriation will permit the Office of Water Resources Research to carry out an effective program at a funding level somewhat below the current-year level. It will enable OWRR to continue to:

(a) Encourage a competent and diversified group of water resource scientists to perform research directed toward the solution of urgent water resource problems existing at State, regional, and national levels. While particular emphasis will continue to be given to pressing current problems calling for immediate research attention, it is expected that a reasonable amount of the effort will be directed toward improving water planning, conservation and related methodologies and practices which will permit anticipation and, hopefully, avoidance of future problems.

(b) Attract and contribute to the effective on-the-job training of scientists, in a variety of water resource related specialties, thus providing an increasing number of qualified personnel to meet the future demands of the Nation's water resource community.

(c) Promote improved communication and coordination of efforts among those engaged in Federally sponsored water-related programs; avoid undesirable replication of research effort; and provide improved means for collecting, storing and disseminating information about water resource developments and results to persons and organizations who will apply such information to existing or potential water resources planning, management, research, and related problems.

Increasing Program Effectiveness in the Future

At the budget hearings a year ago, I included in my prepared statement a brief description of certain new program development practices, then just initiated, directed toward improving the relevancy and cost-effectiveness of research conducted under the OWRR program. These new practices were referred to in the beginning sections of this statement. With full cooperation and considerable leadership provided by the State institutes, the objective was to assure that the varied and excellent competence of the

institutes was applied cooperatively in multi-state teams to explicitly specify major water-related problems on an area-wide basis, determine potential alternative solutions, and identify the research needed to achieve selected alternative solutions. Although this effort has been constrained by budgetary considerations in both administration and research, progress to date has been very encouraging and initial results will be apparent in the 1975 program as it is carried out. It is expected that the 1975 Title I program research of the State institutes and their cooperators, as well as the Title II program, will reflect an increasingly integrated total program that focuses more directly upon the most significant water research needs of the Nation, leaving less urgent research for future year consideration. It is OWRR's intent to continue aggressively to pursue this new program development technique in 1975, making adjustments and refinements where deemed advisable as a result of operating experience.

Summary

The major purpose and objective of the program administered by the Office of Water Resources Research is to assist in meeting the Nation's present and future quantitative and qualitative water requirements by: conducting a meaningful water resources research program; attracting and training scientists and engineers in water resources oriented disciplines; and assembling and disseminating information concerning ongoing research and the results of completed projects. Excellent progress has been made to achieve this purpose and objective. Looking to 1975 and beyond, it is expected that OWRR program progress can and will be enhanced: (1) by working jointly and cooperatively with, and benefiting from, the excellent research organization and competence developed by the State institute universities, by their affiliates, and by the private research community, during the past several years; and (2) by adopting new research program development procedures that will more adequately assure that the research conducted has high cost-effective potential and is clearly relevant to the most critical water problems of the Nation.

Because the OWRR program was initiated some 9 years ago, outstanding water resources talent has been developed and is now available, when needed and for purposes determined most urgent, to assist the Nation in solving water-related problems of the greatest urgency such as those involving energy development, environmental protection, and land use, as well as problems inherent in water shortages and water of degraded quality.

Table 1

Non-Federal Contributions - OWRR Title I Programs - FY 1973
(In thousands of dollars)

State	Annual Allotment Program (Sec. 100)	Matching Grant Program (Sec. 101)	Total
Alabama	$ 121	$ 72	$ 193
Alaska	185	30	215
Arizona	31	72	103
Arkansas	115	50	165
California	242	145	387
Colorado	118	115	233
Connecticut	192	8	200
Delaware	48	-	48
Florida	155	140	195
Georgia	92	81	173
Hawaii	116	95	211
Idaho	72	92	164
Illinois	106	116	222
Indiana	50	98	148
Iowa	99	158	257
Kansas	53	59	112
Kentucky	124	98	222
Louisiana	67	-	67
Maine	70	23	93
Maryland	50	-	50
Massachusetts	137	147	284
Michigan	477	64	541
Minnesota	42	128	170
Mississippi	52	13	65
Missouri	79	110	189
Montana	68	59	127
Nebraska	105	86	191
Nevada	54	56	110
New Hampshire	110	-	110
New Jersey	128	63	191
New Mexico	273	55	328
New York	100	102	202
North Carolina	191	110	301
North Dakota	135	51	186
Ohio	63	69	132
Oklahoma	100	48	148
Oregon	92	112	204
Pennsylvania	39	125	164
Puerto Rico	98	-	98
Rhode Island	149	32	181
South Carolina	56	78	134
South Dakota	86	46	132
Tennessee	95	15	110
Texas	101	140	241
Utah	106	88	194
Vermont	63	-	63
Virginia	110	91	201
Washington	160	87	247
West Virginia	34	11	45
Wisconsin	180	101	281
Wyoming	49	20	69
Totals	5,638	3,559	9,197

Table 2

DISTRIBUTION OF OWRR RESEARCH FUNDS BY
USDI AND OWRR WATER-RELATED PROGRAM PRIORITY SUBJECTS
(In thousands of dollars)

	Program Priority Subject Areas	FY-1974 Estimated	FY-1975 Estimated
I.	Energy-Related Research: thermal loading; heat dispersion; mining effects; beneficial uses; underground heat storage, etc.	690	1,100
II.	Environmental Protection: eutrophication; identification, source, fate, effects and control of pollutants; water quality management; environmental impacts, etc.	3,990	3,000
III.	Improved Land and Water Planning, Management and Use: planning methodologies; socio-economic aspects; multiple use; alternative strategies; river basin development; watershed management; water pricing; law, etc.	1,630	1,700
IV.	Water Resources:		
	A. General-hydrology, water movements, evapotranspiration; precipitation patterns, ground water; supply; sedimentation, etc.	1,600	1,500
	B. Water Reuse - waste water reuse	90	200
	C. Irrigation Efficiency - optimization of water application; improved management, etc. ...	570	600
	D. Urban Water Problems - distribution systems; storm runoff, etc.	940	900
V.	Indian Self-Determination: improved resource management; reservoir development, etc.	70	100
VI.	Others: information systems; technology transfer; remote sensing and monitoring systems; engineering design; research needs, etc.	320	300
	Totals	9,900	9,400

Table 3

Estimated State Distribution of OWRR Research Funds - FY 1974
(In thousands of dollars)

State	Title I	Title II	Total
Alabama	$ 126	$ -	$ 126
Alaska	130	-	130
Arizona	180	55	235
Arkansas	117	-	117
California	200	690	890
Colorado	228	71	299
Connecticut	100	-	100
Delaware	118	-	118
Florida	114	70	184
Georgia	183	-	183
Hawaii	140	-	140
Idaho	155	-	155
Illinois	190	85	275
Indiana	130	-	130
Iowa	140	-	140
Kansas	180	-	180
Kentucky	180	-	180
Louisiana	100	-	100
Maine	127	-	127
Maryland	147	-	147
Massachusetts	145	385	530
Michigan	130	49	179
Minnesota	240	39	279
Mississippi	125	-	125
Missouri	120	32	152
Montana	160	69	229
Nebraska	260	117	377
Nevada	175	71	246
New Hampshire	100	-	100
New Jersey	100	228	328
New Mexico	190	-	190
New York	185	194	379
North Carolina	255	-	255
North Dakota	125	-	125
Ohio	180	-	180
Oklahoma	165	97	262
Oregon	130	140	270
Pennsylvania	125	106	231
Puerto Rico	105	-	105
Rhode Island	135	-	135
South Carolina	135	-	135
South Dakota	130	-	130
Tennessee	130	-	130
Texas	250	136	386
Utah	375	72	447
Vermont	100	90	190
Virginia	230	121	351
Washington	100	75	175
West Virginia	100	-	100
Wisconsin	280	-	280
Wyoming	129	178	307
Dist. of Columbia	6	-	6
Totals.....	8,100	3,170	11,270

Table 4

Estimated Regional Distribution of OWRR Research Funds - FY 1974
(In Thousands of Dollars)

	Regional Area	FY-74
1.	New England Region - Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont	$ 1,180
2.	Middle Atlantic Area - Delaware, District of Columbia, Maryland, Pennsylvania, New Jersey, New York, and West Virginia	1,330
3.	South Atlantic Gulf Region - Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina	1,500
4.	Ohio-Great Lakes Area - Illinois, Indiana, Kentucky, Michigan, Minnesota, Ohio, and Wisconsin	1,510
5.	Missouri Basin Area - Iowa, Kansas, Montana, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming	1,630
6.	Southern Plains Area - Arkansas, Louisiana, New Mexico, Oklahoma, and Texas	1,200
7.	Colorado-Great Plains Area - Arizona, California, Colorado, Nevada, and Utah	2,060
8.	Pacific-Northwest Area - Idaho, Oregon, Washington, and Alaska	620
9.	Insular Area - Puerto Rico, Virgin Islands, Guam, and Hawaii	240
	Total:	$11,270

RESEARCH MANAGEMENT

Mr. HALL. Thank you, Madam Chairman.

I will summarize it as briefly as I can. I think that it is important, though, to call attention to some changes in the structure of our research management in OWRR, particularly as it relates to the title I program at the institutes, one in each State.

The most important factor here is a regional organization of these institutes into eight groups. The functions of these eight groups are to work together to identify the critical problems that exist in each region, to analyze those problems to determine what is the important research that needs to be done in order to resolve them, to work as a unit, as a multiuniversity unit, to conduct the research that needs to be done with respect to those problems, and to disseminate the research results back out to those who require it.

REGIONAL AREAS

Mrs. HANSEN. Please place in the record at this point your regional areas and the States that comprise them. Give me an example of what you have on the west coast?

Mr. HALL. On the west coast we have the Colorado Great Basin region and the Pacific Northwest region. The Pacific Northwest region consists of Idaho, Washington, Oregon, and Alaska.

The Colorado Great Basin essentially is the States of the Colorado River compact.

We will provide a complete statement of how those operate.

[The information follows:]

REGIONAL AREAS

Regional associations of States have been established to facilitate improved development and management of a problem-oriented OWRR program. Their purpose is to help assure that the varied and outstanding research competence that is available through the State institutes is applied cooperatively to: specify major water-related problems on an area-wide basis in consultation and collaboration with leading water officials within the States; determine potential alternative solutions; identify the research needed to achieve selected alternative solutions; and facilitate dissemination of research results to those who need them.

Some States have interests in more than one of the regional areas listed below. For example, Pennsylvania's interests relate to both the Ohio-Great Lakes Area as well as to the more eastern Middle Atlantic Area. In such cases a State will participate, as appropriate, in the deliberations of more than one regional association.

NEW ENGLAND

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

MIDDLE ATLANTIC

Delaware
District of Columbia
Maryland
Pennsylvania
New Jersey
New York
West Virginia

SOUTH ATLANTIC GULF

Alabama
Florida
Georgia
Mississippi
North Carolina
South Carolina
Tennessee
Virginia

SOUTHERN PLAINS

Arkansas
Louisiana
New Mexico
Oklahoma
Texas

OHIO–GREAT LAKES

Illinois
Indiana
Kentucky
Michigan
Minnesota
Ohio
Wisconsin

MISSOURI BASIN

Iowa
Kansas
Montana
Missouri
Nebraska
North Dakota
South Dakota
Wyoming

COLORADO–GREAT PLAINS

Arizona
California
Colorado
Nevada
Utah

PACIFIC–NORTHWEST

Idaho
Oregon
Washington
Alaska

INSULAR[1]

Puerto Rico
Virgin Islands
Guam
Hawaii

PROGRAMMATIC STRUCTURE

Mr. HALL. The second part is programmatic structure in which to identify more precisely exactly what the research needs are with respect to the priority problems within the programs of the Department of the Interior.

This is particularly applicable to OWRR's title II program. The Department of the Interior has established five priority programs or objectives—energy, environment, land use planning and management, helping the Indians achieve self-determination, and then the water resources program which is divided into three priority units with respect to OWRR's water resources research. These are water use efficiency, water reuse, and urban water problems.

Again our purpose here is to provide cross-check structures between the five priority program areas as we describe them, for example, and the research categories established by the Interagency Committee on Water Resources Research—how does water supply impact with energy, and so on down the list. We think this will give a much better hold on what it is we are trying to do as well as assist us in developing future programs.

Mrs. HANSEN. You don't need research if you don't have water.

Mr. HALL. That is correct, but what we want to do is identify where our ignorance is so that we don't wind up destroying our water resources at the same time we are trying to enhance them.

In doing this I think it is important to state again that we still believe that the congressional admonition made at the time the act was passed that all wisdom does not reside in Washington—and by

[1] An informal association due to geographic dispersion.

that we do not mean the State of Washington, Mrs. Hansen, but Washington, D.C.—and that we should seek ideas about what the problems are and how they might be solved from those people who have ideas across the entire United States, particularly the experts in the field.

So despite the fact that I talk about a change in the structure of research management, we are not moving to a structure whereby the Office of Water Resources Research, on its own, determines what is important. Rather, it is our intent to strengthen our contacts with the State water officials through consultation and collaboration, that we use the talent available through the State institutes to ferret out the exact nature of the problems that we are facing, and see to it that our research program does take care of those problems.

1975 BUDGET REQUEST

The budget proposal consists of the section 100, allotment to States, $4,539,000. This request is down $1,101,000 from the adjusted 1974 appropriation.

Mrs. HANSEN. Every university in the United States has discovered what you are requesting.

Mr. HALL. Every university in the United States knows and understands what has happened to that particular part of the budget, yes, ma'am. It is down $561,000 from the funds that are available to OWRR for the current year. The three new institutes authorized in the recent amendments will remain unfunded in this budget.

The matching grants program will be $3 million, which is exactly the same as at present. In the title II additional water research program there is $3,170,000. and this is no change from 1974. For the Water Resources Scientific Information Center the request is $940,000, which is an increase of $6,000 over the 1974 appropriation. And in administration we are asking for $1,051,000 which is up $106,000 from previously. The $106,000 is because of a change in the way we are accounting for our space.

GSA SPACE COSTS

In 1975 we will pay space rental costs out of the administrative budget.

Mrs. HANSEN. How much is your rental cost?

Mr. HALL. Bill, you will have to give me the figure. I think it is $70,000.

Mr. KOOP. The amount is $59,000.

Mr. HALL. $59,000 for rent, and the remainder is the increased pay costs that came up during the past year.

PROGRAM EFFECTIVENESS

I think it might be in order to speak briefly to the question about how effective the OWRR program has been because this question does come up.

Just before coming over here, I took a look at the State of Washington institute since I thought you might be interested in this.

Mrs. HANSEN. I think you should also address yourself to Colorado and Utah.

Mr. HALL. I am not citing Washington as the prime example or the best example. It is a good institute but we have a lot more.

Mr. HORTON. He could have looked at Wyoming, Madam Chairman, also.

Mr. HALL. Wyoming is a good one and anybody else that wants to speak a good word for their institute, I think it would be welcome.

But simply because I wanted to see what the story was and since there have been some arguments that the allotment program in particular winds up with research results sitting on the shelf and not being used, I took a look at the 13 State of Washington allotment projects started in 1972 and 1973—these are relatively recently started—and asked what has been done with these particular projects. Because of a misunderstanding of my staff member who ferreted this particular material out I actually received no report whatsoever on two of them so we are really talking about 11. But of the 13 or 11, whichever way you want to look at it, 9 have produced useful results and have been picked up by State agencies. The specific State agencies are identified, the context in which the research was done has been identified, and in four cases the State agency and/or Federal agency has thought well enough about the initial research to pick it up and pay for it from here on by themselves. No OWRR money will have to be provided for those anymore.

Mrs. HANSEN. Which State agency in the State of Washington uses this information?

Mr. HALL. It is the Department of Ecology, the Department of—is it Water and Natural Resources?

Mrs. HANSEN. Yes.

Mr. HALL. And then, also, the Corps of Engineers, some private organizations or sportsmen's organizations, EPA, the city of Spokane, and the agricultural people in one case. Of the whole 13 projects, only two were identified as not having produced results that were in use at the present time. In one of them the principal investigator left a project and as a consequence it fell in limbo at that point and was stopped. The other one is a type of project that the results are related to a much longer period of time and we would not expect the results to be applied until later. I think this is a pretty good record.

Mrs. HANSEN. What were some of the projects? Use a State as an illustration.

Mr. HALL. One example is a project that produced results useful to the National Park Service. They were concerned about who uses the parks and what is the structure of the users. We talk about visitor days as being the use of a recreational facility. Here the idea was to find out what is the structure—are they family units, are they individuals, are they youth groups, are they hippies or just whatever—who use these facilities and in what way do they use them. This study was aimed at trying to find out just exactly what the structure of the users is so that park officials can design facilities to better suit the various categories of users rather than basing their design solely on the number of visitor days.

A second example was concerned with the State Department of Public Health. I think it has a slightly different name in Washington. At any rate, they were concerned about the survival of intestinal bacteria in the mountain waters in the recreational areas—how long

do they last, what are the conditions that determine whether they survive or don't survive, retain their viability. The study results were used by that State agency.

Mrs. HANSEN. You better inform OMB that there isn't much use to perform water research if they don't grant money to these various agencies to provide the very most elemental sanitation facilities.

I would hope that there would be some input between the water research office and the people who are coordinating the budget, pointing out what the disastrous results can be over a period of time with this raw sewage entering our water supply.

Mr. HALL. I certainly have done my share of attempting to do an educating job there, both when I was in the Office of Science and Technology and at the present time. One of the problems we have is that we need to consider the interested bystander speaking up in these cases; that is, someone who has some good facts on an important problem. As you know, I am not a career bureaucrat. I am in here to get this job done. When I get it where I think it will be done I am going back.

Mrs. HANSEN. The problem is in the Office of Management and Budget. I have decided to change the name of OMB, leaving out management and making it Office of Budget.

Mr. HALL. What I was trying to refer to is the fact that I am not trying to protect my own job by presenting the points that I have presented. We have a number of other examples that I could bring out.

COOPERATIVE STUDIES

For example, I mentioned that we are developing these interuniversity, interinstitute cooperative studies. I just picked five out of OWRR's annual report.

The Cornel Great Lakes study which Congressman Fascell of Florida has cited in the Congressional Record is an outstanding example of what this particular program was intended to accomplish.

Mrs. HANSEN. What is that region doing relative to Lake Erie?

Mr. HALL. This particular study is attempting to solve the institutional questions of how you get Canadians, State, Federal people, and the International Joint Commission into a package where they can effectively manage the water quality problems of the Great Lakes.

Mrs. HANSEN. As you are well aware, the quality of the water at Lake Erie has been under a great deal of discussion for several years.

Mr. HALL. Yes; and we are not the only ones who are researching the problems of the quality of Lake Erie.

Mrs. HANSEN. What have you done to coordinate this research? You have several States and Canada that are affected.

Mr. HALL. This is right. We have a number of things.

One is that we do need and have coordination because we are not the only people who are concerned with and ought to be doing research in the Great Lakes, particularly Lake Erie.

Mrs. HANSEN. What I am asking is what have you done to bring together all the known facts?

Mr. HALL. This particular project is an example of where we have been doing just that, of seeing what is the situation, what are the facts about the management of the Great Lakes. This happened to be the institutional question.

We have another one that is being organized at the present time, the same group of universities, but under the leadership of the University of Wisconsin, which is doing the same thing with respect to the sources of pollution from the land. We have identified where it comes out of the city sewers, but we do want to know where it comes off of the diffused sources, the watershed contributions in general from the agricultural operations, and things of this sort.

The hydrology of the Great Lakes is primarily being conducted by the EPA and the Corps of Engineers. They are studying the hydrologic movements, the currents, as part of the International Hydrological Decade, and you will remember the international field year on the Great Lakes, they developed methodology for accomplishing this work, working cooperatively with the Canadians. The lake study in that particular case was Lake Ontario rather than Lake Erie because the people that were involved felt they could tackle that problem easier than they could the problem of Lake Erie without getting into political questions. But the methodologies were developed for intergovernmental coordination and cooperation in developing the hydrologic studies, the biologic studies, and so on.

RESEARCH COORDINATION

Mrs. HANSEN. As you are well aware, before the Office of Water Resources Research began there must have been 20 agencies involved.

The Government seems to operate on a crisis basis. What the committee is concerned with, is what use will this information be if it is not make known to the people who are going to solve the questions that you suggest.

Mr. HALL. I think here we have to make sure we keep in mind the people who have been assigned the responsibility for pulling together, the Great Lakes Basin Commission, for example, and the International Joint Boundary Commission between Canada and the United States, and what we do is coordinate our work directly with those people. This study that I just mentioned was conducted through and with the assistance of the Great Lakes Basin Commission and the International Joint Boundary Commission.

RESULTS IN GREAT LAKES

Mrs. HANSEN. What successes have you had to date in the Great Lakes area? To my knowledge you have been performing research in this area for almost 10 years.

Mr. HALL. Yes, it has been about 10 years. It will be 10 years coming up. We will have a decade celebration I guess one way or the other.

Mrs. HANSEN. That depends.

Mr. HALL. The early years of this work, as you will recall, were primarily directed toward specific research studies, specific research projects, and it was only in the last year or so since I came in that we have been redirecting it toward the regional and the broader approach and I think we have made a lot of progress in that period of time, but in terms of having the results I would say this Cornell Great Lakes Study is an example——

Mrs. HANSEN. Aside from performing the study, what has happened as a direct result of this study?

Mr. HALL. The House Subcommittee on the Great Lakes has utilized the results of this specific project to identify the institutional requirements that are going to have to be met if we are going to be able to manage the Great Lakes as a unit.

Mrs. HANSEN. In 10 years they should have developed at least one step to take beyond laying out guidelines for a House committee.

Mr. HALL. If we had had this operation going 10 years ago I would agree with you. This particular project started approximately a year ago and is one of the regional studies that we have been developing in our new management concept. I cannot be responsible for what was done in the years prior to the time that I came in. One of the reasons I came in was to see to it that this regional concept was developed and was put into action, and we are doing our best to do that.

USE OF STUDIES

Mrs. HANSEN. What exactly has been utilized in the studies to date. You had various State institutes participating: New York, Ohio, Wisconsin, Minnesota, et cetera.

Mr. HALL. Yes, Michigan, also.

Mrs. HANSEN What have they done as a result of the research?

Mr. HALL. In fact these are the things that did come out of our research, really identifying what are the dimensions of the problems we have on the Great Lakes. Prior to that time, in the first place people didn't think they had any problems on the Great Lakes.

Mr. YATES. Come on. I have lived on the Great Lakes all my life and Lake Erie has been dying for 20 years. We know that they have had problems.

Mr. HALL. Yes, but the main things were the symptoms, that is, the algae blooms and the destruction of the beaches and, of course, we knew the primary source of the problem, that is, the raw sewage and partly treated sewage being dumped into the lake, but the dimensions of the impact on the aquatic life, and so on, were unknown. These types of studies have been produced and have all been fed into the broader EPA studies and into the Great Lakes Basin Commission studies that have been going on and they have been contributing in this sense.

Mr. HORTON. Madam Chairman. I think the thrust of your question is an excellent one. We have been working closely with Dr. Hall over the past year to insure that the coordination of OWRR and the specific programs are applied to regional problems of national or at least regional importance, and certainly your questions on the Great Lakes are applicable to the northern Great Plains, to the Piceance Basin, to the Colorado River System——

Mrs. HANSEN. I just used Great Lakes as a good example of one of the places where there were enormous problems.

Mr. HORTON. We are pushing for specific results to come out of a lot of this effort which have been collated together and we are pushing more toward an applied scientific program as opposed to purely scientific inquiries, and Dr. Hall's proposal for regional coordination amongst the institutes is a step in that direction.

But we are pressing him now to become result oriented and to the extent he can pull a lot of these individual institute research programs together into a program of regional significance at least. And the Great Lakes is a good case in point.

Mr. HALL. These are precisely the objectives we are attempting to accomplish through the reorganization of the program I was referring to in the first part of my remarks.

Mrs. HANSEN. Pure research sitting on a shelf isn't going to do anybody any good.

Mr. HALL. That is right.

Mrs. HANSEN. It is just going to be another scholarly document.

Mr. HALL. That is exactly our argument. That was also my reason for reciting the use of results of the State of Washington allotment program. I haven't developed information equivalent to that on the other State institutes, but I am sure they go the same way. In other words, the last couple of years our research is not just going up on the shelves.

RETRIEVAL OF RESEARCH RESULTS

Mrs HANSEN. No matter what happened prior to that time, there surely must be some research that was useful.

Mr. HALL. Oh, yes.

Mrs. HANSEN. Because you don't destroy all the material developed.

Mr. HALL. This is one of the things we are developing with our computer information retrieval system. The first years of this retrieval effort were primarily oriented toward finding out what was on those shelves and getting it abstracted, indexed and categorized in a way we could retrieve and use it without the expenditure of tremendous amounts of manpower.

At the present time we are beginning to experience a very rapid upsurge in the use of this computer retrieval system. We have probably about a tenfold increase in the utilization of that system during the past year and we expect it to be even higher yet. One of our problems is that a lot of people don't realize what you can get out of this system and as a consequence they don't come in and ask for it, so we are going to go to them with demonstrations and with instructions that show how to get this information off the shelf.

Mrs. HANSEN. You have been promising us for many years that information could be obtained through the retrieval system.

Mr. HALL. The retrieval system was not started until 1968.

Mrs. HANSEN. But that was 6 years ago.

Mr. HALL. But it takes time to review the literature, put it in a form, get the abstract, get the key words, and get it in there where you have a sufficient base in order to make it worth your while to go through the retrieval system.

My point is now it is worthwhile, the base contains about 70,000 abstracts, and we are able to get good documents showing us what it is that we do know about a good many problems, and we are getting this material out to the people that need to use it.

RESEARCH COST EFFECTIVENESS

One of the questions that always comes up is cost effectiveness. Cost effectiveness in research is always very difficult to document because it is seldom used directly. It is always used indirectly and by the time of the final product it is like trying to find a special brick in a building, but we do have many that are worthy of mentioning.

One, for example, was a research project at the Virginia Institute that has literally revolutionized the production of corn down there. In terms of the number of farmers now following the recommendations of the research investigators, their costs of production have been reduced by about 100, well, 150 percent of the annual cost of the total OWRR allotment program. There is a cost effectiveness, in terms of 1 year's return in reduction of costs, equal to about $8.5 million and potential of about twice that. In addition, this farming practice produces about 20 percent more corn per acre and I haven't included that as a benefit because I don't know exactly how many acres of corn they have down there.

Mr. VEYSEY. What is the nature of the project?

Mr. HALL. This was a project that originally started to determine what was going to be required in the way of supplemental irrigation to improve the corn yields in the State of Virginia. The researchers developed a new and different tillage process, a way of growing corn, that reduces the cost of growing it by about $8 million a year in the farms which have adopted it so far, which is about 35 percent of the cornland at the present time in Virginia. The conservation of moisture that occurs eliminates the need for supplemental irrigation and has resulted in about a 20-percent increase in yield.

Mr. VEYSEY. Would that be a typical project, direct agricultural objective?

Mr. HALL. Not necessarily typical because this one is complete in itself. In other words, the project developed the methodology, the way to do it, the whole technology is all done in a single research project. Usually, what a specific research project in our program does is contribute one part of the total new knowledge needed to solve a problem.

Mr. VEYSEY. Why wouldn't that be undertaken by their agricultural extension work as an agricultural project?

Mr. HALL. It was considered as a water project because of the fact that they were concerned about supplemental irrigation and its effect on water supplies. What this has done is, in effect, to eliminate the need for going into a supplemental irrigation program.

Mrs. HANSEN. Your agricultural extension agents are not necessarily water technicians. I think that is the point.

Mr. VEYSEY. They are corn technicians, though.

Mrs. HANSEN. That is correct. But they were working with water in this instance.

Mr. HALL. One of the advantages of working in a university is that the university, the agricultural extension department, is prepared to pick up good results from our program and help to see that they are utilized.

CALIFORNIA WATER PROGRAMS

Mr. VEYSEY. I have to confess that being one who is not aware of what you have done, for example in California, I don't know what programs have been funded that make sense.

Mr. HALL. Yes. I can tell you a lot of them from personal experience because I was the director of the California institute for 6 years.

Mr. VEYSEY. Where is it?

Mr. HALL. Our headquarters were at UCLA, but it was in the whole University of California. We operated with scientists on all the cam-

puses, including the Davis campus which is where the agricultural units were.

An illustration of a California project is one that was concerned with green belt irrigation, utilizing and renovating waste waters. Such green belts provide fire protection benefits and help get rid of the waste. It also provides wildlife habitat and aids in water conservation since the waste water percolates through and comes back in the system for reuse.

The California institute has dug very deeply into the problems of nonwettable soils. As you know, when there is a burn in southern California, the net result is the creation of a soil that is nonwettable. When the rains come, they remain on the surface and they simply won't percolate down in the soil. As a result, you have a rapid runoff and heavy erosion. What the researchers have done is to identify the cause of this as being a chemical that is in the native materials. It accumulates in the ground and on the surface of the ground, gradually washes in. A fire will actually vaporize the chemical out of the soil for a few inches, but just down below a few inches it is not vaporized and when the water hits that spot it simply stops. This causes a very fluid, saturated 2 or 3 inches of soil on the surface and, when additional rain comes, you have bad erosion problems. That is what they have done to date.

Now, what the researchers are looking at is how to break the nonwettability. They know the materials, the substances that cause it. They are studying the chemistry of these substances and hope to determine the types of materials which might be applied to the soil to neutralize this nonwettability effect and permit the water to go in the ground.

Another California example is the development of the method for analyzing the tradeoffs between earthquake hazard and the economy of construction. How much should be invested in the way of earthquake protection at a particular site in your water systems, vis-a-vis the probabilities of earthquakes?

Another research project was one that I started up myself some years ago. It dealt with the problem of how to operate the California water system, both the Federal system and the State system, in such a fashion as to produce, over the long haul, the most dependable water and energy supplies from those rivers that you can get, taking into account the fact that they have a hydrology with the probability of wet and dry years that can't be anticipated in advance. How far can you go into permitting delivery of water, not infringe on the flood control storage reservations, and make these multipurpose systems as a unit produce the most benefits? These studies are now paying off. The Bureau of Reclamation is putting some funds into follow-on studies and OWRR has been able to reduce our activity there. The State of California has been cooperating. This gives you some sort of an idea of the things that are going on.

There are a number of other projects such as ground water studies to develop models that will permit us to analyze ground water basins and determine how to develop and operate them in the best possible way to serve the people who are relying on them.

Mr. VEYSEY. Thank you.

Mr. HALL. Incidentally, this little book, OWRR's annual report, is a gold mine of information about how the program has paid off. It doesn't list all useful research results from the program but it does refer to certain ones and we can provide additional materials on any of them that you are interested in.

JUSTIFICATION MATERIAL

Mrs. HANSEN. We will insert the justifications in the record at this point.

[The justifications follow:]

Highlight Statement

The total budget request for the Office of Water Resources Research (OWRR) is $12,700,000, a decrease of $989,000 from the 1974 appropriation for the program, and $529,000 below the amount requested for FY 1974. The request includes: (1) $4,539,000 for annual grants to State Water Resources Research Institutes under Section 100, Title I, of the Water Resources Research Act, a decrease of $1,101,000 from the FY 1974 appropriation and $561,000 from the 1974 request; (2) $3.0 million for matching grants to State institutes for specific research projects under Section 101, Title I, of the Act, the same amount as was requested and appropriated the preceding year; (3) $3,170,000 for additional water research to be conducted by qualified organizations and individuals pursuant to Title II of the Act, an amount identical to that requested and appropriated in FY 1974; (4) $940,000 for operation of a center for acquisition, storage, retrieval and dissemination of scientific water resources data, which amount is $6,000 more than for FY 1974; and (5) $1,051,000 for program management and administration, an increase of $26,000 over the amount available for FY 1974.

General

As elaborated upon in OWRR's 1973 Annual Report and in the statements that follow, significant progress has been made toward achieving the research, training and scientific information dissemination objectives of the Water Resources Research Act of 1964. The past year has seen the development and initial implementation of new program orientation directed toward achieving more cost-effective problem-oriented research results. Under this program specific emphasis is and will continue to be placed upon research seeking answers to the most urgent water-related problems. The State institute directors have been working together through regional associations to identify the important water and water related problems and the corresponding research priorities. Where desirable, they have jointly undertaken research in an effort to bring the best minds to bear on problems of a local, multi-state, or national nature.

Title I and II

Under the Title I research, scientific information dissemination, and training program the State water resources research institutes located at a state university in each of the 50 states and in Puerto Rico have developed research programs related to such diversified water problem areas as: water supply augmentation and conservation; improved water resource planning techniques and management practices; and environmental protection and enhancement, including water quality management. The results of many recently completed projects are being used by Federal, state and municipal agencies to assist in the solution of their respective water problems or to serve as a foundation for additional research studies directed toward more effective solutions to these problems. The increased exchange of ideas and general consultation and collaboration between the Institutes and other members of the Federal, state, and local water resource communities, as required by the 1971 amendment of the Water Resources Research Act, has resulted in greater relevance of the research programs as well as improved dissemination and application of results. Expansion of this cooperative effort toward the identification and solution of common problems of a regional or river basin nature offers promise of an even more effective program.

The Title II research program permits the Department to augment the capabilities available through the Title I program by making it possible to draw upon the specialized expertise offered by a broad spectrum of scientific and engineering organizations and individuals from within both the public and private domains. This reservoir of specialized competence is being used to solve urgent water problems related to the missions of the Department of the Interior and its bureaus and offices. Title II funds will be used to support eight research programs in support of five identified current priority objectives of the Department of the

Interior in energy, land use management, water resources, environmental preservation and Indian self-determination, supplemented by three OWRR programs representing special attention being given to water reuse, to irrigation efficiency, and to urban water problems as assigned by the Committee on Water Resources Research of the Federal Council for Science and Technology.

Non-Federal Contributions

Since the start of the Section 101 matching grant program in 1965, the State institutes have committted more in non-Federal funds than that required to match the Federal input. There is every indication that the states are prepared to continue to provide cooperative support funds in excess of those required by the Act.

Similarly, although not required to do so, the states are making significant contributions to the Section 100 annual allotment program with such contributions expected to exceed $5 million for fiscal year 1974. This is virtually a dollar for dollar matching contribution by the states as a whole.

Training

The training provisions of the Act are being successfully implemented through the participation of productive and innovative graduate and undergraduate students as research assistants on the various Title I projects. Some 2,000 such research assistants participated in the FY 1974 program, many of whom plan to continue in water research work upon completion of their education. This training program has resulted in a constant flow of trained and dedicated personnel to meet the continuing demands for trained water resource personnel in governmental agencies at all levels as well as in the universities and private industry.

Dissemination of Scientific Information

OWRR's Water Resources Scientific Information Center continues to successfully meet the needs of the Nation's water resources community for scientific and technical information and to expand its coverage of the water resources field. WRSIC's machine-readable information base now contains over 70,000 citations and abstracts and is expected to increase by some 16,000 items in the coming year. Its principal products, a twice-monthly journal containing abstracts of research results, an annual catalog describing on-going research, and topical bibliographies, are widely distributed and have been a major factor in improving communications and coordinating the efforts of those engaged in Federally-sponsored water programs. This timely dissemination of information about water resource research activities and results has significantly reduced undesirable replicative research and has provided the basic information on which many current advanced research projects are based. A limited test network of field retrieval stations to provide prompt responses to specific water research inquiries is now in operation, and the feasibility of its expansion to more expeditiously serve the needs of the water planners, managers, researchers, and others is being studied. Members of the Federal water resources community, including members of Congress and their staff assistants, are invited to use the WRSIC retrieval system to obtain information about recently completed research.

The State institutes, responding to the December 1971 amendments to the Water Resources Research Act, have placed increased emphasis on the dissemination of research information. This has been greatly facilitated by the consultation and collaboration activities of the institutes undertaken for program development and research identification purposes. Research information dissemination by the institutes includes such activities as giving technical lectures and popular talks, conducting seminars, publishing newsletters, writing popular research description articles for papers and journals, and providing consultation and advisory services to state, local and other water officials.

Other Activities

The Office of Water Resources Research continues to place increasing emphasis on achieving closer consultation and collaboration between the State water resources research institutes and other members of the water resources community in all phases of problem identification and analysis, research program development and execution, and application of research results. Currently this coordinated effort is being expanded to encompass interstate collaboration on water research matters. State institute groups, State institute directors and State water officials have met on a regional basis and identified key water problem areas and defined priority research needs which will, in many cases, be jointly undertaken. The result should be a more efficient and cost-effective program with a minimum of duplication and with the best talents of several State institutes contributing to the solution of well defined water resource problems of mutual concern.

DEPARTMENT OF THE INTERIOR

OFFICE OF WATER RESOURCES RESEARCH

Salaries and Expenses

Appropriation, 1973	$16,344,000
Transferred to other accounts	-2,040,000
Total available, 1973	$14,304,000
Appropriation, 1974	$13,689,000
Transferred to other accounts	- 460,000
Total available, 1974	$13,229,000

Summary of Increases and Decreases, 1975

	Base for 1975	Increase/Decrease 1975	
Assistance to States for Institutes:			
Reduces Annual Grants to State Institutes	$5,100,000	$-561,000	
Scientific Information Center:			
Increases to cover pay raises	934,000	+ 6,000	
Administration:			
Increases to cover portion of space rental costs	1,025,000	+ 26,000	
Net Decrease, 1975			-529,000
Budget estimate, 1975			12,700,000

SALARIES AND EXPENSES

Analysis by Activities

Activity	Fiscal Year 1973 Amount Available	Fiscal Year 1974 Total Appropriation	Transfers	Amount Available
1. Assistance to States for institutes	$ 5,100,000	$ 5,640,000	$ -540,000	$ 5,100,000
2. Matching grants to institutes	3,000,000	3,000,000	--	3,000,000
3. Additional water research	4,300,000	3,170,000	--	3,170,000
4. Scientific information center	913,761	934,000	--	934,000
5. Administration	965,850	945,000	80,000	1,025,000
Unobligated balance lapsing	24,389	--	--	--
Total	$14,304,000	$13,689,000	$ -460,000	$13,229,000

SALARIES AND EXPENSES

Analysis by Activity

Activity	F.Y. 1973 Amount Available	F.Y. 1974 Amount Available	F.Y. 1975 Estimate	Increase (+) or Decrease (-) 1975 compared with 1974	Page Reference
1. Assistance to States for institutes.....	$ 5,100,000	$ 5,100,000	$ 4,539,000	$ -561,000	8
2. Matching grants to institutes.....	3,000,000	3,000,000	3,000,000	--	10
3. Additional water research.....	4,300,000	3,170,000	3,170,000	--	12
4. Scientific information center.....	913,761	934,000	940,000	+ 6,000	17
5. Administration.....	965,850	1,025,000	1,051,000	+ 26,000	18
Unobligated balance lapsing.....	24,389	--	--	--	
Total.....	$14,304,000	$13,229,000	$12,700,000	$ -529,000	

Justification

The purpose of water resources research is to develop by careful study and investigation the facts and principles needed to make effective and improved water resource planning and decision-making possible. Every part of the Nation faces current or potential water problems which vary greatly in nature and often involve conflicting needs. It is not unusual for the solution to a problem in one area to aggravate or create an even greater problem in another. Research must, therefore, examine the cause and effect from the standpoint of the system as a whole if lasting and equitable benefits are to be realized. The current energy shortage poses an excellent example of the need for a systems approach to research. Many persons probably do not recognize the importance of water resources when they think of the energy crisis. Yet, water, its availability, conservation and quality, frequently will prove to be the key factor in determining the success or failure of many of the alternatives being considered as potential solutions to our energy problems.

The cooperative Federal/State program authorized by the Water Resources Research Act is singularly well suited to fill water and water-related research needs wherever they exist or develop. The program provides: experience; availability of a reservoir of highly competent research personnel; ready access to a comprehensive water resources research data base; and an established network of research institutes especially aware of the water resource needs and assets peculiar to the various States and regions.

Continuing a new program orientation initiated last year, the 1975 program will continue to emphasize problem definition and the coordinated and cooperative research effort by groups of State Institutes to solve common water resource problems of an interstate nature. The advice and needs of the various bureaus of the Department of the Interior, as well as all agencies of the Federal Government having water or water-related interest, will continue to be given full consideration in the establishment of priority problem areas and the selection of specific research projects for funding. The program will continue to expand the water resources data base maintained by OWRR's Water Resources Scientific Information Center (WRSIC) and to take other actions to assure that pertinent water resource research information is promptly made available to all Federal agencies and to the water resources community as a whole.

Now entering its tenth year, the Water Resources Research Program has reached a state of maturity where the pay-offs of early research efforts are evident. The results of many of the earlier research projects have been put to direct use by planners and managers of water resource activities. Many early projects, while not an end in themselves, have provided the basic information and encouragement on which more complex and comprehensive research efforts have been founded. Others have had the catalytic effect of providing that small, but essential, answer which generated information needed to proceed with problem-solving studies. The program has also continued to attract many students to the water field. About 2,000 students each year are employed as research assistants under the guidance of professional research investigators on sponsored research projects. As was anticipated by the Act, many of the student assistants of earlier years are now employed in water resource planning, management, and research activities after graduation. Annual reports of the Office of Water Resources Research reflect the varied scientific disciplines of these students and the types of water-related positions many accepted upon graduation.

OWRR's annual reports also cite numerous examples of research results and their application. A few examples also are summarized in the following justification statements for the annual allotment, matching grant, and additional water research (Title II) programs.

Building on this foundation of established research competence and drawing upon the available pool of highly experienced water research personnel, a continuing capability exists to develop solutions to existing water problems, and extend that capability to meet new and urgent water research requirements.

32-043 O - 74 - 51

1. Assistance to States for Institutes

Analysis by Activity

Activity	F.Y. 1973 Amount Available	F.Y. 1974 Amount Available	F.Y. 1975 Estimate	Increase (+) or Decrease (-) 1975 compared with 1974
Assistance to States for institutes.....	$5,100,000	$5,100,000	$4,539,000	$ -561,000

Assistance to States for institutes. Fiscal year 1974, $5,100,000; fiscal year 1975, $4,539,000; decrease $561,000. The decrease consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
$-561,000	--	$4,539,000	--	Provides for $89,000 for each State and Puerto Rico

This $4,539 million "Assistance to States for institutes" program activity, authorized by Section 100 of the Water Resources Act, will provide $89,000 to each State and Puerto Rico to support the work of the 51 State water resources research institutes in the 50 States and Puerto Rico. The three new institutes authorized to be established by P.L. 92-175 will remain unfunded. It is estimated that the 51 institutes and other cooperating universities will conduct approximately 400 projects in FY 1975 of which 200 will be carry-overs from the current fiscal year, and provide on-the-job water research training for some 1,800 students serving as research assistants on OWRR-sponsored projects.

Prior to their initiation, all research projects under this program element are subjected to an in-depth screening by Project Selection or Advisory Committees at the State level and by the State institute director offices prior to their final review and approval for support by the Office of Water Resources Research.

Although there are no statutory provisions which require non-Federal financial support for this activity, the States have contributed substantial sums since the beginning of the program. It is expected that close to 50% of the cost of the research and related activities carried out under the FY 1975 annual allotment program will be covered by non-Federal cost-support contributions by the State institutes.

In addition, it is expected that in 1975 the State institutes will:

* continue to improve the responsiveness and relevancy of their research effort by closely collaborating with the leading water officials within their respective states and regions on all phases of their program from problem definition through research execution and the dissemination of the research findings.

* coordinate closely with institutes in neighboring states on the development of joint research efforts to find solutions to common water problems.

* place additional emphasis on the prompt dissemination of water research results to those individuals and organizations who have a need for and ability to utilize such information.

In recent years there has been a steady trend toward the multidisciplinary approach to water resource research. The State university institutes and the more than 50 other participating universities and colleges can draw from a large, highly skilled cadre of scientific and academic disciplines to provide new and innovative approaches to research problems. The OWRR annual reports contain summaries of many useful research results stemming from the Section 100 annual allotment program. A few recent examples are cited below:

(1) An Arizona project investigated the feasibility of using the high temperatures developed at electric power sites to improve the efficiency of the renovation of waste water which could then be reinjected into the natural water reserve. Since electric power generation and waste water production are population dependent, they can be suitably coupled in an efficient system. The study concluded that the concept is feasible and that the use of the waste heat normally available at electrical power generating sites can result in the production of renovated water suitable for ground-water recharge and for agricultural purposes. In effect, this would result in a new water source.

(2) A small project in Idaho demonstrated the feasibility of using ozone to treat liquid waste, and water supplies plagued with high iron and manganese content. The project included research necessary for the development of a portable ozonation facility for such use. The W. R. Grace Company has subsequently provided the University of Idaho with pilot-type equipment to continue studies that will result in design information useful for adapting the technique for use in small city treatment plants and in processing of wastes generated by breweries, paper plants, and similar industries.

(3) A computer program has been developed by a University of Kentucky project which simulates flood plain damages which can be expected from various outflows from reservoirs in existence in a river system. Data provided by the program is currently being used by the Huntington District of the Corps of Engineers to determine the release schedule for the complex system of fifteen reservoirs in the Muskingham River Basin. The program will also be used to estimate the annual damage which may be expected along the Carmel River in California.

(4) The ability of poultry processing and rendering plants to dispose of their wastes efficiently has a direct bearing on the future of one of Georgia's major industries. Cost comparisons of alternative poultry plant pollution abatement methods required to meet a spectrum of water quality standards were developed by a University of Georgia project. These cost/effectiveness trade-offs are being used by the poultry processors, and the American Poultry Industry Fact Finding Conference as the basis for determining the best methods for the industry to meet its high responsibility for clean water and yet remain viable economically so as to preserve the thousands of jobs and millions of dollars of personal income that the poultry industry provides Georgia and the Southeast.

(5) Three years of tests conducted by the University of Florida with wastewater from two central Florida citrus processing plants indicate that the best place to dispose of millions of gallons of wastewater is right back in the citrus grove. The results indicate that using wastewater to irrigate citrus offers three advantages to the industry. It is a quick and inexpensive way of dispersing wastewater, the effluent supplies additional nutrients to the trees, and the disposal method can save millions of gallons of fresh ground water which would normally be used for irrigation. As a result of this research, the Coca Cola Company's Minute Maid Division is using the system to irrigate a 27-acre test grove of mature trees near Leesburg, Florida. The Florida citrus industry is following this test with keen interest and it is anticipated that if tests continue to produce successful results, others will adopt this system of waste water irrigation. It is estimated that enough wastewater is discharged from citrus processing plants in central Florida to irrigate 20,000 to 30,000 acres of citrus annually.

(6) In Texas, about 3.5 million tons of dry manure must be stored, collected, transported, treated, disposed of, or recycled each year from confined cattle feeding operations. A Texas A&M University study has shown that an average of only 2 percent of the total manure solids is transported in runoff from open-feedlots, while the other 98 percent is reduced by decomposition, evaporation, or land disposal. Most feedlot wastes are disposed on on land. This research has shown that very large amounts of manure (900 tons per acre) can be plowed deep into the soil without causing surface-water or ground-water pollution problems.

2. Matching Grants to Institutes

Analysis by Activity

Activity	F.Y. 1973 Amount Available	F.Y. 1974 Amount Available	F.Y. 1975 Estimate	Increase (+) or Decrease (-) 1975 compared with 1974
Matching grants to institutes.....	$3,000,000	$3,000,000	$3,000,000	--

Matching grants to institutes. Fiscal year 1974, $3,000,000; fiscal year 1975, $3,000,000; no change.

Section 101 of the Water Resources Research Act, in stipulating that Federal funds provided for approved research projects must be at least matched by non-Federal funds furnished by the State or other sources, provides an ideal instrument for furthering the Federal-State partnership visualized in the Act's conception. It is expected that the non-Federal inputs to the matching grant program will substantially exceed the $3.0 million of Federal funds requested. These combined funds will be used to support an estimated 100 research projects in F.Y. 1975.

In FY 1974 OWRR received 350 matching grant research proposals requesting over $12.1 million in Federal matching funds. Of these, 110 projects were selected and are being supported from the $3.0 million Federal appropriation and the $3.2 million in non-Federal funds furnished by the States. A large share of the remaining 240 proposals also dealt with urgent water problems, were well planned, and would have been selected had additional Federal funds been available to match State inputs. The number and quality of proposals submitted clearly indicate the demand for research to assist in solving pressing water resource problems and the willingness and capacity of the State institutes to participate in this cost-sharing research program on a steadily increasing basis.

The State universities and other participating universities will give priority attention in 1975 to water-related problems of Nationwide concern identified in the next section on the Title II "Additional Water Research" program. However, as this matching grant program is jointly financed by Federal and State funds, water problems identified by the State institutes and their State and Regional Advisory Committees as being of particular concern to the State, region or river basin will receive full consideration in the project selection process.

It is believed worthwhile to note that for every Federal dollar invested in the Section 101 program, better than two dollars of research productivity is realized. It is also evident, with less than one-third of the proposals being selected, that funds are being devoted to the research of only the most pressing of water resource problems.

Some recent examples of proven or potentially useful results of research supported by the Matching Grant program are shown below. Additional examples can be found in OWRR's Annual Report.

(1) The many water-related activities on the Great Lakes systems depend critically on the magnitude of lake levels and outflows. A project recently completed resulted in the delineation of magnitudes of the monthly rainfall, evaporation, and runoff components affecting lake levels. A follow-on project is extending this work to the development of hydrologic models of the Great Lakes. The models will be used to simulate the Lakes' hydrology in order to prepare better operating rules for the control works in the outflow channels and to determine the need for other control works. It is expected that the models will be employed by the Great Lakes Basin Commission in their extensive overall study of the lakes.

(2) Research previously conducted by the Illinois Institute was concerned with developing relationships between the fundamental hydraulic characteristics of streams (depth, width, velocity, etc.) which can be applied to locations where no direct measurements are available. Successful relationships were developed for eighteen river basins in Illinois and later research showed that a general approach could be applied to basins in other states. The relationships have been used to predict time-of-travel of pollutants for 41 river reaches in Illinois. The results have been used by the Argonne Laboratory in a successful development of a water quality model for Illinois rivers in which the values of the hydraulic parameters are necessary in determining the accumulative capacity of streams.

(3) Under projects conducted by the Arizona Center, economic water-harvesting systems were developed to increase the efficiency of harvesting precipitation and of water storage. As a direct result of these studies, the Water Resources Research Center of the University of Arizona was contracted by the Papago Tribe to construct three water-harvesting systems for livestock watering on reservations where no other water source was available. The systems were built using Papago Vocational High School students from Sells, Arizona. The results obtained from this project can be extended to other semiarid regions throughout the western United States and the world where additional water supplies are needed.

(4) A University of Montana project has resulted in the development of a planning model intended to be used primarily as a management tool by the Water Resources Division of the State Department of Natural Resources and Conservation. It is expected to provide impersonal, accurate, and speedy answers to water management questions such as "what will be the effect on the river basin of diverting flows from a particular stream for a new thermal energy plant?" or "what changes in streamflow can be expected by constructing a new storage dam at a specified location?" This data bank also provides ready access to hydrologic and other physical information relating to Montana which are not otherwise available from a single source. The States of North Dakota and Wyoming are greatly interested in this model and a joint research proposal is currently being prepared which would further extend the use of the model to all three States.

3. Additional Water Research

Analysis by Activity

Activity	F.Y. 1973 Amount Available	F.Y. 1974 Amount Available	F.Y. 1975 Estimate	Increase (+) or Decrease (-) 1975 compared with 1974
Additional water research.....	$4,300,000	$3,170,000	$3,170,000	--

Additional water research. Fiscal year 1974, $3,170,000; fiscal year 1975, $3,170,000; no change.

The "additional water research" or "Title II" program provides balance and flexibility to the overall water research program by giving the Department access to the specialized research expertise available in private firms and foundations, governmental agencies at all levels, as well as universities not participating in the Title I program. It is expected that the $3,170,000 requested for this activity will permit funding for projects to augment and expand work carried out under the Title I program.

The 1975 Title II research program will be directed primarily toward support of the water and water-related aspects of priority objectives of the Department including: solving energy related problems; encouraging Indian self-determination and improvement; solving land use problems; promoting efficient allocation and conservation of scarce water and water-related resources in a manner compatible with environmental considerations; developing means of achieving more efficient resource management such as reuse and recycling of water; reassuring the economic value of additional agricultural development and improved irrigation efficiencies in order to save resources; and protecting and improving the quality of our physical environment.

In addition to these Departmental objectives, OWRR has again notified all individuals and organizations, expressing an interest in submitting proposals, of general subject areas of prime interest along with examples of specific research requirements. A summary description of these priority research subjects is set forth on Attachment No. 1 following this Title II statement.

For the 1974 "Additional water research" program, over 340 research proposals were received from private firms, universities and others for OWRR's consideration. Total funding requested by these proposals exceeds $31 million. Forty-three of these proposals have been selected for support. OWRR anticipates that it will receive approximately the same number of proposals for 1975 as were submitted for consideration in the 1974 program. The large number of proposals submitted permits the Department to be very selective in supporting only those having the highest technical merit and greatest relevance to water resource matters of concern to the Department and the Nation.

A few illustrative examples of Title II program project results developed in the past year are set forth below:

(1) The University of Texas has developed a practical and effective strategy of optimization that can be applied to the expansion of a complex water resources system. The problem involved is to specify if and when each dam should be built in the system and also the sequence of reservoir releases so that the revenue function for the water resources system is maximized. To accomplish the objectives, several computer programs have been prepared which carry out the numerical computations for a given water resources system. With the aid of the documentation associated with the computer programs, it is possible to determine what information has to be gathered from the water resources system. Once the information is collected, it is

possible to use the computer code to help decisionmakers in evaluating alternative policies over a planning horizon of a large number of years.

(2) A Purdue University Title II project has developed rainfall-ground-water level interaction models for short term forecasting of ground-water levels. The predicted ground-water levels can then be used to specify the variable boundary conditions encountered in the digital ground-water model. The ground-water model now being developed will aid in investigating whether a presently used source of water is adequate to meet the domestic and industrial water requirements in Tippecanoe County, Indiana by the year 2020.

(3) Research by a Walnut Creek, California firm resulted in the development of a method of ecologic simulation for aquatic environments. This provides a useful tool, not previously available, which enables engineers, scientists, and planners to utilize ecologic information in the development and management of water resources. Already there has been a lively response to the findings. The Corps of Engineers' Hydrologic Engineering Center has been granted permission to reprint the report for use in a water quality management training course. A valuable "pay-off" is being realized, under a memorandum of understanding between OWRR and EPA, whereby the project has been extended to apply the research results to the solution of critical water-quality problems in Puget Sound, Washington. Recently the Netherlands has requested assistance in possibly applying this technique to water quality prediction in the polder areas of their country.

(4) A substantial number of families in this country, and particularly in the New England area, are entirely dependent on wells in crystalline rock for their water supply. Commonly the yields from such wells is inadequate or quite small. Research at the University of New Hampshire is seeking to determine if hydraulic fracturing is an effective and economical means of stimulating water well yields. Research results, thus far, in two test wells show that yields of each well were increased from 4 gallons per minute to about 15 and 24 gallons per minute respectively.

(5) Concentrations of naturally occurring uranium and isotopic ratios have been used successfully in a Florida research project to identify the sources of ground water supplying three major Florida springs and one spring-fed river system. This technique may be adapted to evaluating the pollution potential of ground water in specific areas, evaluating the potential hazard for salt-water intrusion in coastal areas, and determining areas and rates of ground-water recharge.

(6) A dynamic programming optimization procedure that determines the sequence of releases and withdrawals from a system of multiple reservoirs supplying water to metropolitan centers has been developed by a Title II project in Texas. The procedure takes into consideration water losses due to evaporation, flow augmentation requirements and flood spillages and determines the minimum cost policy to meet the metropolitan requirement, while retaining a specified volume of water in storage at the end of a time period. Water treatment costs, power and pumping costs and purchase water costs are included in costs evaluated. The program is currently being implemented and tested on the City of Dallas computer system.

Attachment No. 1

Office of Water Resources Research
Examples of Priority Research Subjects for Title II Support
Fiscal Year 1975

The Title II research program of the Office of Water Resources Research will be directed primarily toward support of certain current priority objectives of the Department of the Interior. These include:

- Solving of Energy Problems.
- Encouraging Indian Self-Determination and Improvement in the Quality of Life on Indian Reservations.
- Solving Land Use Problems.
- Promotion of Efficient Allocation and Conservation of Scarce Water and Water-Related Resources in a Manner Compatible with Environmental Considerations. Developing means of achieving more efficient resource management such as reuse and recycling of water, reassessing the economic value of additional agricultural development and improved irrigation efficiencies in order to save resources, thus reducing the need for large capital investments of the future.

Improving the Quality of our Physical Environment.

In addition to the above Departmental objectives, OWRR has again identified general subject areas of prime interest. These are listed below, with examples of specific research requirements.

Many water-related resource problems are applicable to both Departmental priority objectives and OWRR subject areas of prime interest. Proposals for research which offers a high assurance of increased effectiveness in dealing with such dualistic problems will receive strong consideration for funding.

OWRR will also consider funding other subject areas of research not included on this priority list if the research proposal provides convincing reasons that the subject area is of high priority and within the purview of Title II of the Water Resources Research Act of 1964, as amended.

OWRR Priority Research Subjects

1. Improvement of Water Resource Planning, Managerial, Financial, Operating and Regulatory Policies. In approaching this problem, research goals should be to provide a basis for establishment of improved mechanisms, including evaluation of alternative means of augmenting and conserving supply, for water resources planning, implementation of plans, and to improve management effectiveness through lessening of conflicts, uncertainties, and confusion among claimants to the resource.

2. Water Resources Policy and Political Institutions. Understanding of policy and institutional problems is indispensable to sound water resources management by both the public and private sectors of the Nation. Research is needed on how institutional policy is measured and formulated and what policies and arrangements are conducive to sound water management. Among the questions to which research could be directed are those involving current policies and institutions. The river basin as a water management unit needs further evaluation with respect to the compatibility of water resources management objectives and the needs of regional economic development.

3. Hydrologic Systems Analysis. The application of operations research tools such as mathematical modeling and simulation, optimization and design theory need to be assessed and further explored in relation to hydrologic events and to planning of surface and ground water resources development.

4. Urban and Metropolitan Water Resources Problems. Research is needed on urban hydrology and the effect of man's activities on water. Such research could include evaluation of the impact of urbanization on the frequency and magnitude of flood peaks, reduction of low flows, decrease in natural ground water accretion, impairment of water quality, erosion, etc., and development of methodology and technology to cope with such problems.

5. Ecologic Aspects and Environmental Consideration of Water Resources Planning and Management. Improved means of identifying, assessing and predicting ecologic impacts of water development such as dam building, drainage, irrigation, dredging, filling, channelization, and weather modification are needed. Conjunctive ecological studies designed to minimize harmful effects and optimize the beneficial effects of these water developments on the environment are also indicated.

6. Evaluation of Economic Importance of Various Uses of Water, Cost Allocation, Cost Sharing, Pricing and Repayment. Methodologies are needed for estimating future water demands in time, place, and quality with full consideration given to the economic relationships between supply and demand as well as the impact of new technologies. Research is needed for improving the methods used in evaluating primary, secondary and externality benefits of water resources projects.

7. Analysis and Evaluation of Water Resources Projects. Benefit-cost analysis has been the principal tool for evaluation of public investment programs, including watershed and water resources programs. It has ranked projects and programs in terms of the objective of economic efficiency only. Research is needed to determine appropriate alternatives and multi-objectives which will insure that presently unquantified environmental amenities and values may be given appropriate considerations. Evaluation of methods to quantify values in terms of appropriate objectives and assigning weights to these values is needed so that alternative objectives and/or combinations of objectives can be compared.

8. Ground-Water Supply, Management, and Protection. Research is needed on management methods and techniques to protect the ground-water resource from degradation and overdraft; also to insure its availability and safety for

domestic, municipal, industrial, and agricultural purposes, and to accomplish the integrated management of surface and ground water resources. In many areas over the Nation, productive aquifers find limited use because the quality of the native ground water is unacceptable or the water has become contaminated. Many constituents or properties imparting objectionable tastes, odors, or esthestic traits exceed allowable limits. Better techniques should be researched as to feasibility of water spreading and well injection in various surficial earth materials and aquifers. Research is particularly applicable in regions where the surficial materials are of low permeability. Research is needed also on the geochemical effects of artificial ground-water recharge.

Regarding the degradation of ground-water quality by contaminants, basic research is needed on the geochemistry--reactions among water soil and rock materials, and contaminants in the aquifer system.

A serious deficiency of aquifer system models is the inability to portray accurately fluid movement in the unsaturated zone, losses from the system by evapotranspiration, and accretions by infiltration or recharge. This aspect of fluid movement also has an important influence on surface runoff. Research is needed on the physics of fluid movement and solute interactions in unsaturated granular media.

9. Protection and Rehabilitation of Estuarine Resources. Research is needed to develop criteria, standards and guidelines for including ecological effects in planning for water resource development of estuaries and coastal bays, such as: dredging, filling, dams, diversions, land-cut canals, hurricane barriers, and waterfront finger-type developments. These studies should attempt among other things to assess the biological effects of these developments by changing temperature, salinity, flow regimes, circulation, flushing and sedimentation, and destruction of vegetation.

10. Thermal Loading Problems. With the expected increase in number of electric generating plants and the consequent thermal loading of rivers, lakes, and estuaries, increased research attention is needed to develop new or improved approaches to physical mixing and thermodynamics of the heated discharges; in development of economically competitive alternatives to use of once-through water as a heat-transfer medium; on biologic, ecologic, environmental and sociologic impacts, on types and quantities of data required to properly evaluate facility sites and to choose among alternative sites; on adequacy of regulations and procedures for site selections with respect to water use and management; and on possible ways of beneficially utilizing the heat for food production, recreation, or other purposes.

11. Water Demand Considerations. In regions where water supply is unable to keep up with demand, the value of water for specific purposes will increase. Further research is needed on the effect of price on demand with specific attention to the value of water for irrigated agriculture, recreation, industry, urban use and other purposes. Research is also needed to determine appropriate alternative objectives and to develop methods to evaluate benefits in relation to costs for the different objectives, such as, improved distribution of population, environmental quality, and other social values.

4. Scientific Information Center

Analysis by Activity

Activity	F.Y. 1973 Amount Available	F.Y. 1974 Amount Available	F.Y. 1974 Estimate	Increase (+) or Decrease (-) 1975 compared with 1974
Scientific information center.....	$934,000	$934,000	$940,000	$+6,000

Scientific information center: Fiscal year 1974, $934,000; fiscal year 1975, $940,000; an increase of $6,000. The increase consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
$+6,000	--	$940,000	8	Pay raise costs

With the proposed $940,000, OWRR's Water Resources Scientific Information Center (WRSIC) will continue its 1975 operations at approximately the same level as in 1974.

In 1975 WRSIC will:

(a) Acquire about 15,000 additional abstracts reflecting the results of completed water resources research as described in technical journals and reports, monographs, books and serials; process these abstracts into machine-readable form for WRSIC's information base; and publish these abstracts with appropriate indexing terms in WRSIC's "Selected Water Resources Abstracts" bulletins that are made available to the water resources community on a twice monthly basis;

(b) Support 9 "literature centers of competence" providing abstracts for the WRSIC information base, and encourage and obtain the cooperation of Federal, State, and other organizations in providing information base abstracts;

(c) Publish, in collaboration with the Smithsonian Science Information Exchange, a comprehensive annual catalog of abstracts describing ongoing research projects;

(d) Prepare and disseminate several topical bibliographies of special interest and a limited number of state-of-the-art reports on selected subjects;

(e) Respond to the technical information needs of water program officials by employing an automatic retrieval program and growing information base of approximately 70,000 citations and abstracts to economically and rapidly generate topical bibliographies of significant problem areas, and respond to special requests for literature reference relating to specific water resource interests; and

(f) Continue an experimental program of operating a small number of geographically dispersed remote terminals to determine the feasibility of providing improved technical information services.

WRSIC's importance to the Nation's water resources community has steadily grown as its information base has expanded and its reputation for responsiveness has become well known. The Center is: (a) playing a major role in the avoidance of undesirable research replication, thereby contributing to more effective use of available water resources research dollars; (b) improving communications and coordination of efforts among organizations and individuals engaged in water-related research; and (c) serving as a focal point for water resources research information through its comprehensive and responsive program. Persons and organizations familiar with the Scientific Information Center's program have been highly complimentary and have in many cases urged continued expansion of the program as rapidly as funding will permit.

5. Administration

Activity	F.Y. 1973 Amount Available	F.Y. 1974 Amount Available	F.Y. 1975 Estimate	Increase (+) or Decrease (-) 1975 compared with 1974
Administration.....	$970,000	$1,025,000	$1,051,000	$+26,000

Administration: Fiscal year 1974, $1,025,000; fiscal year 1975, $1,051,000; increase $26,000. The increase consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
$+26,000	--	$1,051,000	38	Portion of space rent costs

The requested "administration" funds will provide support for salaries and related program planning, development, management, operating and housekeeping activities of the Office of Water Resources Research.

In 1975 OWRR's program administration staff will:

(a) Provide overall direction of the OWRR program, striving continually to increase the cost-effectiveness of the research effort while at the same time minimizing the program management and administrative workload in keeping with the capacity of the small staff;

(b) Provide programming, budgeting, and related administrative/management support to include determination of priority water resources problem areas and analysis of research needs;

(c) Review and evaluate approximately 1,000 new research proposals and execute some 200 new contract and grant documents;

(d) Provide technical and administrative monitoring of over 500 on-going grants and contracts;

(e) Review and process an estimated 1,400 reports and documents stemming from OWRR supported research;

(f) Provide technical and administrative guidance to several hundred existing or potential program participants by means of personal contacts, phone calls, and voluminous correspondence.

(g) Coordinate the OWRR research program with related activities of other agencies on a Nationwide basis;

(h) Conduct conferences and meetings as appropriate for effective program operations;

(i) Encourage close collaboration among OWRR, its supported institutes, and water resource officials at National, Regional, and State levels during all phases of program development and implementation to assure that the research effort is directed toward the solution of urgent water problems and responsive to real life needs.

(j) Arrange for "critical reviews" by recognized experts to determine specific goals, objectives, progress, needs and priorities for additional research in selected water resource subject areas. These critical reviews may be the result of symposiums, special advisory panels or be obtained by contractual arrangements with consultants having special expertise in the particular field of interest.

Such reviews are of importance to OWRR, the State Centers, and others in keeping them informed as to requirements in specific technical areas which are unmet by the current state-of-the-art, and in assuring that research under the Act remains focused on urgent water problems and does not duplicate completed or ongoing research.

The increase for "Administration" is due to a new cost item, $59,000 for space rental costs, with offsetting reductions of $33,000 in other administration costs for a net increase of $26,000.

Personnel Summary

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions.....	46	46	46
Full-time equivalent of other positions.....	1	1	1
Average paid employees.....	39	43	43
Average GS grade.....	10.9	11.1	11.1
Average GS salary.....	$20,165	$20,497	$20,837

ITEMIZATION OF ESTIMATE

Appropriation Title: Salaries and Expenses — Office of Water Resources Research

	Actual 1973	Estimate 1974	Estimate 1975	Increase (+) Decrease (-)
Program and Financing:				
Total obligations	$14,279,611	$13,229,000	$12,700,000	$ -529,000
Unobligated balance lapsing	24,389	--	--	--
Budget authority (Appropriation)	$14,304,000	$13,229,000	$12,700,000	$ -529,000
Object Classification:				
11 Personnel compensation	$ 777,842	$ 863,000	$ 839,000	$ - 24,000
12 Personnel benefits	70,633	77,000	76,000	- 1,000
21 Travel and transporation of persons	23,395	27,000	27,000	-
22 Transportation of things	1,794	2,000	2,000	-
23 Rent, communications, and utilities	15,095	18,000	88,000	+ 70,000
24 Printing and reproduction	77,980	80,000	80,000	-
25 Other services	1,821,264	1,456,000	1,453,000	- 3,000
26 Supplies and materials	5,924	7,000	7,000	-
31 Equipment	3,701	5,000	5,000	-
41 Grants, subsidies, and contributions	11,481,783	10,694,000	10,123,000	-571,000
TOTAL	$14,279,611	$ 13,229,000	$12,700,000	$ -529,000

STATE RESEARCH ACCOMPLISHMENTS

Mrs. HANSEN. Please insert in the record for each State some particular project that you know has been put to practical use. I think the committee would deeply apprecate that.

Mr. HALL. We shall do that.

[The information follows:]

Research Accomplishments

Briefly described below is one successful research project from each State. These are drawn from a larger number called to the attention of OWRR and the State Institute directors. Such attention commonly stems from letters or oral statements from information seekers who wish to acknowledge appreciation of assistance received. These are not necessarily the best examples as tracking down research applications is a formidable study in itself and one where supporting data are not always readily available. Many if not most research findings reach the user through the media of technical, scientific, and professional journals or through the training process, including short courses, workshops, and seminars for professional workers in water resources. In such instances the application of research results is unrecorded more often than not.

This summary list of research descriptions and applications is similar to a list submitted for the hearing record last year, but different research projects have been cited.

ALABAMA--An Alabama study investigated the costs of pollution abatement for the textile, steel, and paper industries. It revealed that many of the costs of safeguarding rivers and lakes from pollution were relatively low, and where the costs could not be absorbed by industry the price increases of the products were only about one or two percent. The research conclusions are being used by the industries and by various pollution-abatement agencies.

ALASKA--In Alaska many water resources problems are particularly acute during the long, cold winter season. However, the Alaska Institute capitalized on these low temperatures by developing a freeze-conditioning process for dealing with waste-treatment sludge. This improved process has enabled Fairbanks, Alaska to deal more efficiently with their waste treatment processes.

ARIZONA--A research project at the Arizona Water Resources Research Center was highly successful in developing economical water-harvesting system methodology based upon management of precipitation runoff and water storage. The Papago Indian Tribe, through the Bureau of Indian Affairs, arranged with the Center for construction of three such systems to provide livestock water on reservation land, employing the principles derived from this research. These findings can be used also in arid regions elsewhere in the world as well as in the United States.

ARKANSAS--The Arkansas Institute studied the ecology of a large lake (Dardanelle). The study provided management guidelines, for the lake, that were of considerable interest to the Arkansas Power and Light Company, the Arkansas Game and Fish Commission, the State Department of Health, and the State Pollution Control and Ecology Division. The Arkansas Power and Light Company was particularly interested in this study in connection with the Company's construction of a new powering generating station to be located

on the shores of Lake Dardanelle. By following the recommended guidelines, adverse environmental impacts associated with development can be minimized or avoided.

CALIFORNIA--This research involves the use of reclaimed municipal sewage effluent to irrigate a zone of green trees, shrubs and grass ("greenbelt") to serve as fire protection, a place for recreation, a base for groundwater recharge, improved wildlife habitat, and increased forage production for livestock. Various State, Federal, and local agencies have participated in and helped to support the work including the California Division of Forestry, the Lake Arrowhead Sanitation District, and the U. S. Forest Service. Non-Federal support, for fiscal years 1974 and 1975 alone, was $90,220. This is a good indication of how an idea, supported initially on a modest scale by OWRR, can attract the attention and support of other organizations.

COLORADO--Research directed by the Environmental Resources Center in Colorado, concentrating on the State water quality monitoring network, found that it could not detect reliably the occurrence of accidental spills. By the application of mathematical models of the State's rivers, a monitoring system was devised which consisted of two networks: a primary to detect spills with a high likelihood of occurrence and a secondary to handle long-term trends. The new system was installed recently for immediate use by the Water Quality Control Division of the State Health Department.

CONNECTICUT--Until 1971 Connecticut had no general policy about management of streamflow, and no State agency had authority to supervise detention and release of streamflow. Legal requirements for dam construction related to safety of the structure only. Stream diversions were generally unregulated. Recommendations resulting from an institute project (Integration of Connecticut Water Rights Laws and Pollution Control Laws) were incorporated by the legislature in its passage of Connecticut Public Act No. 0229, establishing comprehensive flow protection policy.

DELAWARE--An analysis of Delaware State agencies with responsibilities for different aspects of water resources resulted in recommendations that efficiency could be improved through consolidation of many water-related functions. As a direct consequence of those recommendations many of the water resource functions were consolidated in a new Department of Natural Resources and Environmental Control with significant increases in management efficiency.

FLORIDA--The point of this Florida study was to attempt to conserve the large amounts of wastewater being discharged from citrus processing plants. It was found that these waters could be used satisfactorily and inexpensively to irrigate citrus groves. The wastewater added nutrients to the trees and the method could conserve millions of gallons of fresh ground water which would normally be used for irrigation. As a result of this work the Coca Cola Company's Minute Maid Division is already using the system to irrigate a 27-acre mature citrus grove near Leesburg, Florida.

32-043 O - 74 - 52

GEORGIA--The objective of a Georgia study was to determine how to minimize water pollution resulting from the disposal of poultry litter. It was found that the air-drying of poultry manure volatilizes one-half of the nitrogen, a potential contaminant of water supplies, and that it was beneficial to make frequent, light applications of manure rather than fewer, heavy applications. Through the Georgia Cooperative Agricultural Extension Service farmers, feed-lot operators, and land owners are being made aware of the results of this research and of the potential hazard to surface-water quality from this industry.

HAWAII--Results of a study of the Honolulu aquifer have provided an improved understanding of the complex transition zone between fresh and salt water and the responsiveness of salinity in well water to the amount of water withdrawn. These results have been used to provide guidelines for limiting withdrawals. This research will materially help in prolonging the life of existing wells, in designing and drilling new wells at lowest cost, and in providing high-quality water to more than 500,000 residents and the thousands of tourists who visit Oahu annually.

IDAHO--The construction of roads across streams used by anadromous fish has caused damage to fish spawning runs where the free-flowing conditions have been replaced with culverts. This research was organized to look into the hydraulics of culvert design in order to determine how culverts might best be installed for minimum interference with the passing fish. The findings resulted almost immediately in a large demonstration project in Alaska funded by the Bureau of Sport Fisheries and Wildlife. The information being developed will be of high value to design engineers and fisheries experts as well as for use in a design manual now being prepared.

ILLINOIS--Many uses of the Great Lakes systems depend critically on the magnitude of Lake levels and outflows. An Illinois project was the first effort to delineate the magnitudes of the monthly rainfall, evaporation, and runoff components of the changes in lake levels. A subsequent project has extended this study to development of hydrologic models of the Great Lakes. The model can be used to simulate the Lakes' hydrology in order to prepare better operating rules for existing control works and to determine the need for additional control works. Such models are desired by, and will be useful to, the Great Lakes Basin Commission in their extensive study of the Lakes.

INDIANA--Research has been conducted in Indiana relative to determining the effects of urbanization on the hydrology of an area. The principal investigators used the research finding in conducting a water resources workshop on the "Physical Aspects of Watershed Hydrology" where they presented materials for use by practicing engineers. Moreover, the State Engineer for the Indiana Soil Conservation Service has taken this information and is incorporating it into their hydrology service manual to be used throughout the State.

IOWA--The results from a project titled, "Using Soil Filtration to Reduce Pollution Potential of Lagoon Effluent Entering Ground Water Systems" have

been immediately useful and applied. A solid set irrigation system designed pursuant to the research results has been installed to dispose of the lagoon waste from hog confinement units. The results have also been used by the Agricultural Advisory Committee of the Iowa Water Pollution Control Commission in setting guidelines for animal waste disposal on agricultural land. The demand for research results of this nature is evident by a heavy demand for copies of the project completion report.

KANSAS--Research is underway on a process to convert livestock manure into substitute natural gas. The process (called hydrogasification) is based on combining manure with hydrogen at temperatures of 1050°F. Preliminary results from this project look promising. If this process can be perfected, results can be used to ease the manure disposal problem and perhaps ease the fossil fuel demand around areas of concentrated livestock feeding. An alternate process may be developed that can use manure to produce ammonia, which in turn can be used in various other chemical combinations as a commercial fertilizer.

KENTUCKY--The purpose of a Kentucky study was to investigate the various functional constraints controlling the design of water distribution systems and develop analytical methods and digital computer routines which could be used to design a water distribution system at minimum cost. A successful computer program has been developed to analyze water distribution systems (including pumps, valves, storage tanks, and other components in the pipe system) to arrive at minimum cost system. Computational procedures have been shown to be effective and to present many advantages over existing methods. Users manuals, computer source decks, and examples have been provided to over 150 consulting engineer firms. Shortcourses have been given and a correspondence course has been prepared. Approximately 50 engineers have been trained and are using the material with favorable results.

LOUISIANA--The Louisiana Institute has been studying the feasibility of storing fresh water in saline aquifers (underground basins). The potentials are great. It is estimated that to store 120 million gallons of water in some surface structures, like water tanks, would cost about $12,000,000 exclusing land costs. In contrast, the injection and storage in underground basins would cost about an estimated $250,000. As a result of this research, Jefferson Parish, part of the New Orleans metropolitan area, is investigating the feasibility of utilizing saline aquifers for their future water supply needs.

MAINE--University of Maine scientists have used research findings on causes and control of lake eutrophication in helping to develop and implement the State of Maine's newly enacted shoreland zoning law.

MARYLAND--The Maryland Department of Natural Resources invited the Maryland Water Resources Research Center to prepare a research and monitoring program proposal for the brackish water cooling towers to be constructed at Chalk

Point by the Potomac Electric Power Co. Working with the State and Company personnel, a program was designed and accepted. Base-line studies were initiated to determine preoperating conditions of soils, crops, and other vegetation in the vicinity of the two hyperbolic cooling towers. These data are to be used in determining the environmental impact of large, natural draft cooling towers using brackish water for cooling steam electic generating stations. This study for the State Department of Natural Resources is the direct result of competence developed under earlier OWRR-supported research work.

MASSACHUSETTS--Results from recent research on public management of freshwater wetlands in Massachusetts have already influenced wetlands legislation and are finding use as guides to official agency action in the future. Work included relation of wetlands distribution and the surficial geology; wetlands classification; a quantitative system for visual-cultural evaluation; and criteria for economic evaluation.

MICHIGAN--"Major and Trace Element Loading of Central Michigan Lakes Project," a study by the Michigan institute, was designed to identify and evaluate metal element vectors in Michigan lakes with respect to a variety of inputs. The investigation grew, in part, from a need for historical data to use as a base for interpretations of current environmental quality data. Modern nuclear techniques were employed on old problems with the result that interaction effects of one metal upon another can now be easily studied. Metal uptake experiments can now be applied, in a mathematical modeling sense, to estimate the rate of detoxification of lakes and rivers in industrial areas. This means that a much better scientific base is now available upon which to recommend restoration procedures for lakes that have been seriously polluted with heavy metals. To Michigan this could mean the reestablishment of a multimillion dollar commercial and sport fishery that was destroyed by pollution.

MINNESOTA--The Minnesota institute developed information to permit the prediction of the effects of selected management practices on the productivity of Lake Minnetonka. The lake is intensively developed and has been subjected to severe eutrophication due to the activities of man. The lake was studied by the principal investigator in cooperation with State agencies, municipalities, special purpose districts, and several private engineering firms. Sewage effluents have been diverted from the lake based on a management plan prepared from the results of this research. A follow-on project is monitoring the effects of stopping the flow of sewage into the lakes and thereby measuring the effectiveness of the management plan. This research is of great interest to the people living near the lake and to governmental agencies responsible for establishing and enforcing water management policy.

MISSISSIPPI--Research in Mississippi analyzed the water budget for a typical dairying operation and evaluated the efficiency of its waste treatment system, the purpose being to determine means for conserving water and minimizing water pollution by reducing the volume and concentration of waste

effluent. The results have been used in the planning of two new dairy facilities in the Mississippi Agricultural and Forestry Experiment Station System and in planning privately-owned dairies.

MISSOURI--An OWRR grant of less than $4,000 is changing supplemental irrigation practices on the acid, humid soils of the midwest. In one year in a single county in Missouri application of the research findings resulted in increasing the value of the corn crop by more than $200,000 while reducing stream flooding. The research findings developed recommendations for reducing the toxic effects of soluable manganese and aluminum when water is improperly applied to these soils. Pursuant to those findings, supplemental irrigation systems are developing to store runoff from a single field on a farm. Where the recommended practices are properly used on the field producing the water runoff, the amount of water is adequate to provide optimum yield even in driest years.

MONTANA--A research study titled "An Investigation of the Extent and Cause of Eutrophication of Canyon Ferry Reservoir" provided helpful findings for planning and policy purposes. A 1957-58 study provided a benchmark for the research findings which showed that little change had taken place in the eutrophication of this lake, that agriculture is not providing as significant input of pollutants as many people have been led to believe, and that the greatest contributor of nutrients is the domestic sewage emanating from the City of Bozeman. A new sewage plant, when it is operating at full efficiency, should reduce the nutrient load within the near future. Although a number of the lakeside cabins do not have adequate sewage facilities, stricter regulations and enforcement should alleviate this situation and help maintain the high quality water of this lake. All of these findings are important to the local and State governments and the State and Federal agencies in developing operating guidelines for this reservoir.

NEBRASKA--The research project entitled "Engineering Phases of Land Treatment Related to Increasing Water Use Efficiency and Storage Efficiency of Rainfall" was designed to find ways to reduce water and soil losses on cropped farmland. The problem is especially important in Nebraska and other Corn belt states. A system was developed which reduced soil losses by 90% and water losses by 50%. Flood hazard reduction and pollution control are additional benefits. Findings of this research and a companion project are being implemented and actively promoted by State and Federal conservationists and local county advisers. Significant economic and environmental benefits have already accrued.

NEVADA--Nevada's arid conditions require the best possible management in order to achieve the best possible efficiency with a minimum of conflict. The Truckee Meadows watershed system was the subject of research concerned with development of a method for measuring the interaction of both the quantity and quality of water moving through the system. The type and extent of major land uses in the area were determined, along with a detailed evaluation of ground-water characteristics, consumptive use by vegetation

and unmeasured runoff. The resulting model of the system has made it possible to predict the physical and economic consequences resulting from changes in the factors cited above. These findings were used by the Washoe, Reno, Sparks Regional Development Commission as an element of the General Plan of Development for Washoe County.

NEW HAMPSHIRE--Health officers were instrumental in the installation of at least 13 new septic systems in a lake area in New Hampshire as a result of New Hampshire institute research carried out in cooperation with a local lake association. The older systems, suspected of being a source of pollution to the lake, were examined in connection with research on the tolerance of a recreational lake for development and use.

NEW JERSEY--New Jersey research involved the development of aeration systems to improve the quality of highly polluted river water. In a test of the proposed system, it was determined that an aeration system costing $194,000 annually would be as effective in raising dissolved oxygen levels as advanced waste treatment estimated to cost $785,000 annually. Findings have shown the value of such artificial aeration when used to supplement secondary waste treatment of polluted rivers, and have determined the design characteristics of suitable installations and methods of analyzing the effects. These findings have been used by the Miami Conservancy District (Ohio) in planning a small prototype installation of river aerators, and are currently being used by the Tennessee Valley Authority in planning a much larger river-oxygenation installation. Also, the Metropolitan Sanitary District of Chicago is using the results in planning and designing a large prototype installation of aerators, which has been officially recommended to the Illinois Pollution Control Board.

NEW MEXICO--The New Mexico Institute, in conjunction with other New Mexico Universities, made a very comprehensive, interdisciplinary study evaluating the best uses of the Rio Grande Basin waters. Ideas and findings from this research have been utilized in formulating the New Mexico State Water Plan.

NEW YORK--Citizen education and public participation have been strong characteristics of the Susquehanna River Basin Commission, a multi-state regional agency. The consequences of Hurricane Agnes in 1972 created a greater need for an effective public-agency interaction, and the New York Center's program has been a major device for providing information materials (e.g., flood plain management seminar; flood insurance; public education tours; community response to flood risks), for initiating and assisting in organizing a Susquehanna River Basin Citizens Organization, and for bringing about a coordination of research in Pennsylvania and New York on Susquehanna River Basin problems. A continuing program, Hurricane Agnes Flood Project, was designed and will continue into the 1973-74 period as a multidisciplinary, inter-regional program to assist in solving existing problems and to develop essential knowledge needed for management decisions at all levels to minimize the effects of disastrous floods.

NORTH CAROLINA--The objective of one North Carolina research project is to determine the effects of the authorization of construction of a reservoir project on land values, ownership, and utilization. The findings provided the central theme for a Reservoir Shoreline Development Workshop held by 87 State and regional planners, reservoir owners, governmental agencies, and University representatives. The investigators of this project have worked with the Centralina Council of Government's Lake Norman Marine Commission to utilize the research findings to improve the planning of shoreline areas around Lake Logan near Charlotte, North Carolina which is under pressure of urban development.

NORTH DAKOTA--A study designed to analyze the utilization and management of water resources in northcentral North Dakota qualified the impact of man and his facilities upon the recreational water resources and the economy of the area. The results of this study indicated that there is a direct relationship between the numbers of people utilizing the lake and the levels of bacterial and chemical contamination. Salmonella bacteria increased by a factor of 10 after heavy-use weekends. This study also revealed that the water-based recreation activity during the summer generated a $3.4 million impact on a community of approximately 2,000 residents. Results of this study will be used to develop guidelines for the optimum density of lakeshore property, including public and private use, establish adequate solid and sanitary waste disposal systems, and contribute to establishing a long-term program of lake restoration and management in North Dakota.

OHIO--The potential transfer of heavy metals, pollutants such as chromium, nickel and mercury from Lake Erie sediments to the overlying waters was investigated by the Ohio institute, using water and sediment sampling, and innovative analytical techniques developed by the researchers. The Ohio State Attorney General's office has expressed interest in this research project, as the results will have a bearing upon a $47 million law suit: BASF Wyandotte vs State of Ohio.

OKLAHOMA--An Oklahoma study has proved a boon to the Oklahoma Oil industry as well as conservationists. They analyzed the toxic compounds in oil refinery effluents and determined their effect on aquatic biota. The study produced means for the oil refineries to correct some of their processes and it resulted in a great improvement in the quality of their effluent. The Oklahoma Water Resources Research Institute undertook this study in very close cooperation with the Oklahoma Refiners Waste Control Council.

OREGON--There was a critical need for development of structural techniques which would induce the deposit of gravel in certain streams in order to stabilize bottom conditions and minimize silt build-up. A research project was initiated which successfully achieved the desired results. The findings are currently being used effectively by the Oregon State Game Commission and the U. S. Bureau of Land Management in their joint State-Federal Siuslaiv River Basin program.

PENNSYLVANIA--Mine drainage is one of the most pressing water quality problems in Pennsylvania. As a result of a project titled "Crushed Limestone Barriers for Neutralization of Acid Streams" the Commonwealth of Pennsylvania constructed limestone barriers in an acid stream. A subsequent project is evaluating these barriers and their capabilities to neutralize and remove acid from the water. The results of the evaluation should lead to improved barrier efficiency.

PUERTO RICO--The purpose of this Puerto Rico study was to analyze pertinent data on irrigation costs and practices and their effect on agricultural production and diversification of crops. It was determined, for example, that the low yield per acre for sugar cane resulted from the fact that the farmers, for various reasons, were not using the amount of water needed to satisfy the physiological requirements of the plants. These results are being used by numerous government agencies involed in the development of the Lajas Valley: Puerto Rico Department of Agriculture, Agricultural Experiment Station of the University of Puerto Rico, Soil Conservation Service, State Planning Board, Puerto Rico Water Resources Authority, and Agricultural Extension Service of the University of Puerto Rico.

RHODE ISLAND--Design of nuclear power plants such as one proposed for Rome Point, Rhode Island, stands to benefit from two Rhode Island Center studies. One found the minimum safe distance of a disposal field from a water supply source to be greatly dependent upon the soil characteristics and the ground water table. The second study developed a model predicting the behavior of warm-water discharges into streams when the discharge is in the form of a slot jet.

SOUTH CAROLINA--The movement of moisture in the surficial unsaturated zone is critical with respect to predicting the travel of pollutants to the water table and through shallow aquifers to nearby streams. A South Carolina research project aims at developing quantitative techniques to predict moisture exchange between the root zone and lower horizons of the unsaturated profile. The Division of Radiological Health, South Carolina State Board of Health, has been keeping in close touch with the results of this work because of its relation to the migration of radioactive materials through soils near radioactive waste repositories. Results of the research have also been used in the development of the recharge phase of a hydrologic model for predicting baseflow of streams in the Piedmont region of South Carolina and adjacent states. This model has the potential for becoming a useful water management tool throughout the region.

SOUTH DAKOTA--An investigation has recently been undertaken in South Dakota on "Regional Income and Employment Effects of Water Resources Investments." The South Dakota Water Resources Commission and Conservancy Sub-Districts are looking to this study in formulating a State water plan. It is expected that the results of this study will be effective in evaluating the feasibility of two proposed large-scale dams in South Dakota.

TENNESSEE--The objective of a Tennessee research was to analyze statistically the probability of occurrence of drouths using computerized climatological data, and hydrological and soils data for selected areas. The resulting analysis was prepared for the use of water resource managers. The results have been used by farmers, industry, and in several metropolitan areas in evaluating water usage under drouth conditions, and predicting potential water shortages.

TEXAS--With demands for irrigation water growing rapidly, the Texas Institute made a study of trickle irrigation as a means of stretching relatively scarce water supplies. Although trickle irrigation is extremely efficient, one of the problems encountered was clogging of the orifices in the irrigation lines. Through improved designs for the sprinkle emiters and improved filtering methods the clogging problem was overcome. The results have been a marked water use efficiency in Texas tree crops (citrus, nuts, and fruits)--growing more with less water.

UTAH--A major problem in the Bear River Basin has been working out an equitable allocation of the river's water among the three States (Utah, Idaho, and Wyoming). The State of Utah specifically could not accept, without verification, the reconstructed natural flows as calculated by others. Therefore, a major purpose of the simulation model developed by this research project was to provide a technique for predicting Bear River flows under various conditions of development. The Utah Division of Water Resources has applied the model successfully to predict the flows which correspond to the assumed conditions used by Idaho and Wyoming. This information was highly effective in the tri-State negotiations which followed. The results were a successful compromise which benefited all three States by arriving at a more equitable allocation of the water involved.

VERMONT--Research findings on long-term variations in lake levels of Lake Champlain, since 1871, have been solicited and used by the State of Vermont Water Resources and State Highway Departments, and by local contractors, engineers, and water-front landowners. Results have been used, moreover, in design of a water treatment plant intake and a marina dock.

VIRGINIA--The objective was to study the concentrations of microorganisms in the surface microlayers of fresh water bodies in order to evaluate conventional subsurface sampling techniques for water quality studies. It was found that coliform counts in the thin surface layers may be 10 to 100 times larger than counts from samples at depths of 10 centimeters. This would suggest that sampling techniques must be investigated further or that water-quality standards need to be rewritten to take into account the nonuniform distribution of bacteria. The results have been studied by the Virginia State Water Control Board with the view toward applying them in their programs.

WASHINGTON--This project, which resulted from a proposal by the Water Research Center, combined the efforts of a research team from two States, Idaho and Washington. The problem was one of poor water quality in Coeur d' Alene

Lake and the Spokane River Drainage System. The findings have provided valuable information on changes in the river-lake system, guidance for future decisions, and significant management tools for the use of State, regional and local agencies in the two States. The Corps of Engineers has obtained baseline information for its city of Spokane Urban Study, the Environmental Protection Agency has received data for its Storet Program, and the Washington State Department of Ecology has employed the results in its baseline data monitoring program. The latter agency has provided additional funding to extend the research.

WEST VIRGINIA--A West Virginia research project was concerned with developing methods for analyzing rainfall intensity-frequency variability over the mountain terrain of West Virginia. The Water Resources Division of the West Virginia Department of Natural Resources utilized model selection techniques, computer programs and plotter routines to produce a series of reports of streamflow characteristics in the State. These reports will be used in the planning and design of flood control and highway drainage structures in the State.

WISCONSIN--The objective of Wisconsin research was to investigate the physical transport mechanics and chemical transformations of nutrients through and over low temperature or frozen soil profile. They studied the characterization handling, and utilization of farm animal waste. It was found that under some conditions, manure applied to crop land during the winter leads to high nutrient losses in the runoff, thereby creating undesirable pollution of surface waters. A quantitative mathematical model of manurial nutrient movement under conditions of early spring has been developed. A computer model has also been developed which predicts nitrogen transformations and nitrate movement through the soil. Conferences and workshops have been conducted to discuss the research results and to teach the livestock operators how to manage the runoff of nutrients from their farms.

WYOMING--A study is nearing completion wherein an evaluation is being made of the hydrologic, environmental, and economic impacts likely to occur as a result of proposed water development projects in the North Platte River Basin. Because of the recognized importance of this type of information, a similar study is now being developed by the three states of Wyoming, Montana and North Dakota to transfer results of the North Platte study to the Fort Union coal region. The Fort Union study will be in greater detail and will show the predictive impacts of various types and levels of coal-energy development activities that are being considered. State and local officials are anxious to have the results of this study for planning, and possibly, legislative purposes, and the researchers are maintaining contacts with such officials so that study results may be used as soon as they become available.

ACCOMPLISHMENT OF OWRR

Mrs. HANSEN. Would you please describe some important accomplishments of your office in the past year?

Mr. HALL. I think the most important accomplishment of our office in the past year is the development of the regional and problem-oriented approach to the research which I described earlier. I believe this is going to do more than any other thing in assuring us that research we undertake is timely and is directed at the problems that need to have research attention.

ANNUAL ALLOTMENT PROGRAM

Mrs. HANSEN. You are requesting a decrease of $561,000 for assistance to States for institutes, for a total program of $4,539,000. What is the rationale for this reduction in view of the critical water problems?

We have letters from 21 Members and more coming, protesting this action.

Mr. HALL. Mrs. Hansen, the problem comes when you have to spread the Federal budget over the various categories. It was felt that the energy research area was going to have to be——

Mrs. HANSEN. But water is directly related to energy research. Water is a necessary part of the development of oil shale.

The Geological Survey and certainly other Federal agencies have to be aware of what our expanded energy program is going to do to our water resources. Some of the proposed techniques on the advanced uses of coal are deeply related to the supply and quality of the water.

Mr. HALL. As a matter of fact, we completed a study through the combined efforts of the University of Wyoming, Montana State University, the University of Montana, and the Institute at North Dakota to analyze exactly what were the research needs associated with the Northern Great Plains coal development. We got into it and found that in addition to some water problems there were some other types of problems that weren't strictly water, and I said, "Go right ahead. Let us see what we need to know in order to be able to move ahead with confidence in the development of Northern Great Plains coal," and we have a report on this. I believe that copies of that report were provided to the committee.

OIL SHALE DEVELOPMENT

Mr. YATES. Has the Office of Water Resources Research compiled any data on the amount of water that will be necessary to develop the oil shale deposits in Colorado, or Utah, or Wyoming?

Mr. HALL. The Office of Water Research hasn't but Assistant Secretary Horton's shop has. They dug into the question of what are the implied water requirements of the shale development. The U.S. Geological Survey and the Bureau of Reclamation are participating in this effort.

Mr. YATES. Does anybody know how much water would be there?

Mr. HALL. Not exactly because it is going to depend a lot upon what the extraction processes are and how you manage the residuals that come from it, but we make the best estimates we can and we believe

that the results of the research on those processes will give us more precise information.

One of the main things that we have to concern ourselves with there is what happens to the ground water. That particular geographic area is underlain by a heavy anhydrite, they call it. It is a high salt area and as you remove water or change the water regime there you are going to be moving most anhydrites out and it will be an important concern to the salinity in the Colorado River.

Mr. YATES. But the Department of the Interior is now engaged in making leases of tracts in the oil shale areas. If we don't know what is going to happen to the water as a result of oil shale development of those tracts should we be going ahead with those leases?

Mr. HALL. This is a question that is beyond my personal competence to answer because OWRR is not involved in the leasing process nor the rationale by which they are done.

Mr. YATES. No; but one of the serious questions is what happens to the water? I would assume that would be your problem.

Mr. HALL. What I was going to point out is that granting the lease does not grant permission to go ahead with the actual exploitation. Mr. Bettenberg, do you have an answer on this?

Mr. BETTENBERG. I think I do. We do have estimates of the requirements of an industry under various assumptions, water requirements. We have made estimates of the effects of operations on ground water, surface water, and so forth in the Department. Those things are contained, for instance, in our environmental impact statement on the oil shale program. The oil shale program is a prototype program.

Mr. YATES. That is not true. It is not the development that will be in the future but it is a pretty well advanced kind of development.

Mr. BETTENBERG. It is six tracts.

Mrs. HANSEN. As I understand it, you have to analyze what happens in these six tracts to develop some of your answers. The sum of $1.2 million is being requested by the Geological Survey for water resources investigation for hydrology related to oil shale.

Mr. BETTENBERG. This is in association with the leasing program. In Colorado we are offering two tracts only at this time and we are deferring further development of the Federal resource there until those are under development and this is the express purpose of the prototype program.

Mr. YATES. How long will it take for those to be developed?

Mr. BETTENBERG. I would think it would be 1980 probably before we will be——

Mr. YATES. Does that mean you will not make any more leases until 1980?

Mr. BETTENBERG. That is the position of the Department.

Mr. YATES. In other words, the six leases that you have given are all for the time being?

Mr. BETTENBERG. That is right.

Mr. YATES. And you will not be making any more leases until 1980?

Mr. BETTENBERG. That is the policy.

Mrs. HANSEN. You won't be granting any additional leases until you have the answers on what you are going to do with the spoils, what effects this will have on water, and which of the two types of

techniques—underground and above ground—should be used in various areas.

Mr. BETTENBERG. Yes.

Mrs. HANSEN. So you have to have those answers before you proceed. Isn't this correct?

Mr. BETTENBERG. That is correct.

Mrs. HANSEN. At least this is what the Department has stated.

Mr. BETTENBERG. The timing would be dependent upon how rapidly we get development on those six tracts, of course, and how rapidly we get the answers and what problems we find, but that was the intent of the program.

Mrs. HANSEN. These will be analyzed, will they not?

Mr. BETTENBERG. Yes, ma'am.

Mr. HALL. This would include the water supply and the impact on the rest of the hydrology.

Mrs. HANSEN. That is correct, because the Colorado Basin is a very critical area of water supply.

ENVIRONMENTAL IMPACT STATEMENTS

Mr. EVANS. Madam Chairman, may I ask a question there.

Mrs. HANSEN. Yes.

Mr. EVANS. Was your office the office responsible for the water section of the impact statement that was filed in relation to the——

Mr. HALL. No; the Office of Water Resources Research is not. The regular line agencies develop the impact statements. In this case I believe the Bureau of Land Management was responsible for developing that statement.

Mr. BETTENBERG. The statement was developed under a task force arrangement. The people on the task force primarily came from Geological Survey and the Bureau of Land Management. The task force included hydrologists from the Geological Survey, also people from the Bureau of Mines.

Mr. EVANS. But nobody from your office?

Mr. HALL. Nobody from the Office of Water Resources Research.

Mr. EVANS. Thank you.

OFFSHORE DRILLING

Mr. YATES. Has any research been done on the question as to whether offshore drilling for oil may disturb water tables on the mainland?

Mr. BETTENBERG. I don't know the answer to that.

Mr. YATES. Would the Office of Water Resources Research?

Mr. HALL. We have not looked at the question per se but we have been studying the interfaces of the aquifers with the ocean, particularly in the Florida area. I believe that as a part of the overall Continental Shelf monitoring program that we will be able to put in our——

Mr. YATES. Has any research been done on that question?

Mr. HALL. On the question per se?

Mr. YATES. Yes.

Mr. HALL. No, because before you can get started on the research you have to determine the geologic structure and formations, the types and movement of water and what their continuities are, and this is partly what the monitoring program is all about, to find this out.

GREAT LAKES WATER LEVEL

Mr. YATES. As you know, we have had a persistent high water problem in the Great Lakes over the last few years despite efforts by the Corps of Engineers to do something. I don't know what the Corps of Engineers has done except drop bolsters along shorelines at various places. The water levels are still at historic high marks.

Has your office studied the possibility of whether water should be diverted out of Lake Michigan at Chicago and sent downstream in order to lower the lake levels?

Mr. HALL. No, the Office of Water Resources Research has not looked at that question. I do believe, however, that this alternative has been looked at by the Corps of Engineers as one of the possible solutions. There are some political questions I understand in that.

Mrs. HANSEN. Dr. Long.

ASSISTANCE TO STATES

Mr. LONG. I understand that you are proposing to reduce assistance to States from about $5.1 million to $4.5 million. Why is this being reduced?

Mr. HALL. The principal reason for it being reduced is the decision that was made in the Office of Management and Budget that higher priority areas existed.

Mr. LONG. So the Office of Management and Budget is cutting you down.

Mr. HALL. Yes.

Mr. LONG. Do you feel that this budget should not be reduced?

Mr. HALL. Personally, yes. I feel that this has been a very valuable program. However, I am not in a position where I have to make the tradeoffs with something else.

Mr. LONG. Why is the same amount allotted to every State?

Mr. HALL. In the allotment program this is the basis for distribution according to the law.

Mr. LONG. Some of our States are bigger than many countries and some of them are smaller than an average congressional district. It is not your decision, then.

Mr. HALL. However, I think that this raises a point that is often raised about our program and I think it is essential that we stop and look at the overall program. When we deal with the overall program, not only the allotments but the matching grants and the title II, here you find that the moneys that we disburse are much more in accordance with the capabilities and needs of the various States. Some States receive very little of the matching grant and title II funds, and other States have large amounts. There is a high variability of the total amount of OWRR funds that is going into each State for water resources research, but the allotment program gives each State a solid base to work from.

Mr. LONG. I wouldn't think it would be very solid for the States of New York or California.

Mr. HALL. No, but New York and California back this by fairly large amounts from matching grants and from title II and from their own State authorities.

Mr. LONG. I am a little puzzled as to where the States leave off and where the Federal Government begins. Is it your rationale that when the States put in more funds that the Federal Government should put in less?

Mr. HALL. Not necessarily because we sort of share the obligation and this is the way our cooperative program operates. The States on the average, in the annual allotment program which provides the basic support for the institutes, put up as much money as we do even though they are not required to do so. However, this is not the same in all States. Every institute does not put up half, or just as much as we do. Some institutes have no State support. Other institutes, for example, in California I believe the amount is about $250,000 that is provided through the university, and other States have corresponding amounts, sometimes higher than that, sometimes lower than that.

They also can and do use those State funds to match in our matching grant program to do studies that both of us think are of importance to the region and to the State.

STATE PROBLEMS AND FUNDING

Mrs. HANSEN. Isn't it true that some States, although they may not have very large populations, have enormous water problems. I certainly would say that the production area of the country, that has all the agricultural land, supplies most of the raw materials for the eastern seaboard would have as many problems with water as you might have in a city. Isn't it true that the States have recognized to a great extent some of the inherent problems and do participate through their institutions in this kind of funding?

Mr. HALL. Yes. Some States participate through direct funding of the institute, through the university budgets. Others participate through the granting of contracts by State agencies.

COORDINATION AND DISSEMINATION

There is another factor that I think is very important in this Federal-State cooperation. Before this OWRR program started in 1964, conclusions made by the Senate's Select Committee on Water Resources and by the National Academy of Science's Ad Hoc Committee on Water Resources were that water resources research over the country as a whole was quite uncoordinated. You could find a person in one university working on the same problem, in the same way, with the same approach as somebody in another university simply because there was no mechanism for seeing to it that everybody knew what everybody else was doing.

Mr. LONG. Scholars do this in the world of publication.

Mr. HALL. They do it in the world of publication and this is where the argument has come, that undesirable duplication still occurred. Whether the charge is true or not, one of the things that OWRR has been able to provide is an organizational structure that encompasses dissemination of information about what other people are doing. It covers the coordination of research, the coordination of research even on a campus, in other words, finding out what the agricultural college is doing, the engineering college is doing, what the biology people are

doing, and integrating this information. The State institutes provide this information to OWRR and they report to each other through their regional associations. OWRR also produces a research catalog that comes out annually and summarizes all the current water research being undertaken in the United States.

Mrs. HANSEN. I may say to the gentleman that the history of this retrieval system goes back about 6 years. The committee did require that this type of material be made available to the people in Seattle or Baltimore who had a use for this information.

Mr. LONG. That sounds like a very useful idea.

Mr. HALL. Through our scientific information center we can tell you what has been done as well as what is being done and who is doing it. I think it brings this information as close up to date as we can get.

Mrs. HANSEN. There is the ability to monitor the research.

Mr. HALL. That is one additional thing that we are innovating at the present time. That is to get State people who will need the research to serve as the monitors on the research, actually participate with it, so that the results are transferred as they are developed rather than waiting for a scholarly paper to come out on the subject.

Mr. LONG. My experience with scholarship is that scholars operate in fashions. Certain disciplines become very fashionable; somebody makes a reputation and everybody wants to follow. Nobody wants to do the hard work in some area that isn't fashionable.

These fashions change sometimes with bewildering speed. An unknown scholar may suddenly become famous because he happened to pick an area of research that was a sleeper.

FUND TRANSFERS

You have here $540,000 Assistance to States in transfers. Is "transfer" an euphemism for "impoundment"?

Mr. HALL. It depends on how you view the process by which the transfer occurs. If the funds are transferred they would not be available to OWRR for the purposes of transmitting them to the institutes. That much is clear regardless of what else occurs. The associated problem is that there was a pay increase granted to the Federal employees and funds have to be found somewhere to cover this.

Mrs. HANSEN. Let me ask you the question in another way because this is something I want to bring out, if the gentleman will yield.

Last year the Congress, as you are well aware, added $540,000 for the State institutes to provide $110,000 for the 51 ongoing institutes and $10,000 for the three newly authorized institutes, District of Columbia, Guam, and the Virgin Islands.

The administration has proposed to transfer the congressional add-on for pay costs and is requesting no funding for the three new institutes in 1975.

Do you agree with this plan, Dr. Hall? The committee has a very dismal view after we have made a judgment of having OMB use our add-ons for some other purpose.

Mr. HALL. You are asking for my personal view?

Mrs. HANSEN. That is correct.

Mr. HALL. My personal view is, I do not like it either.

Mr. LONG. This does bypass the intent of Congress, whether you call it transfer, impoundment, or whatever.

Mr. HALL. Yes, sir.

Mr. BETTENBERG. It bypasses the intent of Congress at the time of the appropriation of the funds. But we are coming back requesting formal legislation from this committee to approve those fund transfers. We are not bypassing the congressional process.

Mrs. HANSEN. I know. But the committee does not make its determinations one day and say the next day, "We are sorry, we were not correct."

Mr. EVANS. Did we not do it in a supplemental?

Mrs. HANSEN. No.

Mr. HALL. That is before the committee now.

Mrs. HANSEN. The committee has refused to allow the transfer.

Mr. BETTENBERG. We did this last year in exactly the same manner.

[Discussion off the record.]

Mrs. HANSEN. Did you have any more questions, Mr. Long?

Mr. LONG. No.

BUDGET REQUEST DECREASE

Mr. EVANS. It was touched on a moment ago, since we are on page 8 of the justifications you were asked for an explanation of the cut of $561,000. You said there was a decision by the Office of Management and Budget.

Mr. HALL. Yes.

Mr. EVANS. I notice on page 1 that the request this year is a decrease of $898,000 below the 1974 appropriations. Not only is there this question of what is happening to the 1974 $10,000 add-on for institutes, but in the current budget there is a proposal to reduce each institute by $11,000 per institute and still not fund the three new institutes. In your overall request for funds, you are asking for $12.7 million; is that correct?

Mr. HALL. Yes.

Mr. EVANS. Compare that to what you got in 1973, $14.304 million, and you are trying to operate today, in spite of inflation, in spite of the importance of water research, with $1.604 million less than you had available in 1973?

Mr. HALL. This is correct.

Mr. EVANS. Now, to your knowledge, does this represent a decision on the part of the administration to gradually phase this program out just by starvation of funds?

Mr. HALL. I have no direct knowledge on that particular question. However, I do know that there is a concern in the Office of Management and Budget with the so-called categorical grants. I do know that the staff of the Office of Management and Budget considered this particular part of the program a categorical grant. I have no information as to what they may or may not wish to do in the coming years.

Mr. EVANS. Have they ever talked about this program under this statute as one which should be phased out and folded into some kind of special revenue sharing?

Mr. HALL. They have suggested we should consider that. They have not indicated to me that they would require it.

Mr. EVANS. Do you have an opinion on that?

Mr. HALL. Yes, I have a very strong opinion on it.

Mr. EVANS. Would you mind stating it?

Mr. HALL. I believe that this program, the way it operates at the present time probably comes closer to meeting the desired goals stated in special budget analysis of any Federal grant program we have at the present time.

I think if you will very carefully check the objections to categorical grants that are listed in that special analysis, you will note that the problems that they consider exist in the categorical grant programs do not apply to this program. This program does not have those problems. We are not excessively directing the States and telling them what to do. We are working with and encouraging the States to find out what their own problems are, what research needs to be done. We only review a proposed State program to assure that it is a coordinated, quality program.

Mr. EVANS. On those occasions when you have had conversations with the administration officials on the question of this program possibly in the future being folded into a specific or special revenue-sharing program, have you expressed your point of view, your judgment?

Mr. HALL. Yes, I have.

Mr. EVANS. It is the same opinion which you just discussed now?

Mr. HALL. The same opinion I expressed, only I took an hour to explain the details of why I felt that way.

Mr. EVANS. On page 8 I have asked all the questions I want to, but I would like to ask a few questions later on.

NEW INSTITUTES

Mrs. HANSEN. Is there sufficient water resources research need in District of Columbia, Guam, and the Virgin Islands to justify separate institutes there?

The committee is rather familiar with the problems of Guam. I think they do have water problems there of great magnitude.

Mr. HALL. I think when the authorization committees and the appropriations committees of the Congress studied them in connection with the 1971 amendment of the Water Resources Research Act, they recognized that every part of the country does have water problems of one sort or another. District of Columbia water problems are related to those of a megalopolis type of structure, largely water quality and water supply, parks, recreational facilities, and so forth. Guam and the Virgin Islands both have problems of water supply, including seawater intrusion. And if you define water problems sufficiently broad you also have the associated onshore and nearshore marine environment that would be involved on those islands.

The questions of whether they should be funded at this particular time, my personal feeling is that I would hate to see them started and then forced to cut off. I think they should, when they start, be on a firm basis and be ready to move on, with reasonable confidence in what the future is going to bring. I think it could be counterproductive to start up something that would then be allowed to drop.

Mrs. HANSEN. OMB is doing that constantly in their budget practices.

Mr. HALL. What I stated, of course, is my opinion regarding the new institutes.

STATE INSTITUTES REDUCTION EFFECT

Mrs. HANSEN. Your 1975 budget will provide $89,000 for each of the 51 ongoing State institutes. What will be the effect of this reduction?

Mr. HALL. Well, the primary effect is very apt to impact on their recently initiated information dissemination work. It is much easier to suspend information dissemination type of work than the ongoing research activity. So I would expect that in general there would be a reduction in the level of information dissemination. It is likely that there will also be a reduction in the State institute' effort that will go into consultation and collaboration with State and local water officials, which I feel is a key part of the regional and problem-oriented program we are trying to develop.

Mrs. HANSEN. As you are aware, the Universities Council on Water Resources sent a memordandum to the Senate and the House Appropriations Committees. This letter was directed to Senator Bible, dated March 14, from the University of Florida.

It states:

On behalf of the Universities Council on Water Resources, I would like to respectfully comment on the testimony of Secretary of the Interior, Rogers C. B. Morton, who appeared before your Interior Appropriations Subcommittee on March 4, 1974. We believe certain portions of that testimony do not reflect an accurate assessment of the worth of the State institute programs. Certain statements of Secretary Morton cannot go unchallenged.

Secretary Morton said:

Let us call it what it is—OWRR program. It is not a research bill, it is a college—a land-grant assistance bill and I am for that. But I am not for putting a false name on it.

This is the university's reply:

The usual institute format is to operate with statewide advisory and technical committees and to develop a research program responsive to recognized needs. While the institute offices are usually located on land-grant campuses, the program is directed to State and regional problems.

Research is conducted on campuses throughout the States, including State and private universities, where both faculty interest and scientific competency exist. This leads to a very cost effective research program utilizing the qualified university facilities wherever they exist.

We shall not comment on the stated willingness of Secretary Morton, on page 79 of the transcript, to turn over a thriving, efficient water resources research program to another department because we fail to understand the logic in that argument.

We appreciate Secretary Morton's quickness to recognize the fine Nevada water research program. Still he might have been prepared to discuss the equal merits of the other State institute programs throughout the United States. There is simply no evidence to support the conclusion that there are only a few good institutes and that the appropriated funds should be allocated to these, leaving the others to wither on the vine.

It would be regrettable indeed, if the Secretary's testimony were to be the basis for changes in the act or its administration without a full opportunity for the presentation of evidence and points of view by persons more conversant with the program and its accomplishments.

The OWRR program has been markedly successful and fully deserves the opportunity to further demonstrate its potential through increases in appropriations as authorized by the 1971 amendment to the Water Resources Act.

What is your comment, Mr. Hall?

Mr. HALL. Well, my personal opinion is that, from my own contacts and dealings with the Water Resources Research Institutes since they were begun in the last 10 years, that they are not simply a land-grant support program but that they are a research program and a very effective research program. But the Secretary's understanding of it is apparently different than mine.

MATCHING GRANTS PROGRAM

Mrs. HANSEN. $3 million is requested for matching grants to institutes. What is the total authorization for this part of your program?

Mr. HALL. The matching grants, $5 million. It has never been funded at $5 million; the allotment program was funded at the authorized limit from the beginning until the authorization increase to $250,000 occurred beginning in fiscal year 1973. But the matching grant has not been.

Mrs. HANSEN. What is the difference between projects funded under this program and projects funded under other programs?

Mr. HALL. The projects funded under the section 100 allotment program have two characteristics. They are primarily directed toward the problems of the State as seen by State and local water officials. The other, second objective, they are intended to surface innovative ideas for solving water problems that may exist on a broader scale. The idea is to give someone—an expert who thinks he has a good idea for handling a problem, a chance with a small amount of money to document his case and to show what he can do.

The matching grant funds are intended to produce results with respect to more regional studies, studies which extend not only in the State but beyond the boundaries of that State.

Mrs. HANSEN. Could even be nationwide?

Mr. HALL. Could even be nationwide, but still cut across the entire spectrum of water resources research. In other words, under title I the research winds up being used by State agencies, Environmental Protection Agency, the Corps of Engineers, as well as by Interior and others. When we move to title II, on the other hand, this program was set up on the basis of doing the same thing, but supporting specifically the missions of the Department of the Interior.

RESEARCH PRIORITIES

Mrs. HANSEN. What are your research priorities this year and how do they differ from those of last year?

Mr. HALL. The research priorities for this year are based on the Department's priority programs of developing energy, preserving the environment, development of improved land use management practices, assisting the Indians to achieve self-determination, and the problems related to managing our water resources. Concerning the latter, as far as Office of Water Resources Research is concerned, we place special emphasis on the questions of water efficiency, water reuse, and urban water problems.

Mrs. HANSEN. Some of the Indian tribes, particularly in the Southwest, have extreme water problems. I think you are well aware that schools have been located due to availability of water and they have had to be relocated because suddenly your wells are not adequate.

What is your research focusing on that would be of major assistance to the Bureau of Indian Affairs in their planning for facilities, industry, and agriculture?

Mr. HALL. The principal thing we have done here is the development of various facets of a technique we call water harvesting. As a matter of fact, a study in Arizona resulted in the development and construction of some water harvesting systems to provide livestock and domestic water for the Papago Indians.

We are also extending a different phase of this particular idea. The basic idea, the basic science behind the idea, is that precipitation is really your ultimate water resource and the water which reaches the streams is only a small part of the total precipitation. This is particularly true in an arid region where only 5 percent or less of the precipitation actually shows up in a stream where you might put it behind a dam and pump it out and use it in a traditional type of irrigation system.

Some time ago, some of us got concerned about how to manage the precipitation as a resource rather than just the water in the stream. About this time I left the Water Resources Center and moved to the Dry Lands Research Institute. There we developed a research program for an area in Mexico, the purpose of which was to try to help these people feed themselves in a desert land essentially equivalent to that which the Southwest Indians live in. We were successful in developing a technique, at least in that particular location. I have to put some codicils in this particular case, but in the middle of a desert that has between 8 to 10 inches of rain a year a peach orchard was established.

Mr. MCKAY. That is quite a bit of water, 8 to 10 inches, if you are talking about the desert; you don't get that much in a year in desert country.

Mr. HALL. I know there are much worse. I simply am stating what we accomplished in this particular case, growing peaches, corn, sorghum, wheat, beans, the classical crops of that sort, with an irrigation system that can be built with a man and a shovel.

I think this is a pretty good accomplishment in that case. We were not the first to have done it. I discovered later that the Nabateans some 2,000 years ago did this same type of thing on two inches of rain a year in the Negev desert. Recently a couple of Israeli scientists, trying to unravel a controversy over those so-called rockmounds, reconstructed some of the systems that the Nabateans built trying not to change or modify them. Then on the resulting farmlands they have tried to grow virtually every crop known to man. They have successfully grown fruit trees, olives do very well, cherries do very poorly, apples, apricots and peaches have been produced. They have even grown gladiola bulbs as part of their experiments, and have checked various classes of forage grasses.

This is something that possibly we can do, that is, rediscover what the ancients knew about the management of precipitation. It is one

area where we feel the Office of Water Resources Research can assist. Through the OWRR program we have the types of people who can research this.

One thing I think is important—I said there are some buts—is that some people in Mexico when they saw our success thought, well, this is easy, and they rushed out and tried to do it without any scientific check to see what it was they needed to do. They failed miserably and wound up with serious erosion and other problems. So it is not something you just go out and do. There has to be a research base behind it, so we know how to design something that works rather than just design something and then see if it works.

WEATHER MANAGEMENT

Mr. VEYSEY. Are you doing anything in the management of weather?

Mr. HALL. Not in weather management. This program is in the Bureau of Reclamation.

Mr. VEYSEY. Faltering there, I would say.

Mr. HALL. Perhaps, but what is being done in Interior is being done there at the present time. A difficulty, I feel, is the magnitude of funds it takes to accomplish this type of research. I think we need to go into the field as a field laboratory and study cloud mechanics rather than simply going ahead with the technology that has been developed.

Mr. VEYSEY. You are aware that it is being done on a commercial basis in a number of places?

Mr. HALL. Oh, yes. But there is argument about whether the results are valid or invalid.

Mr. VEYSEY. People continue to pay to get them accomplished. I suppose they think they are valid. They are close observers.

Mr. HALL. Yes, I have to point out there are people who still pay for water-witching on the basis they get good results there.

Mr. VEYSEY. Do they really?

Mr. HALL. Yes. One of the things I think could be done is that the west coast of California in the Liggett Military Reservation area, where you have the coastal mountains with virtually no activity of cities or people on the seaward side, would provide a beautiful place for a full-scale field laboratory for cloud physics analysis, in situ. Because of the undisturbed air masses coming in off the Pacific, with no roughness, no channeling, no abnormal upsets, swinging in, rising up over that mountain range there. I think we could learn a lot about what are the real physics of cloud formation and precipitation. It could teach us how and when to do our cloud seeding or whatever it is we ought to be doing. That would be a fairly large project.

Mr. VEYSEY. You are not in that field?

Mr. HALL. We are not in it. We do not have the magnitude of funds to do that.

ADDITIONAL WATER RESEARCH

Mrs. HANSEN. $3.170 million is requested for additional water research. What matching requirements if any, are involved in this phase of your program?

Mr. HALL. There are no matching requirements under the provisions of the act. However, wherever the proponent of the study has a stake in the results, and should be participating, we do request that they support part of the research costs.

Mrs. HANSEN. In 1974, how many of the grants in this program were for universities, how many for Governmental agencies, how many for private firms, and how many for foundations?

Mr. HALL. Bill, I think you may have that specific figure.

Mr. KOOP. I just have the percentages. The percentage ratio was 65 percent universities, 30 percent private firms and organizations, and the remaining 5 percent, State and local government agencies.

Mrs. HANSEN. Please insert a list in the record.

Mr. KOOP. I will be happy to do so.

[The information follows:]

ESTIMATED DISTRIBUTION OF FISCAL YEAR 1974 TITLE II FUNDS BY TYPE OF ORGANIZATION

Type of organization	Number of grants or contracts	Federal funds (thousands)
Universities and colleges	28	$1,999
Private research firms	12	937
Nonprofit private organizations	1	44
State and local government organizations [1]	3	190
Total	44	3,170

[1] Includes Quinault Indian Reservation

FOREIGN ASSISTANCE

Mr. YATES. On page 13, it is indicated that the Netherlands asked for your assistance in applying OWRR techniques to water quality prediction. What have you done about such requests?

Do you help foreign countries?

Mr. HALL. Yes. What we did in this case was to put the Netherlands Government in contact with the firm that did the research for us. This project was concerned with development of mathematical models for pollution in estuaries and streams, particularly where there is confluence and mixing. This was of considerable importance to Netherlands water officials.

Mr. YATES. Is this the extent of the assistance you give to foreign countries?

Mr. HALL. Yes.

Mr. YATES. There is no need for repayment by them for services rendered?

Mr. HALL. Well, they usually set up their own contracting or consulting arrangement with the investigators who developed the idea or model and pay for it in that particular fashion. Actually, if we start talking about what our work does to help other countries, as you know, knowledge is generally considered to be a free commodity. So that when it is produced——

Mr. YATES. Unless it is copyrighted?

Mr. HALL. Yes; but even here the copyright is usually in the name of the organization that publishes the journal. These journals are available to practically anybody anywhere in the United States and other countries.

Mr. YATES. Sure.

Mr. HALL. Sooner or later they will be picking them up and using them. We do see the results of some of our research coming back to us through foreign countries.

Mr. YATES. Suppose they have a particular problem, the Netherlands has a problem with some dikes and the quality of water as a result of some kind of a hydrological problem; do you help them? Do you send investigators?

Mr. HALL. If they came to us, we would not. All we would do is suggest where they might go to obtain assistance. We are not directly involved in the business of helping other countries.

Mr. YATES. OK.

Mr. HALL. In fact, we do not fund proposals for research to be done in a foreign country. We have steered away from that.

DEPARTMENT AND OWRR RESEARCH PRIORITIES

Mrs. HANSEN. What is the difference between the departmental research priorities and the OWRR research priorities in terms of the consideration given to them by OWRR?

Mr. HALL. The biggest difference is that the Office of Water Resources Research, if you want to look at it this way, has been given a mission for research which extends beyond the missions assigned to other Interior agencies. We have been asked to support research on the problems of the States, of the regions, to assure the Nation at all times of a plentiful supply of good quality water, which is a very broad charter. As a consequence, we speak of the OWRR mission as encompassing the research programs associated with the eight regions that have been set up in addition to the departmental priorities.

SCIENTIFIC INFORMATION CENTER

Mrs. HANSEN. You are requesting an increase of $6,000 for the Scientific Information Center for a total program of $940,000. What is the relationship between this Center and the Scientific Information Exchange of the Smithsonian Institution?

Mr. HALL. The Scientific Information Exchange is the organization which receives and keeps on file reports of all scientific projects which are currently ongoing. We, as well as other Federal, State agencies, universities, submit to the Scientific Information Exchange notices of research projects which describe the specified study being undertaken, what its objectives are, and some key words by which it can be cataloged. OWRR's Water Resources Scientific Information Center contracts with SIE each year to provide us with a comprehensive catalog of ongoing water resources research. SIE puts the notices of research projects into a standard format, so that people who are concerned about water research and want to know what is going on, or a scientist who wants to make sure that someone else is not presently attacking the problem he is interested in, can quickly and easily find out what else is being done in that field. So it is a cooperative arrangement. We work with them very, very closely. On the other hand, OWRR's Scientific Information Center is largely concerned with the results of completed research—acquiring documents setting forth research results, abstracting them, disseminating this information, and retrieving it upon special request.

ADMINISTRATION

Mrs. HANSEN. An additional $26,000 is requested for administration for a total program of $1.051 million. What does this involve?

Mr. HALL. Pay increases and space rental increases. We have to pay rental now whereas before——

Mrs. HANSEN. What is the total for rental costs?

Mr. KOOP. $59,000.

VIRGIN ISLANDS

Mr. YATES. I have a letter here from the Delegate from the Virgin Islands, Mr. de Lugo, who wonders why no money is made available for the Virgin Island institutes?

Mr. HALL. This is caught in exactly the same problem we were speaking of before, the decision being made that energy and other questions had more priority than initiating these institutes.

Mrs. HANSEN. The committee funded the Virgin Island institute but OMB did not like our add-ons.

Mr. YATES. Should it not be funded?

Mr. HALL. As a personal opinion, I believe they have established a need for the program. They have reviewed their competence as required by the Water Resources Research Act and, I believe, they meet the requirements of that act. They do have water resources research needs. Although they have not received a section 100 annual allotment grant, we do consider them eligible for the matching grant program.

Mr. YATES. I would think it would be acute there. They have cisterns to catch the rainfall. I would think that your outfit could be very helpful there. I certainly would hope that some way could be found of providing them with the funds to carry out their program.

Mr. HALL. Both the District of Columbia and the Virgin Islands actually have created their institutes. They are in being, although they do not have any allotment funds. Once they have qualified, we do consider them eligible to request funds under the matching grant part of the program.

Mr. YATES. Thank you, Madam Chairman.

Mrs. HANSEN. Mr. McKay?

BUDGET REDUCTION EFFECT

Mr. MCKAY. Your budget shows a net decrease in funds over last year, plus the inflationary factor. Do you plan to cut out some employees? Is it just a cutting of grants only?

Mr. HALL. The actual cash decrease means there will be a reduction in the level of work that we can do through the State institutes. The inflation factor, of course, constitutes a further reduction in the amount of work that they can actually accomplish.

As far as our office is concerned, and with a reduced level of program development assistance from the institutes, it also represents some reduction in the amount of the administrative work that we can do in connection with ferreting out the programmatic elements that serve to make the program more cost effective.

Mr. McKay. Do you have any information you could leave us as to how much will be cut back as a result of your proposed budgets over what it ought to be?

Mr. Hall. Well, the amounts that it will be as opposed to what it was, considering it at the appropriation level of last year, will be the amount of the reduction, which is $1.101 million, plus some additional reduction in research in proportion to the inflation factor since a year ago.

Mr. McKay. How many ongoing programs do you have that are in the middle of their research that will have to be halted as a result of that?

Mr. Hall. I do not think any of them will have to be halted, but some of them will not be able to go as far toward the objectives as originally intended. We have so much money in a project for staff costs. When they have reached that level, they can do one of two things; either reduce the employment, the number of hours spent on this particular research, or they can reduce the expenses that are associated with the research. They make this decision in an optimal way but either way there is a corresponding reduction in the research effort.

Mr. McKay. Aside from your budget, what do you feel, as the Director of this office, you could profitably use as a budget?

Mr. Hall. Well, I have spent some time looking at that particular question because each budget year, as you know, we more or less start from scratch to determine what ought to be done in our water research program area. In terms of the work to be done, I think there is justification for a level of support that would be substantially higher than we would have staff competence to get at. So I think——

Mr. McKay. Considering the staff competence, knowing the projects of institutes and so on, what could you profitably use this year in your budget that might be different than what you have proposed?

Mr. Hall. I believe we could profitably use in the allotment program somewhere between $150,000 and $200,000 per institute. That figure is based on what I think the so-called marginal institute could do in terms of the water-related problems of that State and the need to do some research work with respect to those problems.

In terms of the matching grant program, although it would be over our authorization I believe there is no question but that we could find States willing to put up matching funds to support good research projects in the order of magnitude of $10 million.

Now in the title II additional water research program we receive proposals that run over $30 million a year. Of those I would say 20 percent are either not very good proposals or are directed toward things not our bailiwick and ought to be taken care of by other agencies. So the limitation really depends on how seriously we would want to get into some of the proposed studies. I would guess we could go pretty close to the limit of the authorization, which is $10 million on title II, and still be getting very effective return on our dollars. There is some question of interaction between titles I and II. Some proposals we now receive in title II might come in as matching grant proposals if the matching grant funds were more plentiful. So there might be some duplication showing up here in these figures that I gave you.

At the present time we are able to fund about 10 percent of what is proposed to us for title II. In terms of the matching grant funds we receive, after careful screening by the State institutes where they pick out the proposals they think are most important and likely to succeed before sending them on to our office, we fund about one in four proposals.

MAINTAINING RESEARCH STAFF

Mr. McKay. Tell me your opinion as to whether or not this will have an effect on the regions or the centers to the point that they will lose some of their competent people as a result of this policy of cutback?

Mr. Hall. Well, I think the thing we have to look at here is "lose to what"? The water resources research institutes have not, and there is a congressional admonition on this, have not simply diverted existing scientists from one place to another, but rather, concentrated on bringing more people who have competence into the water resources field.

Mr. McKay. That is my point. The point is, in any institute you assemble a group of specialists who are working and become better specialists. Now if you reverse that, then have you not injured the program, doubled the cost in future times to reassemble and start all over?

Mr. Hall. As a matter of fact, if you do disassemble and reassemble, people have second thoughts about reassembling in the second part of it.

Mr. McKay. That is my point. Will this happen?

Mr. Hall. They are not lost to the university, but they are lost to water resources research, studying some unimportant thing instead of studying something that is important. This is where we lose if the program goes downhill.

Even more important I think than the physical losses of staff from these organizations, is the mental attitude. One of the things I am very much concerned about is that I have gone to these people and asked them to cooperate with this reoriented program, one which aims at problems. You know the old academic syndrome that "the faculty want to work on what they want to work on"; however, we have gotten their full cooperation. They have said "no" to what they want to work on, and are now working on what we feel and State experts feel is important in terms of real-life problem solving.

The real problem, as I see it, is they feel their reward for having so cooperated is a reduction in the budget. To them it appears, that "the programs that Hall has been espousing for the past year as absolutely essential are not backed by the U.S. Government." This is I feel the most important adverse effect, maintaining this cooperative program reorientation.

Mr. McKay. Your opinion is, this will have a long-term effect on the institute's capability of personnel?

Mr. Hall. I think so. I really do not feel that I would want to argue about $500,000 per se, just as a number. It is the impact of that number that concerns me more than anything else. It is a very symbolic number.

Mr. McKay. Thank you.

Mr. EVANS. Our colleague Frank Stubblefield, from the First District of Kentucky, has written a letter to me which, with your permission, I would like to have Mr. Hall look at and supply a response for the committee files.

Mrs. HANSEN. Very well.

STATEMENT OF GOV. CALVIN RAMPTON

Mr. MCKAY. I wish to introduce in behalf of Utah, Gov. Calvin L. Rampton a statement requesting increased funding for the programs of the Office of Water Resources Research. The Governor points out the shortsightedness of the administration's policies in first impounding funds appropriate for these programs and now seeking budget cuts. This year's budget request is nearly $1 million below last year's appropriation.

The State of Utah has benefited greatly from this program in terms of steady improvement in water planning, development, administration, and quality protection. Much more effort, however, is needed as Utah faces problems of water supply and in quality in connection with energy production, Colorado River salinity, and land use planning. Utah is continuing to make substantial efforts of its own, but continuation of this Federal program is essential.

[The statement follows:]

STATEMENT OF CALVIN L. RAMPTON, GOVERNOR, STATE OF UTAH

I wish to express the concern I feel about the proposed cut in budget of the Office of Water Resources program, Department of the Interior, as recommended in the fiscal year 1975 administration budget. I hope Congress will recognize the obvious shortsightedness of this recommendation and not only restore the proposed cut, but increase the appropriation to $200,000 per State in the allotment part of this program. Three years ago I went on record in congressional hearings in favor of amending the 1964 act to increase the basic allotment from $100,000 to $250,000. The director of the Utah Water Resources Division also testified at that time. I can assure you that our division and department heads are solidly behind this Office of Water Resources Research program. The matching part of the Office of Water Resources Research program and other research sponsored under Title II of the original act should also be substantially increased if we are to maintain a level of water research commensurate with the acute water problems we face.

I have already written Mr. Roy Ash of the Office of Management and Budget and Secretary of the Interior Morton expressing disapproval of the impoundment and diverting to other uses the additional funds appropriated by Congress for the State centers in both fiscal year 1973 and fiscal year 1974. These curtailing actions are both puzzling and disappointing. The fruits of this program are many and obvious. During my tenure as Governor I have noted with pride a steady upgrading of the staff capability in the several departments and divisions of State government concerned with water planning, development, administration, and quality protection. Several key staff additions to those agencies have come from our State university and have benefited from the training and first-hand demonstration and association with research being conducted under this Office of Water Resources Research program. I can assure you that this research program has brought substantial improvement in the quality of agency planning both through research results and the training of people for service at all levels of government and in private industry.

I have noted, also, that our Utah center has sponsored a number of conferences, short courses, and seminars which have provided our technical people an opportunity to brush up on new techniques and methodology which they can incorporate with or adapt to their arsenal of water problem solving skills.

Need for better water use and the shortcomings of our research base were highlighted by the Senate select committee under Senator Kerr more than 15 years

ago. Subsequent deliberations and studies by the federally sponsored Task Group on Coordinated Water Resources Research and the follow-on studies under the direction of the Office of Science and Technology pointed out deficiencies in the water resources research area and made recommendations for improvement. Out of all this came the Water Resources Research Act—a carefully conceived program to strengthen, correlate, and coordinate the national water research program. While we have made substantial gains, water demands and associated problems are increasing even faster than our knowledge about how to deal with them. I am particularly concerned about the limitations of water supply and water quality degradation in implementing programs to improve land use planning, increase energy production, control Colorado River salinity, and develop a comprehensive management plan for the Great Salt Lake.

We take pride in the fact that, although Utah is far more from being the most populous and wealthy State in the Union, the State dedicated and put into action at its land-grant use university a water research facility costing more than $1.5 million. Three and one-third percent of the State's mineral lease revenues are dedicated to water research. Beyond this, for fiscal year 1975, Utah directly appropriated $346,000 for support of water research at its water research laboratory and center. This is in a State in which the Federal Government owns approximately 70 percent of the land, including most of the extremely valuable oil, coal, gas, oil shale, and tar sands.

I think the Federal agencies or the oil, coal, and gas companies do not possess the technical expertise backed by specific research to deal with the very difficult water problems which will arise from their development. One 100,000 barrel-per-day oil shale recovery plant will use up about 20,000 acre feet of water per year, thus concentrating existing salt loadings. The availability of water for such purposes, the ripple of economic, legal, environmental, and social impacts which could arise from transferring water to meet these energy needs, and the effect on water quality to downstream points are complex but important considerations.

I am confident that those kinds of problems occur in each and every State of the Union. Each State could presumably go it on its own, but this would disintegrate the viable network of water research centers which provides the means for a joint effort, coordination, and pooling of information in a very real way, and for cooperative research effort having awareness of linkages with Federal agency programs. The Water Resources Scientific Information Center, an activity of the Office of Water Resources Research, provides each institute, Federal agencies, and the States with current information on practically all water resources research.

In my opinion, the network of water resources research centers, costing the Federal Government slightly over $5 million in basic allotment funds for the entire United States (less than the cost of one good sewage treatment plant for a very small city), is certainly one of the most productive Federal investments in research. This network has been carefully and frugally built over the past 9 years. It will not continue to exist without Federal participation.

The Federal agencies do not now have an integrated research program on water; rather their separate programs support their own diverse missions. The best hope for integrating these into programs and plans that serve our States and communities, that is, our people, is through the State themsleves. This principle has been recognized in other Federal legislation dealing with water resources planning, with land use, and with environmental quality, for example. Unlike the space program, where single great technological decisions could be made at a high level, water decisions have to be made by the people, by States and communities at the grassroots, and it is at this level that we went to bring science to bear. The essential responsibility of the States as trustees and administrators of water resources has been clearly established. The framers of the water resources research program reached the sensible conclusion that the pervasive needs for water science could best be served by a network of institutes at the State level.

I am unable to comprehend the rationale which argues for reducing water research in the face of the energy situation. The most critical element in the development of the vast energy resources of the intermountain West is water. The impact of coal development on even the water rich East has had a traumatic effect on the water supplies of that region. We don't want this repeated in the West. To provide the water supplies needed and to insure their quality raises a highly complex milieu of questions that need increased, not decreased, research on water. Reducing the water research program, and threatening the viability of the valuable network of State water research institutes, just doesn't make

sense when we are talking about investing from $1.5 billion to $3.0 billion in energy research to which water is the key.

While more acute in the arid and semiarid West, increasingly critical water supply and quality problems pervade the entire country. The objective of the OMB staff in cutting back and eventually destroying the best hope for a coordinated national research attack on these problems escapes me. I can only regard it as shortsighted indeed. I strongly urge that OMB reconsider its position in this matter and not reduce its support for research under Public Law 92-175.

ENERGY-RELATED RESEARCH

Mr. EVANS. You indicate that an energy action committee has been created, Mr. Hall. When was that created?

Mr. HALL. Approximately 3 months ago.

To be sure we are talking about the same thing, the Department of Interior has an energy R. & D. committee that was created last summer. In addition to that, Assistant Secretary Horton has set up a water for energy task group. This is not a special new organization. It is simply a mechanism for focusing the attention of his departments and his offices on the energy/water-related questions, the Bureau of Land Management, Office of Saline Water, and others.

Mr. EVANS. That is the one just recently created?

Mr. HALL. This is the one created a couple of months ago.

Mr. EVANS. This committee has not been in existence long enough to come up with any meat yet?

Mr. HALL. I think we are getting our fingers into it and I think we are going to be a pretty effective organization.

Mr. EVANS. As one man's opinion, it is awfully difficult for me to see how you are going to step up your research efforts as they relate to alternative energy sources when the amount of money available for research is being reduced.

Mr. HALL. The only thing we can do is cut out other things.

Mr. BETTENBERG. We do have increases in other areas of the Department. Geological Survey has some $4.3 million in increases in water resources research.

Mr. EVANS. Does this represent taking away from the water resources research group?

Mr. BETTENBERG. No.

Mr. HALL. Actually, we participated in helping construct that part of the program.

TRAINING PROGRAM

Mr. EVANS. I notice in your justification you talk about 2,000 students being employed here as research assistants. With this budget cut, are you going to be able to continue this level of participation?

Mr. HALL. That cut will be cut in approximate proportion to the budget reduction; in other words, about 11-percent reduction.

Mr. EVANS. Eleven percent fewer students involved?

Mr. HALL. Yes. Normally such students are employed as research assistants on a halftime basis.

Mr. EVANS. Has this program been a beneficial one in your eyes?

Mr. HALL. Yes, I think it has been beneficial. However, I hope that we understand that it is a side effect. We do not make any training grants per se. What we get is an honest day's work for an honest day's pay from the student research assistants.

Mr. EVANS. Have you followed these students closely enough after they have been students to see whether or not they continue with interest in water development?

Mr. HALL. Yes, I have followed my own students. I can speak to those. They are all in top positions in the water resources field at the present time.

Mr. EVANS. So a lessening of the students involved is going to show up in years hence in terms of the number of experts available?

Mr. HALL. I believe this is true. There is a table in our annual report, table 8, which indicates the whereabouts of graduates, occupations of graduates whose whereabouts were known. Those in water-related programs in 1972 and 1973 constituted 65 percent, whereas in 1965 and 1966 when it started it was only 49 percent. So you can see the increasing interest in staying in the water field by virtue of the operations of this program. Those who returned to school, which means largely those who are going on for a Ph. D. after they get an M.S. that is 30 percent. So we have 95, 96 percent still apparently in the water field; 4.1 percent went into military service.

Mr. EVANS. If you want to elaborate for the record, please feel free to do so because I think it would be good to have a record showing what happens to these students and what important roles they play in the future. I have two other questions I would like to have you address yourself to that I deem to be very important.

NATIONAL WATER COMMISSION

First of all, the National Water Commission's recommendations are far reaching and quite controversial. My question is, have you undertaken to assess the impact of their recommendations? Is this within, as you say, your bailiwick?

Mr. HALL. I think the assessment for the Department of Interior is done largely by the Bureau of Reclamation——

Mr. EVANS. My question, were you involved in the Water Commission's recommendations in the first place?

Mr. HALL. No. The National Water Commission conducted their own studies.

Mr. EVANS. Having made their recommendations, do you see it as a part of your responsibility to review and objectively comment on their recommendations?

Mr. HALL. Well, we review and comment as individuals through the Department of Interior. I was a member of a committee in Interior which did undertake to review the recommendations of the Commission. However, I think there is another point that you are implying here and that is that the Water Commission's report is a gold mine of things that need to be done in research because of the very fact that we really do not have good documentation of some of the assertions that had to be made there.

Mr. EVANS. My point is that their recommendations are far reaching and in many areas quite controversial.

Mr. HALL. Yes.

Mr. EVANS. Therefore my question.

Mr. HALL. I believe they admit that in many cases they had to make recommendations on the basis of inadequate information, inadequate knowledge of how certain systems really behave and interact.

Mr. EVANS. I am going to restate my question to see if you are hearing me as I think I am saying it.

Mr. HALL. Yes.

Mr. EVANS. Is your group going to review their recommendations, as it relates to water, from the standpoint of making a judgment yourself, passing on their recommendations?

Mr. HALL. No, I do not believe this is really in the province of the OWRR. However, it is in our province to review the report and identify those areas where controversy exists, because generally speaking, the reason you find controversy, deep-seated controversy, is because we do not know and understand the system well enough to get the truth.

Mr. EVAN. How far along are you on this review?

Mr. HALL. These items are being cranked into our research programs at the present time.

Mr. EVANS. Will you have a report that you will issue?

Mr. HALL. Probably not with respect to the National Water Commission's report, per se. What we do is say: This tells us that there are certain areas where we really do not know and understand things as well as we ought to, and therefore we guide our research into this. Then we get the results reported back to the agencies that are responsible for reacting——

Mr. EVANS. Will you issue any document?

Mr. HALL. I do not anticipate that we will issue a document that is a commentary on the report, per se.

Mr. EVANS. Would you have a document that would be a commentary on certain portions of the report that relate to water resources?

Mr. HALL. We certainly do indicate to our research cooperators those areas that we see that call for additional research.

Mr. EVANS. Do you do this by letter?

Mr. HALL. By letter, by oral discussion. For example, when we have a meeting, let's take the applications that deal with the Bureau of Reclamation, we have sessions in the West with the water resources directors from those States. We talk about the kind of problems that are brought up in the Commission's report that do require further research.

Mr. EVANS. The reason I press you on this, Director Hall, is because of the fact that I believe that the National Water Commission's recommendations are far reaching, controversial, and I think this committee and the Congress would be most interested in the opinions you may have on those sections of the recommendations that relate to your assignment; namely, water.

If there is any way in which you could accumulate your observations and make them available to this committee and the Congress, I think it would be most helpful.

Mr. HALL. I think the task that would go with that, it represents an administrative task, would be quite a bit beyond our present funding.

DISCOUNT RATE

Mr. EVANS. I have one last question.

Much controversy surrounds the selection of a proper discount rate in the economic evaluation of water resources projects. The Water Resources Council's Principles and Standards, approved by the Pres-

ident on September 5, 1973, advocated the use of 6⅞ percent, effective October 25, 1973, on all projects evaluated by Federal agencies. H.R. 10203 signed by the President on March 7, 1974, repealed the 6⅞-percent discount rate in favor of the previously approved formula of December 1968 which currently sets the discount rate at 5⅝ percent, pending additional studies.

My question is, do you have an opinion on the correct discount rate to use in the economic evaluation of water resource projects? Is this within your bailiwick?

Mr. HALL. It depends on whether you are talking to me as Warren Hall the individual or the Director of the Office of Water Resources Research.

Mr. EVANS. I have a feeling I ought to talk to you as Warren Hall, the individual.

Mr. HALL. As Warren Hall, the individual, I feel that the discount rate, per se, is not a very useful device, whatever you may set it at, it is not a very useful device for comparing streams of benefits in the social, political sense. They are quite valid in the pure business economic sense.

However, I believe personally that in the socioeconomic sense, the presumption that high discount rates, for example, takes care of risk, can actually lead you to the riskiest project, one which is very short range and does not consider the future.

I feel largely that a high discount rate is simply a statement that we think the present is more important than the future. When we set a low discount rate, we are saying we believe that the future is more important than the present.

Depending on the specific circumstances involved in the case, I could argue for a high discount rate or for perhaps a negative discount rate.

Mr. EVANS. So your point is, it is just a very poor means——

Mr. HALL. It is not an effective device to accomplish what we are trying to accomplish with it.

Mr. EVANS. The higher the interest rates you crank into these projects, the more expensive they are going to be and the more difficult they are to be repaid; the lower the interest rates you crank into it, the easier it is going to be.

Mr. HALL. The real question is, to me, what is it you want to accomplish with respect to preservation of resources for the future. For example, I do not have specific numbers here, just approximate numbers, if we had utilized the discount rate system at the time that the Forest Service came into being and even though there was a public forestry policy that corresponded to conservation and sustained yield, on a 10-percent discount rate which was prevalent about that time in all operations you could not have justified saving a stick of wood. The most efficient and effective way of utilizing the forests at that discount rate would have been to go in and cut down everything in sight. Today we are very happy we did not adopt that policy at that time. I use this simply as an example of showing that the discount rate does not always preserve the values you are trying to preserve.

In some cases, resources for the future calls for a very low discount rate. In other cases, preserving resources for the future would call for a very high discount rate.

Mr. EVANS. I assume had I asked you to respond on the basis of your answer as a director, your answer would be the same?

Mr. HALL. No. I would say the jury is out, the scientific opinion in the economic field is quite divided on this thing. There is probably more scientific weight in the economics field toward applying large discount rates than there is toward applying small ones.

Mr. EVANS. Thank you, Madam Chairman.

Mrs. HANSEN. Thank you very much, Dr. Hall for your participating. I do appreciate it. I still think that the OMB is wrong to reduce the sums for the State institutes. I am afraid they are not interested in my opinion.

Thank you very much.

WEDNESDAY, APRIL 3, 1974.

SALINE WATER RESEARCH

WITNESSES

J. W. (PAT) O'MEARA, DIRECTOR
CHANDLER H. TOWNSEND, CHIEF, ADMINISTRATIVE MANAGEMENT
WILLIAM BETTENBERG, DEPUTY DIRECTOR, OFFICE OF BUDGET, OFFICE OF THE SECRETARY

Mrs. HANSEN. The committee will come to order. We have now the Office of Saline Water and our principal witness is Mr. J. W. O'Meara, the Director. Mr. O'Meara please insert your general statement in the record and summarize it for the committee.

STATEMENT OF THE DIRECTOR

Mr. O'MEARA. Yes, Madam Chairman, we would be glad to have the statement placed in the record at this point. Then I would make some comments concerning the program.

[The statement follows:]

Madam Chairman: It is again my pleasure to appear before this committee to present the 1975 budget request for saline water research. The request before you requests budget authority for fiscal year 1975 in the amount of $3,029,000.

It has been my personal good fortune to be associated with this program for quite a few years. I say this because I was raised in Nebraska during the great drought of the 1930's, which left me with a great appreciation for water; and the opportunity to work in a program that is developing solutions to critical water problems is a most satisfying and rewarding occupation.

We regret to note that the distinguished chairwoman of this committee has announced that this is to be her last term in the House of Representatives. Mrs. Hansen has kept us on our toes with her penetrating questions. Her comments concerning our program sometimes witty, but always in the interest of a better program, will indeed be missed. We wish her every success in all future endeavors she decides to undertake.

I have also learned that another distinguished member of this committee plans to leave the Congress and take up private law practice. I refer to the Honorable Wendell Wyatt. His presence will also be very much missed. We wish you the best of luck in your new career.

PROGRAM STATUS

The 1 million-gallons-per-day—mgd—Vertical Tube Evaporator/Multi-Stage Flash—VTE/MSF—distillation process test bed plant at Freeport, Tex., has been dismantled, and all operations at our San Diego, Calif., test facility have been terminated. After cannibalizing pumps, instruments and other usable items

the remaining test equipment was sold under General Services Administration procedures for salvage and the Treasury will receive $411,000.

I would like to highlight some of our efforts to continue to find utilization for this surplus equipment.

Working in cooperation with the General Services Administration, we transferred equipment valued at $2,283,000 to the San Diego Water Authority for use in a proposed future water filtration plant. The county received 29 pumps and drivers ranging in size from 40 gallons per minute to 7,000 gallons per minute. The 6,000 horsepower motor which powered our 77,000 gallons per minute brine recycle pump is now to be utilized as a 40,000 kilowatt generator. Other equipment transferred to the San Diego Water Authority included valves, electrical switchgear, instrument panels, assorted piping, and so forth. Over one-half million dollars worth of equipment was sent to the U.S. Navy for use at their desalting plant at Guantanamo, Cuba, and another one-half million dollars in equipment was shipped to OSW facilities at Fountain Valley, Calif.; Roswell, N. Mex.; and Wrightsville Beach N.C. All in all, 24 transfers of equipment with an estimated value of $4,421,000, were made to help meet the needs of other governmental facilities.

I would like to publicly commend the members of the OSW staff for the diligent effort they made to see to it that practical continued use is being made of our surplus equipment.

We have dismantled the 1 million gallons per day test bed plant at Freeport, Tex., but we will continue the operation of our materials test center at Freeport through the end of this fiscal year. Seawater distillation processes had reached commercial application in the marketplace throughout the world. Further Federal funding for all work on distillation processes will be terminated with the exception of the operation of the module in Orange County. A critical consideration in all distillation plants is the problem of materials corrosion. As the committee is aware, seawater is a highly corrosive liquid, and when headed, its corrosive attack on materials is accelerated. A number of programs underway at Freeport have shown substantial opportunities for utilizing new corrosion resistant materials of construction as well as the development of methods for inhibiting the corrosive attack on the hot seawater. We will devote test time to complete and confirm the results of necessarily long-term studies.

Highlighting some of the positive aspects of our Nation's desalting technology, I would like to cite first of all the recommendation of Herbert Brownell to President Nixon for controlling the salinity of the Colorado River as it flows into Mexico. As you are probably aware, the key recommendation of that report is the construction of a 100 million gallons per day desalting plant near Yuma, Ariz. Legislation to implement the recommndations of the Brownell report are now before the Congress for consideration. Needless to say, we are delighted that desalting technology has developed to the point where it offers a practical solution to the issue that President Louis Echeverria described as the single greatest problem that exists between our two countries.

We are continuing experimental development work at our Roswell, N. Mex., brackish water test facility and in addition, we have established a small test facility near Yuma, Ariz., on the bank of the Wellton-Mohawk drain to obtain realistic data on the performance of different membrane processes. We are providing the site, pretreatment support facilities and manufacturers are furnishing, without cost to the Government, equipment of a size that will provide them with accurate information upon which to develop their bids. By obtaining this type of information OSW will be better able to evaluate bids and potential bidders will be able to eliminate many contingencies from their bid package. We expect that this operation will more than pay for itself, and this contention is supported by industry representatives who believe the data obtained through this test program will enable them to reduce their bids from 6 percent to as much as 20 percent.

Based on the initial test data obtained at Yuma, we reported in our submission to Mr. Brownell that we would be able to recover 70 percent of the feed water from the Wellton-Mohawk drain as product. We are confident that we will be able to achieve at least that recovery rate and hope to reach a recovery rate of 75 to 85 percent. Each 1-percent increase above the 70-percent recovery rate saves approximately 1,600 acre-feet of water annually—a very significant volume of water in an area where available water is already overcommitted.

Fiscal Year 1975 Budget Request

The budget before you requests an appropriation for fiscal year 1975 of $3,029,000. The total program for fiscal year 1975 will amount to $4,869,000. The remainder of our operating expenses will be funded from the planned carryover of fiscal year 1974 of $1,840,000. No program change is being requested in the basic authorizing legislation.

Fiscal Year 1975 Program

With the program redirection of the past and current fiscal year continuing into the budget year, we will strive to bring to fruition that which we consider to be areas most promising economically for desalting sea and brackish waters. Fiscal year 1975 will place particular emphasis in research on laboratory solutions for specific noncellulosic improved membranes and eutectic freezing and hydrate processes. Our development will concentrate on the engineering and development of one- and two-pass membrane systems; achievement of acceptable system hydraulics; development of fabrication procedures; and large components having high pressure integrity.

Our test facilities will continue to provide logistic support of pilot plant operation development evaluation. The module at Fountain Valley, Calif., is programed and destined to provide the operational development evaluation of the vertical tube evaporator/multistage flash—VTE/MSF—module; the module is completed, but not yet operating as a result of slippage in providing support facilities by the Orange County water district.

Staffing

Our staffing will be reduced from 70 to 47 at the end of fiscal year 1974. The budget estimate shows 29 at the end of fiscal year 1974; however, we have recently received an increase of 18 positions to continue the support for the Colorado River international salinity control project. The relief in staffing came about as a result of a Department of State request for the Office of Saline Water to provide the technical support for the project. We are also requesting approval from the Congress to reprogram up to $900,000 of fiscal year 1974 funds to continue preconstruction activity, and to fund these 18 additional positions.

We consider ourselves fortunate in reporting that of the 80 employees affected by the reduction in force in fiscal year 1973, all found employment (or retired on discontinued employment) except two. We will again initiate an all-out compaign to help those affected by the reduction in force this year to obtain employment.

Accomplishments

Since my last appearance before this committee, the saline water research program has made certain positive gains in its activities toward attaining the goals established by the Saline Water Conversion Act of 1971 for converting "* * * saline and other chemically contaminated water to a quality suitable for municipal, industrial, agricultural, and other beneficial uses * * *" and, at the same time, adhering to the program redirection.

Specific accomplishments have been made through our research program in the areas of desalting sea water by membrane and freezing processes and material studies, namely:

Sea water reverse osmosis membranes having characteristics for rendering a higher rejection, higher flux, and more durability than former membranes have progressed to the point where their application within desalting systems is being studied.

Desalting by freezing processes has resulted in improved formulations for crystallizers, and a eutectic freezing plant design has been obtained.

Materials research has resulted in the development and demonstration of an instrument capable of measuring and monitoring the total copper content of the effluent stream of a desalting plant. Chrome-phosphate inhibitors which alleviate corrosion have progressed whereby it is almost a certainty that plant effluent can be discharged without danger to the environment. A guide or handbook on materials for desalination has been assembled.

Our development program, although reduced through redirection, has some plus factors in its favor toward meeting the goals of the act, namely:

The completion of a 3 million gallons per day VTE/MSF module;

The completion of modifications to the Yuma test facility to enable participation in testing manufacturers' units;

The completion of preliminary engineering and development studies for the 100 million gallons per day desalting plant as part of the Colorado River international salinity control program;

The completion of preliminary testing of the 90,000 gallons per day reverse osmosis module at Roswell;

The placing of the high performance 75,000 gallons per day freezing plant on test at Wrightsville Beach;

The placing on line for testing of new single-pass sea water membranes operating at high flux levels at Wrightsville Beach;

The completion of a 50,000 gallons per day high-temperature electrodialysis test unit for establishing the effectiveness of desalting by this process;

Have placed under development reverse osmosis modules (Roswell and Yuma) yielding high flux and operating at 25 to 50 percent of the pressure presently required by commercial units (lower pressure—reduced pumping power);

The completion of transferring reverse osmosis units from San Diego to Wrightsville Beach;

The completion of tearing down the 1 million gallons per day test bed at Freeport; and

Contracting for tear down of the remaining plant at San Diego (Claire Engle and module).

I will now answer any questions which the committee might have.

INTRODUCTION OF WITNESSES

Mr. O'MEARA. I will try and brief you on the activities we conducted with the money that you appropriated for us last year, and tell you what we propose to do in the coming year. I have with me today Mr. J. J. Strobel, the Associate Director; Mr. William Savage, the Assistant Director for Engineering and Development; and with me at the table is Mr. C. H. Townsend, our Administrative Officer.

It seems to me, Madam Chairman, that it has been the policy of this committee in the past to ask us to defend any increases that we are requesting in our program. Based on that kind of precedent, I don't have much to say today.

I differ from Dr. Hall who said this morning he was not a professional bureaucrat. I believe I have to admit that I am. I didn't start out that way, but I have been around so long that I have been promoted into jeopardy.

DISMANTLING ACTIVITIES

I will give you a quick review of the activities in the past year. One of the major activities we undertook was to dismantle and dispose of the 1 million gallon per day test bed plant located at Freeport, Tex.

We have also terminated all operations at the San Diego test facility. I would like to point out that under the rules and regualtions under which we operate, when equipment becomes surplus to our needs it is disposed of through the General Services Administration. The simple way for us to have gone about this was simply to have walked off the site and told the General Services Administration, "Now you can dispose of that equipment," but the members of my staff walked an extra mile in that they went into the facility and cannibalized every piece of equipment that could be utilized elsewhere. Under the Federal disposal property laws it can go to the Federal Government and State

governments and universities. I am pleased to report to you because of their efforts we extracted more than $4.5 million worth of equipment that is being put to beneficial continuing use. What was left was turned into salvage and it was sold for $411,000.

Mrs. HANSEN. I particularly like your term "cannibalizing pumps."

Mr. O'MEARA. I stole that phrase from my engineers. They went over that plant with a fine-tooth comb and if they found a motor, or valve, or some switch-gear had continuing value, they let me restate it, cannibalized it.

We moved some of that equipment to other test facilities for our own purposes. Some of it went to the State of California, some of it to the San Diego County Water Authority, and a considerable amount of equipment went to the Navy for utilization in the desalting plant they have at Guantanamo, Cuba.

GEOTHERMAL ENERGY

We have terminated all of our operations on geothermal energy and the two pilot plants we had constructed and moved to Holtville, Calif., have been turned over to the Bureau of Reclamation for continuing operations.

What I have reported up to this point I think would stand on the negative side of what we have been doing in the past year. I now would like to address myself briefly to the positive side.

WRIGHTSVILLE BEACH FACILITY

We have turned around our operations at Wrightsville Beach, N.C., and have established it as our center for the development of seawater membrane processes. I can report to you that we have moved in 10 small developmental seawater membrane units. This represents a remarkable advance in membranes. We are now able to tackle the much more difficult problem of seawater conversion with membrane technology. It is a much simpler operation to desalt brackish waters.

It was only 4 years ago that we believed that membrane technology could not be applied at all to seawater desalting due to the higher salinity of the feedwater, and the higher operating pressures required. We have advanced far enough now that improved membranes are indeed giving us potable water after one pass through the membrane. We are taking 35,000 parts per million water down to 200 parts per million, and that is well within the quality standard of good drinking water.

We think this is a remarkable advance and we are very proud of that development. In addition, at Wrightsville Beach we have begun operating a 75,000 gallon per day experimental freezing process pilot plant. From the initial operating data that we have obtained—it is very preliminary—we are encouraged by the potential of that process.

FOUNTAIN VALLEY MODULE

We have completed the construction of our 3 million gallon per day distillation module in Fountain Valley, Calif. This project is in cooperation with the Orange County Water District. We have not yet operated that module, Madam Chairman, because the arrangements

we have there is that our partner in this venture, the Orange County Water District, agreed to supply the boilers for the steam and the seawater intake line and that work has not yet been completed. I don't want that to sound like any criticism of the Orange County Water District. They have done a remarkable job of bringing the project to the point that it is now. But their schedule just didn't move as rapidly as ours as they had some unforeseen delays. We expect to begin operating that module about July 1, and that delay accounts for some of the carryover that we have in our program this year.

Funds that we had intended to use for the operation of that plant have not been expended.

COLORADO RIVER INTERNATIONAL SALINITY CONTROL PROJECT

You are aware, of course, of the development on the Lower Colorado River. Former Attorney General Herbert Brownell, appointed by President Nixon to recommend a permanent solution to the salinity of the Colorado River as it flows into Mexico, selected as the key feature for that control program the construction of a 100 million gallon-per-day desalting plant.

In order to verify the information that we were presenting to Mr. Brownell we established a very small test facility at Yuma, Ariz., right on the banks of Wellton-Mohawk Drain. We are testing on the very water that is going to be desalted by the proposed plant and we are verifying the data that we reported to Mr. Brownell. Based on our studies of that water, and with the other information that we have available to us, we reported to Mr. Brownell that we could recover 70 percent of that feedwater as fresh water and 30 percent would be discarded as brine.

We hope that we will be able to increase our recovery rate and bring the performance of that plant above 70 percent, and this is really quite important.

Even in that one plant, for every 1 percent that we are able to increase the recovery rate, we save 1,600 acre-feet of water a year. When we apply that savings to other water projects that may develop in the United States in future years, it begins to show how important it is to improve the recovery rate of desalting plants.

We have now expanded that facility, and we have asked potential bidders on that plant to bring in their own equipment, at their own expense, and operate their equipment in order to obtain reliable data for their own use in order to prepare their bids.

Industry people have told me, that because they will have this kind of operating data available to them, they expect to be able to reduce their bid price by from 6 percent to as much as 20 percent, simply because they will be able to remove many contingencies from their bid.

They will know the problem, and this data will also help us prepare better specifications. It will also put us in a very good position to evaluate the bids that are received because we will have that kind of data available in our office.

This committee and other Members of the Congress who have supported this program over the years should take a great deal of satisfaction from the Brownell report, because alternatives to a desalting plant would have meant the wasting of a great deal of water in order

to meet the salinity requirements of the Mexican Government. We are very pleased that desalting has been selected as a solution.

We consider it an exciting challenge and certainly a very sobering responsibility. The information we gain from the construction and operation of that plant will have great value to help solve other brackish water problems in the United States.

WATER USE IN THE UNITED STATES

We believe this, Madam Chairman, based on information that has been presented to us that the water use in the United States is clipping along at a rate of about 375 billion gallons a day. That is a trillion gallons every 3 days. I get lost in the numbers game and if my arithmetic is right, with every tick of the clock we are using 4.3 million gallons of water in the United States. The magnitude of the water problem, as you mentioned a year ago, has not disappeared because we have an energy crisis.

WATER REQUIREMENTS FOR ENERGY

Mrs. HANSEN. No; it is going to be increased as you are well aware. You were present when we pointed out to Mr. Hall that part of the problems inherent in the energy crisis is water.

Some processes in the use of coal demand enormous amounts of water. The oil shale lands pose a tremendous problem, and this is just the beginning.

Mr. O'MEARA. We are concerned about the energy crisis and as it relates to water. Congressman Harold T. Johnson of California reported to the Congress last December that he felt that water may well be the Achilles' heel of our plans to develop our own energy resources. We have reported to the Department of the Interior our concern over the volume of water required and we are concerned about the quality that will be required for processing water and then the disposal of the water after it has been used for process water.

Without in-depth knowledge of the problems we feel from what we do know about water quality requirements for energy production that there are going to be substantial problems associated both with water in and water out.

It has been a rewarding experience, Madam Chairman, to be associated with this program because we are achieving progress.

We are moving ahead, and the Brownell recommendation is an enormous citation of the advances that we have made.

DESALTING PROGRAM IN JAPAN

I would like to take just a minute, based on some questions that we have been asked before by this committee, to read at least part of an Airgram that we received from the American Embassy in Tokyo last November 21. In part, it says:

> Despite its abundant water resources, the high population density and industrial concentration in Japan will give rise to a serious water deficit by 1985, the initial discomforts of which are already being experienced. A recently completed comprehensive study indicates a 1985 deficit of 4.5 billion cubic meters.

I have converted that over to be about 3.6 million acre-feet annually. You may be pleased to know that I have not yet seen any plans from Japan to divert the Columbia River to make up that deficit. I am just putting you on notice!

While some relief can be obtained through suppression of demand and redistribution of natural water sources, the Japanese authorities have concluded that "the exploitation of new resources is indispensable." These new resources must be derived either from desalting or water reuse, or a combination of the two.

There is growing concern over environmental pollution in Japan. Even without a shortage of water, a critical need exists for cleanup of industrial and domestic waste water to levels which would permit at least limited reuse. As a result, the Japanese Government established in May 1973 a Water Reuse Promotion Center, whose purpose is to take advantage of the results of the national sea water desalting and byproduct recovery program by applying them to the problem of waste water reuse. A major contribution from water reuse could be realized only through the use of treatments which reduced dissolved solids. For this reason, investigation of membrane processes of water desalination have now taken on major importance in Japan. A 1,250,000 gallons/day reverse osmosis plant, constructed of spiral wound modules purchased from Gulf Environmental Systems, for treatment of high salinity lake water is already in commercial operation in one location in Japan.

While semipermeable membrane research is now being conducted in Japan, the bulk of the practical application and engineering testing of membrane processes for desalination and waste water regeneration in Japan have employed membranes purchased in the United States, based on technology which has evolved from programs of the Office of Saline Water. The important role which desalination and waste water reuse are expected to play in the solution of Japan's growing water problem indicates that there is substantial market in Japan for U.S. desalting equipment and technology, provided the U.S. technological lead can be maintained. Since Japanese experience in the application of membrane processes to water reuse is already more comprehensive than that in the United States, while membrane research per se is being rapidly accelerated, the development of a sizable U.S. market for plants and process equipment in this field, both in Japan and in third countries, is likely to be heavily dependent on future U.S. research and development efforts.

DESALTING DEVELOPMENTS AVAILABLE FOR ALL MANKIND

Mrs. HANSEN. Will the techniques your office develops be used as steppingstones for everybody's use or will they belong to certain private industries?

Mr. O'MEARA. Madam Chairman, all work that is developed through programs sponsored by our office is available.

Mrs. HANSEN. However, Mr. O'Meara, you are cutting down to the point that you have very little money to proceed on any divergent research that might improve known techniques. One gets the impression from looking at the budget that new developments will have to be done by someone else other than your agency. Is this correct?

Mr. O'MEARA. A major part of the research to maintain a U.S. posture ahead of the rest of the competitive world will have to be funded by industry under the type of program that we are proposing.

Mrs. HANSEN. Yes, but they are not going to share their information with anybody else.

Mr. O'MEARA. No.

OSW PROGRAM FUNDING

Mr. WYATT. Essentially you are out of business.

Mr. O'MEARA. We have requested a $3 million appropriation, Mr. Wyatt, together with a $1.8 million carryover to conduct our program next year.

Mr. WYATT. What was your program 5 years ago, roughly?
Mr. O'MEARA. Five years ago between $27 million and $30 million.
Mr. WYATT. What was the high point of your program?
Mr. O'MEARA. $30 million.
Mr. WYATT. That was 4 or 5 years ago?
Mr. O'MEARA. Yes; that was in 1971.
Mr. WYATT. I think it is disgraceful because the water shortage is going to be the next crisis that this country is going to face and the world is going to face, and parts of the world face it right now.

At a time when we know it is going to come on us we are cutting back and just emasculating the saline water program in spite of the nice face that Mr. O'Meara is bound to have to try to put on it, and I think it is a damn disgrace.

I might say this. I read just the other day something about the Japanese demands in the home islands for desalting equipment, and I happen to know from previous work I have done that the Japanese already have very advanced technology for the manufacture of desalting equipment and they have been low bidders in other places around the world here and there, and so instead of our having a market for our companies in Japan for desalting equipment they are going to be jumping some light year ahead to solve their own problems which we could help them solve to our great economic advantage.

JAPANESE EXPORT OF DESALTING EQUIPMENT

Mr. O'MEARA. Mr. Wyatt, it is correct the Japanese have been very aggressive in the export market of their desalting equipment, particularly with distillation equipment, and they have been able to win bids over the competition provided by U.S. manufacturers.

Mr. WYATT. And it has been just fairly recent that it has become apparent that they themselves are going to have a high level of need for this kind of equipment. I think they have seen it coming but they have really come face to face with the problem in the last couple of years.

Mr. O'MEARA. Their desalting program has been kind of an interesting evolution. They started ahead of us, but their initial interest was to recover salt. As a result of World War II they didn't have any bottoms left with which to import salt and they have to import all their salt. In order to provide themselves with a source of salt they began a program that they have now turned around.

Instead of looking for the salt, fresh water has become their prime interest.

ACCOMPLISHMENTS OF MR. O'MEARA, DIRECTOR OSW

Mr. WYATT. I have one other thing to say and that is about Mr. O'Meara whom I have worked with closely in the 10 years I have been in Congress and I have been watching his progress in this program and in the agency and I personally think that he has accomplished minor miracles against very long odds. I not only dislike very much to see his program almost totally eliminated but I think it is a great waste of human resource to not have his services utilized more efficiently and more effectively.

Mrs. HANSEN. I couldn't agree with you more, Mr. Wyatt. That is the genius of our Government. We have competent people in our

departments and we always seem to manage either to underfund them, undercut them or get rid of them.

Mr. WYATT. And the bad ones continue on and continue on.

Mr. O'MEARA. I should point out I have been here on and on.

Mr. WYATT. We know, Mr. O'Meara.

Mr. O'MEARA. With the budget we are proposing this year we will continue our basic research program, not as aggressively as in the past, but we will continue to seek new solutions and the development of new processes through research.

DEVELOPMENT

We will continue our development of seawater membranes and continue the operation and development of the freezing process. We will operate the distillation module at Fountain Valley and we are continuing to operate our materials test station at Freeport, Tex. through this fiscal year, then we will terminate that operation.

FUTURE OF OSW AFTER FISCAL YEAR 1975

Mr. WYATT. Mr. O'Meara, may I interrupt at that point to inquire if you have any knowledge as to what the intentions of "the Government" are with respect to OSW after fiscal 1975?

Do you have any tea leaves that you can read for us?

Mr. O'MEARA. The best I can answer that question is there is every indication that the Department of the Interior plans to continue funding a research program that is looking for new solutions for desalination, and until we come up with other new processes, we would essentially limit ourselves to a research type of operation.

COST OF DESALTED WATER

Mr. WYATT. Are we ever going to know what the real cost of desalted water is, produced on a very large scale with nuclear power, until such a very large scale nuclear powerplant is actually built and in operation?

Mr. O'MEARA. Mr. Wyatt, I can bring you stacks and stacks of studies that will tell you what the anticipated price of desalted water is, but I can't verify a single one of those figures until we put some water in the bucket.

Mr. WYATT. Your answer then is very plainly that we don't know with any accuracy really, other than just anybody's guess or estimate, what the cost is going to be until we get one such plant built and in operation?

Mr. O'MEARA. That is correct. Now, Mr. Wyatt, we will have some good cost data on brackish water when we build the large plant on the Lower Colorado River. We will have accurate cost data and accurate operating information. I believe that one plant, in some respects, will be a breakthrough because it will provide the kind of answers that you are posing in your question. The answers are as essential to the operation of the program as they are to the development of the hardware.

Mr. BETTENBERG. If I might elaborate on Mr. O'Meara's comment in respect to the first part of your question, I have had discussions

with the staff at the Office of Management and Budget with regard to OMB's intentions.

It is the intention of the Department to continue the program forward and they give me every assurance that it is their intention also.

Mr. WYATT. Is this on a level of about 10 percent of what it was 4 or 5 years ago?

Mr. BETTEBERG. The portion of the program that had been eliminated was one avenue of work and——

OFFICE OF MANAGEMENT AND BUDGET

Mrs. HANSEN. Frankly I believe very little of what the Office of Management and Budget says now or any time in the future. They don't think that Congress is a co-equal branch with the executive branch.

Mr. BETTENBERG. All I can relay is the substance of the discussions that I have had with them on this particular subject. It concerned us in the Department.

There seemed to be some reason for letting private industry take the initiative in the distillation research. That was what the bulk of those funds were for in the past.

Mrs. HANSEN. Please inform the Office of Management and Budget that if they think the country is in better shape today they better look again. The thing that concerns the committee is that the United States, to keep abreast and ahead in these fields, and I think Mr. O'Meara would agree, must be continuing its research because one piece of research leads to other small pieces of research which are basic in the scientific world.

OSW STAFFING

Mr. WYATT. Madam Chairman, I think the answer is very plain on the staffing level, reduced from 70 to 47 at the end of fiscal 1974, to be reduced to 29 at the end of fiscal 1975, not counting the 18 positions that have been added specifically for the Colorado River salinity project, but for general purposes you have a reduction from 70 to 29.

Mr. O'MEARA. That is correct.

Mr. WYATT. Just this year, let alone next year. Mr. O'Meara is going to be presiding over an empty house at that rate.

Mr. O'MEARA. We had received our budget pass-back from the Office of Management and Budget and they had authorized us 29 positions beginning next fiscal year. We appealed that decision on the basis that we were going to have substantial responsibilities in the design and construction of the 100 million gallon per day plant at Yuma, Ariz. As a result of our appeal they have granted us an additional 18 positions because of that project. To achieve the objectives of that project Madam Chairman, we had asked OMB for authority to reprogram $860,000.

We have received OMB approval, and we have written the committee a letter concerning our proposed reprograming. I understand from Mr. Bettenberg that the letter is making its way through the Department and will be arriving here soon.

Mrs. HANSEN. OMB keeps sending us budget amendments even though they know the hearings are almost finished.

MATERIALS TEST CENTER

Mr. O'MEARA. I would say that the materials test station also had been directed to close last year but, we had asked to be able to continue operations because much of the research that we are doing on materials is long-term research. It will remain open through this fiscal year.

The materials test center will continue work on corrosion problems. There are ways that the scientists and engineers can accelerate corrosion to enhance our studies, but it still requires a relatively long period and we have considerable work underway there. If we would have closed it down on the previous schedule, we would have lost considerable data, but by continuing to operate through this fiscal year we have come up with some rather remarkable developments.

We have developed a new method of inhibiting corrosion by additives to the seawater. This leads us to believe that future desalting plants could be designed using very cheap metals instead of the copper nickel and stainless steel we now require.

Additionally, we have just come up with a new way of treating aluminum, very inexpensively, that now advances the opportunity to use aluminum in desalting plants, and that could substantially cut capital investment. Aluminum is far cheaper than the noble metals that now are required. I think the record at the Office of Saline Water is—maybe I am boasting when I say this, but I do this on the part of staff—a record of cooperation both in obtaining and disseminating information.

COOPERATION WITH OTHER AGENCIES

In line with the comments this morning that fine reports are of little value, if desalting technology can't come out of the end of the pipeline in usable form, it is of no value. In order to do this, as small as we may be, we have had direct programs with, or liaison with, the Department of State, the Department of Commerce, with HUD, and EPA, the Corps of Engineers and the AEC, with the Navy, and the National Science Foundation, NASA, United Nations and within the Department, the Bureau of Reclamation and U.S. Geological Survey, and even National Park Service. We have worked closely with the European Federation of Chemical Engineering. We have liaison with Japan, Israel, Egypt, Greece, Iran, Italy, England, Germany, and even Russia.

We have cooperated in studies with 18 States and 5 cities. We work with the American Chemical Society and the American Institute of Chemical Engineers, and the National Association of Corrosion Engineers. The National Association of Corrosion Engineers recently has put $5,000 into our materials test station at Freeport, Tex. This input of private funds is not the first money we have received for our program. We have maintained a close liaison with industry and we have helped develop, such as it is, an industry in the United States that is moving toward bringing solutions to very difficult water problems.

AUTHORIZATION HEARINGS

And then in conclusion, Madam Chairman, I would like to report to you that we had our authorization hearings before the Subcommittee on Water and Power Resources of the House Interior and In-

sular Affairs Committee. I would like to submit to you the amendments that the subcommittee made to our bill, H.R. 13221.

They amended our request for $3 million plus a $1.8 million carryover by authorizing a total program of $15.7 million. You may want this report for your files.

JUSTIFICATION MATERIAL

Mrs. Hansen. Thank you very much. Please insert the justifications in the record at this point.

[The justifications follow:]

SALINE WATER CONVERSION

SALINE WATER RESEARCH

SUMMARY AND HIGHLIGHT STATEMENT

The fiscal year 1975 program for saline water desalting research and development is $4,869,020, including $1,840,020 carryover of fiscal year 1973 funds. This is a decrease of $5,833,011, from the FY 1974 program of $10,702,031 (FY 1974 appropriation $3,627,000, carryover from prior years $7,075,031).

Basic research on new desalination processes is programmed at $400,000. Research and development on membrane and freezing processes amount to $2,816,020, including operation of the test facilities at Wrightsville Beach, North Carolina, Roswell, New Mexico, Fountain Valley, California, and Yuma, Arizona. Operation and maintenance of the Vertical Tube Evaporator/Multi-stage Flash Module (VTE/MSF) at Fountain Valley, California, is budgeted at $588,000. Program administration, including reimbursement to the General Services Administration for space costs, totals $1,065,000.

The FY 1975 program will be directed toward advancing membrane and freezing processes technology for sea and brackish water conversion, investigating promising new processes, and continuing operation of the VTE/MSF module.

PERSONNEL SUMMARY

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions	78	70	29
Full time equivalent of other positions	13	6	6
Average paid employment	138	73	35
Average GS grade	11.9	11.4	13.1
Average GS salary	$21,565	$22,765	$26,198
Average salary of ungraded positions	$12,081	-0-	-0-

DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY

Saline Water Research

Appropriation, 1974		$ 3,627,000
Unobligated balance:		
Start of Year	8,915,051	
End of Year	-1,840,020	7,075,031
Total Available, 1974		$10,702,031

Summary of Increases and Decreases, 1975

Research and Development:		
Research expense (decrease)	-1,000,000	
Development expense (decrease)	-1,508,960	
Construction, operation and maintenance:		
Test beds and facilities (decrease)	-1,130,000	
Modules (decrease)	-1,603,051	
Administration and Coordination (decrease)	- 591,000	
Net decrease, 1975		$-5,833,011
Total available for obligation		4.869,020
Less: Unobligated balance from FY 1974		-1,840,020
Budget Estimate, 1975		$ 3,029,000

32-043 O - 74 - 55

DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY

Saline Water Research

Analysis by Budget Activities

	Actual Obligations 1973	Amount Available 1974	Fiscal Year 1975 Estimated total Available	Fiscal Year 1975 Unobligated Balance from 1973	Fiscal Year 1975 Budget Estimate	Total available 1975 compared to total available 1974	Page Reference
I. Research & Development Expenses:							
(a) Research	$ 3,798,275	$ 2,600,000	$ 1,600,000	$ 1,600,000	$ -0-	$-1,000,000	6
(b) Development	9,103,218	2,074,980	566,020	66,020	500,000	-1,508,960	8
II. Construction, Operation & Maintenance:							
(a) Testbeds & facilities	4,124,865	2,180,000	1,050,000	174,000	876,000	-1,130,000	11
(b) Modules	742,263	2,191,051	588,000	-0-	588,000	-1,603,051	14
III. Administration & Coordination:	2,452,440	1,656,000	1,065,000	-0-	1,065,000	- 591,000	15
Totals	$20,221,061	$10,702,031	$ 4,869,020	$ 1,840,020	$ 3,029,000	$-5,833,011	

ITEMIZATION OF ESTIMATE

Department of the Interior

Appropriation Title: Saline Water Research

	Actual 1973	Estimate 1974	Estimate 1975	Increase (+) Decrease (-)
Program and Financial:				
Total obligations	$20,221,061	$10,702,031	$4,869,020	$-5,833,011
Receipts & reimbursements from Federal funds (-)	- 61,081	---	---	---
Unobligated balance available, start of year	- 2,204,031	- 8,915,051	-1,840,020	+7,075,031
Unobligated balance available, end of year	8,915,051	1,840,020	---	-1,840,020
Budget Authority	$26,871,000	$ 3,627,000	$3,029,000	$- 598,000
Obligations by Objects:				
11 Personnel compensation	$ 2,655,195	$ 1,683,000	$ 818,000	$- 865,000
12 Personnel benefits	239,533	139,000	64,000	- 75,000
13 Benefits for former personnel	27,535	36,000	167,000	+ 131,000
21 Travel and transportation of persons	155,093	135,000	115,000	- 20,000
22 Transportation of things	65,513	90,000	25,000	- 65,000
23 Rent, communications and utilities	633,508	1,100,000	961,000	- 139,000
24 Printing and reporduction	88,314	100,000	75,000	- 25,000
25 Other services	15,906,035	7,319,031	2,364,020	-4,955,011
26 Supplies and materials	206,973	100,000	80,000	- 20,000
31 Equipment	184,808	---	200,000	+ 200,000
32 Land and structures	58,554	---	---	---
Total Obligations	$20,221,061	$10,702,031	$4,869,020	$-5,833,011

I. (a) RESEARCH EXPENSE

This activity includes basic and applied research on: new separation processes, structural features in membranes, new and improved seawater membranes, unit operations, and effects on the environment. The following table provides a comparison by program for the Fiscal Years 1974 and 1975.

Program	(In thousands) Available FY 1974	Requested FY 1975	Increase (+) or Decrease (-)
Research	$2,600	$1,600	$ - 1,000
Fundamental Research	900	400	- 500
Seawater Desalting Research	1,700	1,200	- 500

An explanation of the decreases follows:

Fundamental Research: Fiscal Year 1974, $900,000; Fiscal Year 1975, $400,000; decrease, $500,000. The decrease consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
$-500,000	---	$400,000	---	Due to dropping a number of exploratory projects.

The decrease of $500,000 results from non-renewal of certain investigations involving polymer solvation, piezodialysis, flux, rejection, and fouling on membranes.

Fundamental research supplies data and information applicable to all separation processes. The program for FY 1975 provides for limited investigations into new desalting processes.

Seawater Desalting Research: Fiscal Year 1974, $1,700,000; Fiscal Year 1975, $1,200,000; decrease, $500,000. The decrease consists of:

	Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1)	$-400,000	---	$1,000,000	---	Due to reduced effort of laboratory synthesis of certain seawater membranes.
(2)	$-100,000	---	$ 200,000	---	Due to nearing completion of research on two freezing processes.
	$-500,000				

(1) The decrease of $400,000, is due to a reduction in level of effort on research and laboratory synthesis of composite and asymmetric membranes for seawater application.

(2) The decrease of $100,000, is due to plans to phase out the research effort on the secondary refrigerant process.

The major effort in FY 1975 will be devoted to the further development of:
(a) several specific non-cellulosic and improved composite membranes for application in spiral wound, hollow fine fiber or tubular form, and the development of a universal seawater pretreatment system; and,
(b) eutectic freezing and hydrate processes, thin channel freezing, and modified crystallization processes.

I. (b) DEVELOPMENT EXPENSE

This activity includes programs involved in the engineering development of desalting processes.

Program	(In thousands) Available FY 1974	Requested FY 1975	Increase (+) or Decrease (-)
Development	$2,075	$ 566	$-1,509
Seawater Desalting	1,315	466	- 849
Brackish Water Desalting	760	100	- 660

An explanation of the decrease follows:

Seawater Desalting Development: Fiscal Year 1974, $1,314,980; Fiscal Year 1975, $466,020; decrease, $848,960.
The decrease consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1) $-483,960	---	$466,000	---	Due to reduced effort on membrane processes development.
(2) $-365,000	---	$ -0-	---	Due to termination of secondary freezing process development.
$-848,960				

(1) The decrease of $483,960, is due to reduction in membrane pilot plant operations at the Wrightsville Beach Test Facility.

(2) The decrease of $365,000, is due to termination of the secondary refrigerant pilot plant operations at the Wrightsville Beach Test Facility.

The FY 1975 seawater desalting development program includes:

(a) Pilot Plant Operations and Modifications

The thrust in this area is to develop through pilot plant testing, a viable method of desalting sea water to potable water conditions using membrane

processes. It is projected that membrane desalting plants require less energy, decreased land area, and relative ease in adding incremental production capacity as compared to other desalting systems. At the present time, small membrane assemblies are in operation to produce potable water from sea water. Improved membranes and components are in the developmental stage. The major problem is to develop a complete system whereby operating data can be obtained over a sustained period and preliminary system economics can be established. Development is directed toward both one- and two-pass systems wherein sea water can be desalted through a single membrane system or two systems in series. Various membrane configurations are under investigation with the near-term goal of narrowing down to those which appear to have maximum economic promise. The membrane system includes the membranes themselves, support structures, pumps, pretreatment systems, controls, instrumentation and all auxiliaries. Testing will be conducted primarily at Wrightsville Beach, North Carolina.

(b) High Volume Assembly Development

The present sea water membrane desalting development program is directed toward testing of small assemblies or "modules" since it is necessary to establish membrane performance before component growth can be considered. Based on past investigations, however, increased assembly size will reduce water cost since there are less component interconnections and output per unit volume is increased. Therefore, the approach is to develop larger assemblies and to place these on test as soon as possible. The major problem in scale-up is to develop fabrication procedures and large components which will have high pressure integrity. Of major importance is the achievement of acceptable system hydraulics. Work has been initiated on the design of larger assemblies and they will be placed in operation with a complete desalting system after individual check-out in a natural sea water environment.

Brackish Water Desalting Development: Fiscal Year 1974, $760,000; Fiscal Year 1975, $100,000; decrease, $660,000. The decrease consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1) $- 30,000	---	$100,000	---	Due to reduction in membrane pilot plant operations at the Roswell Test Facility.
(2) $-335,000	---	$ -0-	---	Due to termination of newly evolved membrane developments.

Brackish Water Desalting Development Continued

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(3) $-115,000	---	$ -0-	---	Due to discontinuing membrane process development at Yuma, Arizona.
(4) $-180,000	---	$ -0-	---	Due to completion of Wellton-Mohawk plant design studies.
$-660,000				

(1) The decrease of $30,000, is due to the program redirection initiated in FY 1973. Funding in FY 1975 is required to complete testing of present units and assemblies at Roswell.

(2) The decrease of $335,000, is due to the planned FY 1974 termination of development of previously evolved new membrane systems.

(3) The decrease of $115,000, is due to the planned one-year period of testing at Yuma, Arizona, in support of proposed bids on the Wellton-Mohawk project. FY 1974 funding will carry into FY 1975. Further developmental requirements will be conducted under the proposed Wellton-Mohawk (Colorado River International Salinity Control) program budget.

(4) The decrease of $180,000, is due to the use of FY 1974 funding for early FY 1975 completion of preliminary engineering design studies for the Wellton-Mohawk plant.

II. (a) DESIGN, CONSTRUCTION, ACQUISITION, MODIFICATION, OPERATION AND MAINTENANCE OF SALINE WATER CONVERSION TEST BEDS AND TEST FACILITIES

In FY 1975, desalting development plant activities will be conducted at four locations. The four facilities, Wrightsville Beach, North Carolina, Roswell, New Mexico, Yuma, Arizona, and Fountain Valley, California, provide the necessary support functions for the developmental operations. Two facilities (San Diego, California and Freeport, Texas) previously operated are now in the process of being closed out.

Following is an analysis of funds available in Fiscal Year 1974 and requested for Fiscal Year 1975 for this activity.

	(In thousands)		
	Available FY 74	Requested FY 75	Increase (+) or Decrease (-)
Wrightsville Beach, North Carolina	$ 800	$ 250	$ - 550
Fountain Valley, California	300	300	- 0
Yuma, Arizona	380	-0-	- 380
Roswell, New Mexico	500	500	- 0
Other Facilities being closed out	200	-0-	- 200
	$ 2,180	$ 1,050	$- 1,130

Wrightsville Beach, North Carolina, Test Facility: Fiscal Year 1974, $800,000; Fiscal Year 1975, $250,000; decrease, $550,000. The decrease consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1) $-400,000		$ 0	---	Due to completion of alterations.
(2) $-150,000	- 9	$ 250,000	1	Due to reduction in pilot plant operations.
$-550,000	- 9			

(1) The decrease of $400,000, is due to completion of modifications to the facility required in FY 1974 in order to convert from support of distillation processes to membrane processes. Closing out the San Diego Test Facility and the increased emphasis on seawater membrane desalting development, made it necessary to establish the Wrightsville Beach facility as the center for membrane process development.

(2) The decrease of $150,000, and 9 positions results from reduction in pilot plant operations requiring less support.

The FY 1975 program covers logistic support of pilot plant operational development evaluation. Costs include laboratory services, utilities, maintenance, chemicals, and spare parts.

Fountain Valley, California, Test Facility: Fiscal Year 1974 $300,000; Fiscal Year 1975, $300,000; no change.

Delays in the availability of supporting facilities (being supplied by the Orange County Water District) in FY 1974 resulted in the contract period carrying the program to mid-FY 1975.

Funding in FY 1975 is required to complete the financing of the facility operations and maintaining one (1) position in support of Water Factory 21.

Yuma, Arizona, Test Facility: Fiscal Year 1974 $380,000; Fiscal Year 1975, $0; decrease, $380,000. The decrease consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
$-205,000	-1	$ 0	---	Due to funding requirement restrictions.
$-175,000	---	$ 0	---	Due to completion of facility modification.
$-380,000	-1			

The decrease of $205,000, and one (1) position is due to the requirement that testing in FY 1975 be funded under the Wellton-Mohawk (Colorado River International Salinity Control) program budget.

The decrease of $175,000, is due to the completion of facility modifications required to support tests by manufacturers at Yuma.

Roswell, New Mexico, Test Facility: Fiscal Year 1974, $500,000; Fiscal Year 1975, $500,000; no change.

In order to complete the development testing of pilot plants and membrane desalting assemblies which would yield decreased cost and higher product recoveries of the Wellton-Mohawk plant, operation of the Roswell Test Facility and the maintenance of one (1) position will be required during FY 1975 at the same level as 1974.

Other Facilities: Fiscal Year 1974, $200,000; Fiscal Year 1975, $0; decrease, $200,000. The decrease consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
$-200,000	-1	$ 0	-0-	Due to non-recurring close out costs at San Diego, California.

The decrease of $200,000, and one (1) position is due to closing out and restoring the facilities at San Diego, California. The module tear-down funding (see Item II(b)) plus the $200,000 for the other tear-down at San Diego may be sufficient for the total facility.

The Freeport, Texas, VTE/MSF test bed has been dismantled.

II. (b) DESIGN, CONSTRUCTION, ACQUISITION, MODIFICATION, OPERATION, AND MAINTENANCE OF SALINE WATER CONVERSION MODULES

Saline Water Conversion Modules are sections of prototype plants which simulate the operation of a complete plant and confirm essential design features. This program is now carried on at the Fountain Valley, California, Test Facility.

A. Modules: Fiscal Year 1974, $2,191,000; Fiscal Year 1975, $588,000; decrease, $1,603,000. The decrease consists of:

	Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
(1)	$-375,000	--	0	--	Due to non-recurring tear down costs of MSF module at San Diego.
(2)	$-1,228,000	--	$588,000	--	Due to reduced FY 1975 funding requirements.
	$-1,603,000				

(1) The drecrease of $375,000, is due to non-recurring costs involved in tear-down of the Multi-Stage Flash (MSF) Module at San Diego, California.

(2) The decrease of $1,228,000, is due to the M.O.M. contract period funded in FY 1974 extending into FY 1975. The budgeted $588,000 provides for the remaining FY 1975 costs of M.O.M. necessary to conduct the operational development evaluation of the VTE/MSF Module (Orange Counry Project).

III. ADMINISTRATION AND COORDINATION

Administration and Coordination: Fiscal Year 1974, $1,656,000; Fiscal Year 1975, $1,065,000; decrease, $591,000. The decrease consists of:

Increase (+) or Decrease (-) Amount	Positions	Total Program	Total Positions	Explanation
$-691,000	- 30	$ 965,000	26	Due to decreased employment
$+100,000	---	$ 100,000	---	Reimbursement to GSA for space costs.
$-591,000	- 30			

(1) The decrease of $691,000 is due to the anticipated reduction of 30 positions in this activity due to the phased redirection of the Saline Water program.

(2) The increase of $100,000 is to provide for reimbursement for space, services and facilities provided by GSA in accordance with Public Buildings Amendments of 1972, P.L. 92-213.

The program for FY 75 covers administration and coordination activities authorized under the Saline Water Conversion Act of 1971. Included are planning, supervisory, technical and administrative functions related to research and development contracts and grants.

Approximately one hundred and ninety (190) research and development agreements, contracts and grants are outstanding. Ninety-seven (97) contracts and grants, totaling approximately $17.3-million, are active requiring close technical and administrative supervision and monitoring until the results are in usable form for dissemination to the public; the balance is open subject to audit, financial and property settlements. The planned reduction of program activities and ending of many research and development projects must be carried out in an orderly manner, to obtain optimum benefit from the government's investment in the saline water research and development program. A minimum staffing of 26 personnel is required for this activity in FY 1975.

LEGISLATION FOR COLORADO RIVER INTERNATIONAL SALINITY CONTROL PROGRAM

Mrs. HANSEN. What is the status of your authorizing legislation for the Mexican agreement?

Mr. O'MEARA. Hearings were held before the Subcommittee on Water and Power Resources of the House Interior and Insular Affairs Committee the week of March 4. Just yesterday the subcommittee marked up that legislation and will move it now to the full committtee.

You may be aware that there were two bills introduced. The administration had sent forward a bill that authorized the Department of State to conduct this program and then transfer funds back to the Bureau of Reclamation and to the Office of Saline Water for the construction of facilities. The administration bill was also limited to just the provisions of the Brownell recommendation.

Several Members of the Congress introduced legislation that gave the responsibility to the Department of the Interior rather than Department of State. They also added a title II to the bill which provided for salinity control activities above Imperial Dam.

It was the latter bill that the committee reported out.

The Senate Interior Committee has set hearings for that bill on April 26.

FUNDING FOR THE COLORADO RIVER INTERNATIONAL SALINITY CONTROL PROGRAM

Mrs. HANSEN. Will funding for this project be requested by OSW?

Mr. O'MEARA. If the bill that was reported out of the subcommittee yesterday carries, then it will be the Department of the Interior requesting the funds. All the responsibility will come under Assistant Secretary for Land and Water Resources Jack Horton.

Mrs. HANSEN. Who will pay for the operation of the plant once it is built?

Mr. O'MEARA. The operation of the plant, as provided in the bill, is the responsibility of the U.S. Government.

Mrs. HANSEN. Will the Interior Department operate the facility and provide the funds?

Mr. O'MEARA. According to the present bill, yes; it would be an Interior budget responsibility.

REPROGRAMING OSW FUNDS

Mrs. HANSEN. You mention in your statement that you are requesting approval to reprogram $900,000 for this activity. Do you have any further details on that beyond that it is languishing at OMB?

Mr. O'MEARA. It has cleared OMB, and the letter reporting it to the committee is in the department's sausage grinder. The reprogramed money will be used to maintain part of our staff until the authorization for the Welton-Mohawk bill is enacted. It also allows us to undertake some preconstruction activity.

Some of the expenses of the work that we are undertaking at Yuma in cooperation with industry to test equipment and get prepared for this plant are coming out of those funds, as well as some continuing research on the improvement of brackish water desalting technology.

REDIRECTION OF THE OSW PROGRAM

Mrs. HANSEN. You have commented on the status of your program redirection which was begun last year. Do you have anything more to add to your previous comments?

Mr. O'MEARA. We have been concerned about the timing of some of the redirection based principally on the fact that we now face this challenge of the 100-million-gallon-per-day plant. We have asked to be able to continue brackish water development work so that we can obtain as much data and information and improved processes as we possibly can before we commit ourselves to the construction of a plant of that size. As a result of those appeals we have been able to continue some brackish waterwork. We have been able to keep our test facility at Roswell, N. Mex., in operation.

Mr. MCKAY. Madam Chairman.

Mrs. HANSEN. Yes.

Mr. MCKAY. With that in mind, if you don't get enough research money to get some of the answers you need and then you go ahead and build that plant down there and it flops, you know the effect of that, don't you?

Mr. O'MEARA. Yes, I know the effect of it, but that plant is not going to flop. That plant will be constructed and be able to recover at least 70 percent of the feedwater.

Mr. MCKAY. By the known knowledge you have now? Are you sure of that?

Mr. O'MEARA. Yes. I say that with every assurance. We have the technology available to build the plant, but we have every hope, Mr. McKay, to advance our technology to bring that up to 75, 80, or 81 percent recovery, rather than 70 percent, by continuing our brackish water development work.

That is the difference, not that the plant will or won't work, but how much can we increase the efficiency of its operation is what we still need to determine.

Mr. MCKAY. Because if that thing should wind up failing you get a backlash here that we will want to cut out the whole program unless you get enough research to know where you are going.

Mr. O'MEARA. Research to advance the performance of the plant, but we have every confidence, and I say this supported not only by an excellent technical staff but I have been in close contact with the major manufacturers of this kind of equipment, and they are ready to lay their reputation on the line and back it with a performance guarantee.

Mr. MCKAY. I am trying to support the program because I think this has to succeed and it takes a long time to get going and we will be putting ourselves right back at the beginning unless we are careful and we will wake up with another "Sputnik" and then we have a crisis on our hands.

Mrs. HANSEN. I think the Office of Saline Water's record has been remarkably good considering the relatively short time that they have been performing their work.

PRICE OF DESALTED BRACKISH WATER

Mr. McKay. Along with that, what do we have it down to a price per gallon?

Mr. O'Meara. I would have to give you a little different frame of reference. The price per gallon is quite small. There are brackish water desalting plants now operating in the United States that are producing fresh water for between 35 and 40 cents per thousand gallons. This is the cost of desalting the water. It is not the delivered price to the consumer.

But by the same token I could report in Alexandria, Va., I pay 75 cents a thousand gallons for my water so our price for desalting brackish water is coming down into the realm of economic practicability.

Mrs. Hansen. When you began what was the price?

Mr. O'Meara. There were no brackish water desalting processes at that time, and the price of producing 1,000 gallons of fresh water from seawater ranged upward from $5.

Mr. McKay. Per thousand?

Mr. O'Meara. Yes. Seawater is being desalted for about $1 per 1,000 gallons at the present time.

Mr. Wyatt. Is that at Key West?

Mr. O'Meara. The Key West plant was initially at 85 cents per 1,000 gallons, but now as the price of energy has gone up the price of water will have to follow. I don't have the latest quote on what the energy price has done to their cost of water, but it has increased.

There are two new plants nearing completion in the Virgin Islands and the initial estimates on the cost of those two plants, and they are relatively small—they are each 2.25 million gallons per day, will be at about $1 per 1,000 gallons.

ISRAELI DESALTING ACTIVITY

Mr. McKay. I can't verify this but it sticks in my mind that the Israelis were doing some research with atomic or other sources to pull from the sea sufficient waters not only for urban conditions but probably to help out in their development of the desert.

Do you know anything about that or is that just talk.

Mr. O'Meara. Your memory is quite good, Mr. McKay.

I guess in terms of national budgets, percentages of national budgets, the Israelis have put far more money into desalting than the United States.

Mr. McKay. What kind of success have they gained?

Mr. O'Meara. Their success is about similar to ours. They have not achieved anything greater than we have. They follow our program very closely and we follow theirs but there is nothing remarkable in Israel that I can point to as overachieving what we have been able to do.

Mr. Wyatt. Do you know what their cost per 1,000 gallons is in their desalting plant in Eilot, Israel, that we built under our AID program for them? If you don't, can you furnish it for the record?

Mr. O'Meara. We can furnish it for the record and I would hesitate to give it because there was no capital involved in that plant so actually it can be very low cost because there was no capital to write off.

[The information follows:]

ISRAELI EILOT DESALTING PLANT

The Israeli Embassy was unable to supply the cost of desalting water at their Eilot plant at this time.

Mr. WYATT. Because we gave it to them.

Mr. O'MEARA. Yes.

Mrs. HANSEN. Which reminds me we were able to furnish desalting there and yet we find one of our own territories in deep trouble—Micronesia—with water sources and I have never known anybody to propose doing anything with U.S. funds there.

PRIVATE OR PUBLIC PATENTS

Mr. MCKAY. Earlier you talked about grants-in-aid to private companies to develop, that you had a mutual situation. When you have a grant situation, a mutual concern for development, are the effects of that then open to the public or do they become the private patent of that corporation?

Mr. O'MEARA. They are open to the public.

Mr. WYATT. The elements of that are open to anyone?

Mr. O'MEARA. Yes.

Mr. WYATT. Is there a time frame in which that company has to do some things on their own before they are released?

Mr. O'MEARA. The biggest advantage to the company is, of course, first of all they have in-house expertise. Reading a patent is one thing, but it is another thing to know how to apply it. They have foreign patent rights to these developments but patent rights in the United States belong to the Government, and are available to the American public.

UNOBLIGATED BALANCE BEGINNING OF FISCAL YEAR 1975

Mrs. HANSEN. Will you please insert in the record a listing of the specific projects involved in the unobligated balance at the beginning of fiscal year 1975 of $1,840,020?

Mr. O'MEARA. Certainly, Madam Chairman.

[The information follows:]

OFFICE OF SALINE WATER

PROGRAMS SET ASIDE TO PROVIDE $1,840,000 FOR CARRY OVER IN FISCAL YEAR 1975

1a. Research—Seawater membranes:	
Reduction in studies of membrane behavior and factors controlling rejection, flux, and compaction	$300,000
Reduction in studies of membrane fouling, pretreatment of feed waters to prevent fouling, analytical procedures to monitor process performance	400,000
Reduction in studies of new membrane processes (e.g., piezodialysis) or of application of electrodialysis to seawater	240,000
Subtotal	940,000

1b. Development—Seawater membranes:	
Reduction in the development of single pass large membrane assemblies and field testing of same	300,000
Reduced development of 2d generation membranes (higher flux, longer life)—inability to take laboratory developments into fabrication and field test	400,000
Deletion of component development (e.g., instrumentation, controls, pumps)	200,000
Subtotal	1,840,000
Total	1,840,000

REDUCTION IN FORCE

Mrs. HANSEN. You note in your statement that all but two of the personnel affected by the 1973 reduction in force were able to find employment, or retired. What sorts of employment did these people find?

Mr. O'MEARA. Several of the people who had been on our staff went to private industry and a good many of them went into the desalting industry. Some went into other branches of private industry because of their engineering backgrounds.

Probably the largest single transfer to any one group was to the Office of Coal Research, which was authorized an expanded staff at the same time we were losing some expert technical people. We made it a very high program priority to do everything we could to assist them in finding employment. First of all, because they were darned good people and deserved that kind of help and, second, they were being put out of a job through no fault of their own and we felt a real obligation to do what we could do to assist them.

FUNDAMENTAL RESEARCH

Mrs. HANSEN. You are requesting a reduction of $500,000 for "Fundamental research" for a total program of $400,000. The $400,000 is carryover money from fiscal year 1973. What specific projects are being terminated and what kinds of projects will receive priority in 1975?

Mr. O'MEARA. We reduced the level of our basic research studies.

Mrs. HANSEN. Were the projects that were reduced important in developing knowledge?

Mr. O'MEARA. They are very valuable. The only way you extend the frontiers of knowledge is through basic research. The day when somebody comes down out of the garage and says, "Eureka" is about over. It is only through long and difficult work that new technology can really be developed. One project that we will terminate in research is the development of the piezodialysis process, for example. I am fortunate that I can even pronounce it, but what is involved in that process is a new type of membrane, a new theory. For reverse osmosis we have developed a membrane that will reject the salt and the water flows through the membrane. Piezodialysis works just the opposite. It rejects the water. Even seawater is only 3.5 percent salt so with piezodialysis we only have to move 3.5 percent of the mass through the membrane instead of 96.5 percent.

The theory sounds very, very exciting but its development would be long and costly, but you just have to keep hammering away.

Mrs. HANSEN. Will anybody else be performing this research since it is time consuming and costly?

Mr. O'MEARA. No, Madam Chairman.

Industry simply will not fund long-term research. They have to go where they get the best bang for the buck, the short term payout. I would cite that we worked with one of the major electrical companies in the United States several years ago, and we were splitting the funding of a program, when it advanced to where we were going to build a rather substantial piece of test equipment. These people went to their management and said they would need close to a million dollars to continue their desalting work the next year and management said, "Well, if we give you this money this year how many of these plants will you sell next year?"

They said, "We don't expect to sell any plants next year. It may be 3 to 5 years before we make our first sale."

They said, "If we put a million dollars in the design of a new refrigerator door we will sell x additional refrigerators next year at profit of x. Therefore, we are not going to fund any more desalting work."

Mrs. HANSEN. That is what disturbs me because as our water needs increase because of our energy programs you are going to be left on a plateau with no knowledge to move ahead. I can particularly see this occurring in oil shale lands, and the Outer Continental Shelf lands. You are going to be left on this plateau unable to meet the challenges of the future because this continent isn't going to stop moving at the 1974 level, particularly in the scientific world.

O'MEARA. I have to support that. We have been mining coal, I think, Madam Chairman, since man invented the pick, but centuries later we are still finding better ways of mining coal.

Mrs. HANSEN. We are trying to discover some that are even better.

Mr. O'MEARA. So we just have the judgment that we can move as far as we can.

Last year, at the hearings before the authorization committee of the House Interior and Insular Affairs Committee, there were several representatives of industry that testified, and citing one member's testimony, he assured the committee that private industry would continue to do research in desalting even if the Office of Saline Water completely disappeared, but he said, "What we could accomplish in 5 years with the Office of Saline Water will probably take us 25 years without it."

SEAWATER DESALTING RESEARCH

Mrs. HANSEN. You are requesting a reduction of $500,000 for seawater desalting research for a total program of $1.2 million. This $1.2 million is carryover money from fiscal year 1973. Will you explain what this involves?

Mr. O'MEARA. This is what you have asked us to provide, the distribution of the $1.8 million. Mr. Townsend, do you have some comment you want to make on the dollars available?

Mr. TOWNSEND. I would like to point out that in the research effort the desalting research is significantly reduced. This will require, for example, some work to be cut back in the pretreatment stage that is

required to process seawater through the membrane and additionally it is going to cut out some laboratory experimental work to evaluate various membranes that we have been working on in the past.

Mrs. HANSEN. Why do you want to eliminate your laboratory?

Mr. O'MEARA. It is just the function. It is not a question of desire. It is a question of availability of funds.

Mr. WYATT. You have been told you can't have them?

Mr. O'MEARA. Correct.

SEAWATER DESALTING DEVELOPMENT

Mrs. HANSEN. A reduction of $848,960 is requested for seawater desalting development for a total program of $466,020. $66,020 is carryover from fiscal year 1973 and $400,000 is a request for new money.

Do you have any comments on this reduction?

Mr. O'MEARA. We are decreasing our efforts on brackish water desalting——

Mrs. HANSEN. But this is a promising project.

Mr. O'MEARA. We would expect that industry, because they now are selling some brackish water desalting plants, would continue this type of research.

Mrs. HANSEN. If the brackish water problem continues to mount and the research has not kept pace, again you are in this plateau. Isn't this correct?

Mr. O'MEARA. We will essentially using 1972 technology; yes.

EFFECT OF RESEARCH CUTBACK ON THE PEOPLE OF THE UNITED STATES

Mrs. HANSEN. Mr. O'Meara, the ultimate people who will suffer isn't the Office of Management and Budget, it is the people of the United States. You and I have sat across the committee table from each other when the State of California, for example, desired to have water from the Columbia River to alleviate problems of reclamation and drinking water. If you had allowed that you would have had nothing but sandbars which would have reduced the opportunity for any foreign commerce in the Northwest.

Yet, out of those ports went a large bulk of wheat to the ports of the world. Instead of going out of the Columbia River you know where they would have gone, to the Fraser River at Vancouver, B.C. I don't ask you to comment.

Mr. O'MEARA. Different than most of your colleagues, you are not parochial, and while you are speaking of the Columbia River you are in turn, speaking about the good of the United States.

Mrs. HANSEN. Yes. I am using it as an illustration of the problem.

You have the Colorado Basin. You have commitments to Mexico. You have problems that are escalating for our Indian Reservations. Their economic development is predicated upon the ability to obtain water.

You have problems in the Great Lakes. I remember going to Philadelphia one year and you had to ask for a glass of water they were so short of water, the seawater was backing up in the Delaware River.

We haven't had a drought like that, fortunately, again since that time but weather is very unpredictable.

Mr. O'MEARA. Yes, Madam Chairman, nobody predicted the drought that is now searing North Africa. If a drought like that should strike the United States we would have severe problems.

DROUGHTS OF THE 1930'S

Mrs. HANSEN. We did have droughts in the 1930's.

Mr. O'MEARA. I grew up in that drought in Nebraska and I am well aware of what a dust storm is like, and of watching the corn wither. As an interesting commentary of our time, I don't think too many people realize that the mighty Colorado River no longer flows to the sea. It is completely used up before it ever gets there.

Mrs. HANSEN. That is correct.

Mr. O'MEARA. This does not say that we don't have future need for water in that region. We expect continued development, but the river is reaching its maximum ability to deliver for the needs of the people.

Mr. LONG. Would the chairman yield?

Mrs. HANSEN. Yes.

NINETY PERCENT REDUCTION IN RESEARCH

Mr. LONG. The chairman really knows the subject of water needs in the West, the problems of the Indians and the growing population in the West, and I am very much impressed by what she said about the water problem.

I must say I am baffled here by the arithmetic. Apparently the amount of money that is going into this research as compared with past years is going down.

Mr. WYATT. About 90 percent down.

Mr. LONG. Yet we have a problem here which is absolutely fundamental to our future. Just the other day the subcommittee was given budgets requesting nearly doubling the humanities and arts funding and here we are dealing with how much?

Mr. O'MEARA. $3 million, sir.

Mr. LONG. Here we are dealing with $3 million for water, which is an absolute necessity, while we are asked to give $90 million apiece for each of the humanities and arts. The arts are deserving, but we are buying paintings, we are putting up beautiful buildings, we are supporting the Metropolitan Opera, so that people can sit in unbelievable splendor, wealthy people who could afford to pay for their own luxury and splendor.

I do not mind assisting the arts and humanities, but I am impressed with the tremendous increases in those budgets and then the actual shrinkage in these water programs. I simply don't understand these reductions. There must be something here that has not been brought out.

I do not believe the lady from Washington has exaggerated the importance of the problem. What in God's name goes on?

Mrs. HANSEN. The water problem will be with the United States as long as you have people.

Mr. LONG. Of course it will.

Mrs. HANSEN. Mr. O'Meara, as you are well aware, every time you build a house in the United States you have to furnish water, sanita-

tion facilities, and energy to run those systems. You cannot furnish any of these things without water as you are well aware.

The problems of water are not confined to the West.

Mr. LONG. Of course they aren't.

Mrs. HANSEN. The problems of water are probably going to be as critical in your heavily populated areas of the East as anyplace.

Mr. LONG. Water is also fundamental to the problems of the developing countries which we are trying to help. You have closed down this San Diego test facility which was supposed to be the site of a joint United States-Israel desalting project to help Israel, and presumably that could help the Arabs, too, while the United States gained valuable technology as well.

There must be something in your reasoning that is going over my head. Why are these programs being cut back?

What am I missing here?

Mrs. HANSEN. You are not missing anything but I think the thing that has been disturbing the committee was the fact that we reached really a plateau of learning.

Then suddenly the decision was made to let private industry proceed with the research and the operation of facilities. The unfortunate side effect of this activity is that all the exciting techniques that will take us to the next plateau are left without funding. This information will be necessary as we move into even more sophisticated water problems.

I think this is a discouraging situation.

Isn't this correct, Mr. O'Meara?

ARAB WATER PROBLEMS

Mr. O'MEARA. Madam Chairman, last week we received an airgram from our Embassy in Abu Dhabi, which is one of the United Arab Emirates that apparently has a serious water problem. They had been called on by the Ministry of Water and Electricity of Abu Dhabi, wanting to know if any U.S. firm could supply them a 1.5 to 2 million gallon per day desalting plant by the end of this year.

They required that the plant be barge-mounted so that it could be moved to meet more than one water crisis that exist there—and money was no object.

This airgram said if a U.S. vendor had a piece of equipment in an advanced stage of construction, they would be willing to pay any penalties that the manufacturer might incur from their original customer because of late delivery, if they would divert that plant to Abu Dhabi. The sad part of this report is that the request came in last week, which was about 2 months after we had torn down our plant at San Diego.

AUTHORIZATION RESTRICTIONS

Mr. LONG. Are we held down by an authorization?

Mrs. HANSEN. The authorization has just been reported from the subcommittee to the full committee. They increased the authorization by $15 million.

Mr. O'MEARA. $15.7 million.

Mrs. HANSEN. It is my hope that certainly between the House and the Senate we can restore some money in this program.

Mr. LONG. Madam Chairman, when I go back home and I tell my constituents a lot of the things that the administration does—coming down with inadequate budget requests for energy research, and, of course, this water problem and others, they are impressed. But then somebody often comes up to me in a very quiet way and says, "Congressman, I don't want to embarrass you, but doesn't Congress have the power to correct all this?"

I don't know how to answer them.

Mrs. HANSEN. May I say the committee has supported the authorizations. At various times we have even provided additional funds because we felt it was important.

Mr. LONG. I would hope we could get something in the language of this report which would be a signal to Congress, to the authorizing committees, and to the administration that we think the priorities are going in the wrong direction.

Mr. WYATT. Would the gentleman yield on that?

Mr. LONG. Be glad to.

Mr. WYATT. I look at the justification here for the Office of Saline Water and I think it has to be a new record for thin books. Of course, it covers everything that is in the budget request but it certainly is a thin bit of justifications and this just points up the fact to me of the great neglect that we have had in recent years, and this goes back quite a bit, particularly in recent years, of all renewable natural resources.

Water is one of them certainly. The fisheries is another. We have had testimony in here about the Columbia River Fishery as one example, about the almost unlimited resource it will bear. Production is unlimited, depending upon maximizing the present facilities of existing hatcheries and also new hatcheries.

We have a worldwide wood fiber crisis. We have a shortage in this country. It is going to get much worse. If we could spend an extra $2 billion just on these three areas we could accomplish miracles, and yet this is a drop in the bucket to our space program and our foreign aid program, and our defense budget.

I think it is just a scandal.

PRIORITIES OF THE OFFICE OF MANAGEMENT AND BUDGET

Mrs. HANSEN. If the gentleman will yield, I have some interesting figures. In 1974 $3.08 billion was provided to South Vietnam, Cambodia, Laos, Thailand, and some in the East Asia regional program.

In 1975 the proposal is $3,191,000,000. May I call to the gentleman's attention that with all the 27 agencies that this committee handles, which has jurisdiction over a third of the United States lands, only about $3.5 billion is proposed and last year the amount was only $2.6 billion.

This indicates the priorities that have been established by the Office of Management and Budget. I do not oppose the arts and humanities because I also think human beings are resources. I do blame the Office of Management and Budget through the years for not recognizing that you cannot manage our forest, parks, and fishery programs without money. It is impossible.

I happen to think if the people of the United States are going to survive paying the bills of Thailand, and so forth that we have to have the water programs and we have to have the energy programs.

Years ago this committee added funds repeatedly over the objections of OMB for coal research so that you could remove sulfur from coal, so that you could remove fly ash from coal, and so forth. This was done so coal would be more usable in the United States.

JOINT UNITED STATES-ISRAEL PROJECT

Mr. LONG. I want to point out, Madam Chairman, that the San Diego project I mentioned before was to be a joint United States-Israel project and was authorized by Congress in 1969 and $20 million was appropriated in 1970. That money remains available in the AID budget and the project has been bottled up in the White House in spite of the fact that such a project would be of enormous value to Israel and to the other countries in the Middle East to whom water is far more valuable than oil.

I would assume that the Arabs and the Israelis would be willing to trade a lot of oil for water. The real wealth of that part of the world, if it is ever developed, will come not from oil. It will come from water.

Mrs. HANSEN. That is correct.

Mr. O'MEARA. That is the restriction right now on their growth. They have this problem over there: Every time they drill a water well they hit oil.

VIRGIN ISLAND WATER SUPPLY

Mrs. HANSEN. We sat here yesterday, Dr. Long, and listened to the problems of Micronesia and they have a limited water supply.

Mr. O'MEARA. It is interesting to note, Madam Chairman, that the Virgin Islands now obtains about 80 percent of their water from desalting plants, so the development of the Virgin Islands has been keyed to the availability of additional desalting plants to provide the water to run their economy.

I think, Mr. Congressman, that part of the problem we have in the United States is that the water engineer has done such a fantastic job here of putting water where we want it, when we want it, at the quality we demand, that we have become a Nation of faucet turners. We haven't had to think what has gone on beyond that faucet, so it is to the credit of the water engineer that we don't have to give it the thought that the Arabs do.

FALLING WATER TABLES

Mr. LONG. We don't for the country as a whole, but we do in parts of this country. I know, for example, in Phoenix, Ariz., where they moved one of my military bases to, they ran into a tremendous problem there of a falling water table. This is in Huachuca.

They have a real probem if the water table falls a couple feet every year and we know the saline water is moving into those wells all the time, and we have other places in this country where it is an immediate problem even though we do have plenty of water in some other parts of the country.

In all these things there always is another side to the story and I would like to hear it.

Mr. O'MEARA. It is just an assignment of priorities.

Mr. LONG. There has to be a better case than the administration is making for this. What in heaven's name is this better case? In fact, I don't think they have even tried to make a case at all, have they?

OBLIGATION TO PEOPLE OF THE UNITED STATES

Mrs. HANSEN. No.

I still contend, and I think Mr. O'Meara will agree, after sitting here for 10 years, that we are under a direct obligation to the people of the United States to continue research at the level that will provide water for future use.

SIDE BENEFITS FROM RESEARCH & DEVELOPMENT

Mr. O'MEARA. Speaking to the little side benefits that you sometimes find very unexpectedly, one of our membrane development companies working in spiral wound membrane development had a cloth in between the membranes that provides the flow space.

They ordered a new batch of cloth that had a different sizing than the previously used cloth. All of a sudden the performance of that module went up substantially. They then did a lot of work to find out why, and finally determined that the only change that had been made was in the sizing of the spacing cloth. It was put in there quite by accident, but the performance of the membrane went up 25 to 30 percent.

That sizing now is utilized as part of the system and some research is going on to find out why that kind of a chemical additive to the system had that favorable impact on the membrane performance. Some researcher may have stumbled onto that at X point in time working the other way, but this was one of those accidental spinoffs that just develop from doing.

[Discussion off the record.]

WRIGHTSVILLE BEACH TEST FACILITY

Mrs. HANSEN. In your highlight statement you state that you are continuing operation of the Wrightsville Beach test facility. Why, then, do you show reductions for this facility?

Mr. O'MEARA. The scope of the operation has changed substantially, Madam Chairman. We were operating several distillation pilot plant units at that site. We have now changed it all around to where we are only operating, at the present time, some very small membrane test units. Therefore, we do not require as large a staff or as much expenditure for the operation of that facility as we did previously.

Mrs. HANSEN. Weren't you developing a great deal of information from that facility?

Mr. O'MEARA. But that development work was discontinued.

BRACKISH WATER DESALTING DEVELOPMENT

Mrs. HANSEN. You are requesting a reduction of $660,000 for brackish water desalting development for a total program of $100,000. What does this entail?

Mr. O'MEARA. We had not originally programed any money for brackish water but then there was action by the Senate Appropriations Committee that required the money that we had programed for teardown at Roswell should be used to continue the operation. The administration agreed to go along with the Senate directive to spend that money for continued operation there.

SALINE WATER TEST BEDS AND FACILITIES

Mrs. HANSEN. You are requesting $1,050,000 for saline water test beds and facilities.

You have several facilities listed in the justifications: Wrightsville Beach, Fountain Valley, Yuma, Roswell, and other facilities being closed out. What is the status of the Fountain Valley, Calif., facility?

Mr. O'MEARA. I mentioned earlier, you will recall, that we had completed the construction of that test plant but will not be able to operate it until about July 1. We will use this money for operating expenses to obtain data from the performance of that distillation plant, which we believe is the most advanced piece of distillation equipment in the world.

We have combined the best features of two processes that have been developed by our office and have taken the best of both processes and combined them into a single process. We expect exceptional performance from that plant.

We are disappointed that we haven't yet been able to operate it, but we soon will be able to place that plant in operation.

Mrs. HANSEN. What is the status of the Yuma, Ariz., facility?

Mr. O'MEARA. The funds used there were to establish the test facility. We also will operate it out of funds that we have reprogramed.

We mentioned earlier in our testimony the reprograming of funds to cover this facility. Our operating cost there will be small in that the industrial firms are providing their own equipment for testing, so our expenditures there will be minimal.

SALINE WATER MODULES

Mrs. HANSEN. You are requesting a decrease of $1,603,000 for saline water modules for a total program of $588,000.

Mr. O'MEARA. Yes. It is difficult to operate a module after we have torn it down. The module at San Diego has been torn down and sold. Therefore, obviously it doesn't appear as a further budget request.

ADMINISTRATION AND COORDINATION

Mrs. HANSEN. A reduction of $591,000 is requested for administration and coordination, for a total program of $1,065,000. You are going to reduce your positions by 30 people. Supposing the $15.7 million increase recommended by the authorizing committee is added to the appropriation bill. Will you have adequate administration funds?

Mr. O'MEARA. To properly administer the program at the level authorized by the Subcommittee of Interior and Insular Affairs we would need to maintain a staff at our current level, in the range of 70 people, but we are not proposing to do that under our directive.

32-043 O - 74 - 56

We are proposing to go down to 47 people actually. Some of those will be——

Mrs. HANSEN. By July 1?

Mr. O'MEARA. Yes, they will be gone.

Mr. BETTENBERG. Could we go off the record?

[Discussion off the record.]

FUNDING PROPOSED BY THE SUBCOMMITTEE

Mrs. HANSEN. Will you please provide for the record what you would propose to do with the funding proposed by the authorizing committee?

Mr. O'MEARA. We would be pleased to do that, Madam Chairman.

[The information follows:]

ALTERNATIVE PROGRAM LEVELS
FY 1975 Saline Water Research Program

The President has proposed a budget of $4,869,000 to carry out a Saline Water Research Program for fiscal year 1975. This amount is made up of $3,029,000 new funds, and $1,840,000 carry over funds. The program, as proposed, covers a base level effort for research of seawater membranes, freezing, and new and promising processes. Also included are funds for operation of the Verticle Tube Evaporator/Multi-Stage Flash (VTE/MSF) Module, located at Fountain Valley, California. The program was proposed at this level in consonance with other priority programs.

Attachment A presents in table form the President's program and three alternative expanded saline water research and development programs in response to the Subcommittee's question.

- The first alternative is the proposed House authorization bill of $15.75 million. The proposed authorization and correspondence supporting the proposal (see attachment B) is very explicit with regard to where funding would have to be spent.

- The second alternative represents how the Interior Department would allocate the same $15.75 million if it were not constrained by the categorical limits contained in the proposed House authorization bill. A description of the work included in this alternative is provided as attachment C.

- The third alternative represents an approximate median level of $10.2 million which is between the President's budget and the proposed House bill.

The Interior Department does not endorse any appropriation level other than that presented in the President's FY 1975 Budget. The $10.2 and $15.75 million alternatives are presented simply as preferable alternatives from the standpoint of the Interior Department to the program proposed by the House Subcommittee on Water and Power Resources to the Committee on Interior and Insular Affairs.

ATTACHMENT A

Saline Water Research Program
Alternative FY 1975 Program Levels

(In thousands)

Programs	Budget Activity	President's Budget	Proposed House Authorization Alternative	$15.75 million Alternative	$10.2 million Median Alternative
Administrative & Coordination	III	$1,065	$ 2,000	$ 2,000	$ 1,800
Fundamental Research	Ia	400	500	800	500
Seawater Membranes		1,716	3,700	4,200	4,000
Research	Ia	(1,000)	(1,000)	(2,000)	(1,800)
Development	Ib	(466)	(2,000)	(1,500)	(1,500)
Testbeds & Facilities	IIa	(250)	(700)	(700)	(700)
Freezing, Materials & New Processes		200	1,550	1,350	600
Research	Ia	(200)	(650)	(650)	(200)
Development	Ib	--	(800)	(600)	(300)
Testbeds & Facilities	IIa	--	(100)	(100)	(100)
Brackish Water Membranes		600	3,300	3,300	2,000
Research	Ia	--	(800)	(800)	(200)
Development	Ib	(100)	(1,200)	(1,200)	(1,000)
Testbeds & Facilities	IIa	(500)	(1,300)	(1,300)	(800)
VTE/MSF (OCWD) Project		888	1,300	1,300	1,000
Testbeds & Facilities	IIa	(300)	(400)	(400)	(300)
Modules	IIb	(588)	(900)	(900)	(700)
Geothermal		--	800	300	300
Research	Ia	--	(500)	(300)	(300)
Development	Ib	--	(300)	--	--
Testbeds & Facilities	IIa	--	(300)	--	--
Cooperative Studies	Ib	--	300	200	--
Waste Water		--	2,300	2,300	--
Research	Ia	--	(950)	(950)	--
Development	Ib	--	(1,350)	(1,350)	--
Total		4,869	15,750	15,750	10,200
Less carryover funding		-1,840	-1,840	-1,840	-1,840
New budget authority		3,029	13,910	13,910	8,360

Programs	Budget Activity	Current Budget	Proposed House Authorization Alternative	$15.75 million Alternative	$10.2 million Median Alternative
Summary by Budget Activity:					
Research	Ia	$ 1,600	$ 3,900	$ 5,500	$ 3,000
Development	Ib	566	6,150	4,850	2,800
Testbeds & Facilities	IIa	1,050	2,800	2,500	1,900
Modules	IIb	588	900	900	700
Administration & Coordination	III	1,065	2,000	2,000	1,800
Total		4,869	15,750	15,750	10,200

ATTACHMENT B

NINETY-THIRD CONGRESS
JAMES A. HALEY, FLA., CHAIRMAN
ROY A. TAYLOR, N.C.
HAROLD T. JOHNSON, CALIF.
MORRIS K. UDALL, ARIZ.
PHILLIP BURTON, CALIF.
THOMAS S. FOLEY, WASH.
ROBERT W. KASTENMEIER, WIS.
JAMES D. O'HARA, MICH.
PATSY T. MINK, HAWAII
LLOYD MEEDS, WASH.
ABRAHAM KAZEN, JR., TEX.
HORACE G. STEPHENS, JR., CA.
JOSEPH P. VIGORITO, PA.
JOHN MELCHER, MONT.
TENO RONCALIO, WYO.
JONATHAN B. BINGHAM, N.Y.
JOHN F. SEIBERLING, OHIO
HAROLD RUNNELS, N. MEX.
YVONNE BRATHWAITE BURKE, CALIF.
ANTONIO BORJA WON PAT, GUAM
WAYNE OWENS, UTAH
BEN DE LUGO, V.I.
JAMES R. JONES, OKLA.
JOHN P. SAYLOR, PA.
CRAIG HOSMER, CALIF.
JOE SKUBITZ, KANS.
SAM STEIGER, ARIZ.
DON H. CLAUSEN, CALIF.
PHILIP E. RUPPE, MICH.
JOHN N. HAPPY CAMP, OKLA.
MANUEL LUJAN, JR., N. MEX.
JOHN DELLENBACK, OREG.
KEITH G. SEBELIUS, KANS.
RALPH S. REGULA, OHIO
ALAN STEELMAN, TEX.
JOSEPH J. MARAZITI, N.J.
DAVID TOWELL, NEV.
JAMES G. MARTIN, N.C.
WILLIAM M. KETCHUM, CALIF.
PAUL N. CRONIN, MASS.
DON YOUNG, ALASKA

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
U.S. House of Representatives
WASHINGTON, D.C. 20515

March 29, 1974

MEMORANDUM

TO : Hon. Harold T. Johnson, Chairman
Subcommittee on Water and Power Resources

FROM : Jim Casey, Subcommittee Consultant

SUBJECT : Desalting Program -- Fiscal Year 1975

In my recent discussion with you I presented a rough program of $15,750,000 for OSW for FY 1975 and you suggested that it be presented to the Subcommittee. This memorandum presents a more detailed breakdown of the above amount together with some discussion of each identifiable item.

I. RESEARCH EXPENSE:

President's Program.....	$ 1,600,000
(Carryover).....	(1,600,000)
New Money.....	---
Committee Increase.....	2,300,000
Committee Program.....	3,900,000

Breakdown of Research Category

(1) Basic Water Studies

Adm. Program -	$ 400,000
Committee Program -	500,000

This item covers research in properties of water, transport of ions in water, the mechanisms of flux and rejection, and laboratory scale work on new separation processes. The increase in the program would be to carry on more work on the mechanisms of flux and rejection -- the basic phenomenon underlying the membrane processes. Testimony from Dr. Hickman is oriented toward more adequate

funding of this type of work.

(2) Basic Waste Water Studies — Adm. Program - $ -------
Committee Program - 950,000

This is a comparatively new field of activity in which the same type of research heretofore performed for saline and brackish waters will be initiated on waters which have been contaminated by acts of man. Specifically, research will be conducted on the ions and molecules found in municipal sewage effluent, pulp and paper wastes, tannery wastes, cooling tower blowdown and oil refinery wastes --- including oil shale extraction processes.

(3) Seawater Membrane Research

Adm. Program - $ 1,000,000
Committee Program - 1,000,000

This is the only adequately funded item in the President's program. No increase is contemplated in the Committee program.

(4) Freezing Research

Adm. Program - $ 200,000
Committee Program - 300,000

This increase will enable continuing work on processes involving secondary refrigerants whereas the work would be phased out under the President's program.

(5) Brackish Water Membrane Research

Adm. Program - $ -------
Committee Program - 800,000

The Administration's program contains no funds for this important work. Of particular importance is continuing research toward more sophisticated and effective membranes. It would seem that the experience to date on brackish water membrane systems, wherein the technology has come from "nowhere", in a few years affords basis for optimism that chemists will continue to make progress on such things as flux rate, recovery rate and membrane life. This work is strongly supported by the Committee of Fourteen who represent the States of the Colorado River Basin.

(6) Materials Research

Adm. Program - $ ---------
Committee Program - 350,000

This item will afford continuation of materials testing at the Materials Test Center at Freeport, Texas, which would otherwise be discontinued under the Administration's program.

II. DEVELOPMENT EXPENSE:

President's Program.....$ 566,000
(Carryover)..... (66,000)
(New Money)..... (500,000)

Committee Increase..... 5,584,000
Committee Program..... 6,150,000

Breakdown of Development Category

At the present stage of saline water technology, development activities, which are in fact pilot operations, are of crucial importance to the advancement of technology for use in all water resource related activities.

(1) Waste Water Re-use Development

Adm. Program - $ -------
Committee Program - 1,350,000

This is a companion activity to the new item of research in Category I. Under this heading pilot plants would be designed for testing membrane system effectiveness in the handling of chemical contaminants found in selected municipal and industrial effluents mentioned above. This item has potential for advancing energy research activities and water quality objectives.

(2) Seawater Membrane Development

Adm. Program - $ 466,000
Committee Program - 2,000,000

This item is an example of the lack of balance in the President's program. Less than one-half as much is being programmed for development of seawater membranes as is being programmed for research. A balanced program would be the reverse of this trend. Since this activity is the only substantive program supported by the Administration, an effective developmental program requires substantially more in the

way of pilot plant work than the Administration has earmarked.

(3) Brackish Water Membrane Development

Adm. Program - $ 100,000
Committee Program - 1,200,000

This work is needed to support the Wellton-Mohawk project in the interest of progressive improvements in recovery rates and reduction in the volume of the reject brine stream. This is a companion item to the $800,000 item in Category I -- and is strongly supported by the Committee of Fourteen. The work to be done consists of fabrication and testing of membrane assemblies at the pilot plant level.

(4) Freezing Process Development

Adm. Program - $ --------
Committee Program - 600,000

This funding is necessary to support a full year of operation of the AVCO Pilotplant at Wrightsville Beach and to design a pilot plant for the eutectic freezing process.

(5) Distillation Process Development

Adm. Program - $ --------
Committee Program - 200,000

These funds would be used to finance a design and feasibility study of enlarging the VTE-MSF Module in Orange County to a full-scale 15 mgd plant.

(6) Geothermal Process Development

Adm. Program - $ --------
Committee Program - 500,000

These funds would be used to continue operation of two geothermal pilot plants at the Holtville, California, Test Facility where work is being done on the desalting of geothermal brines as a source of useable water.

(7) Cooperative Development

Adm. Program - $ --------
Committee Program - 300,000

This amount will be used to fund ongoing

cooperative studies with other water resource agencies such as:

cooperative ion exchange pretreatment processes with the Metropolitan Water District of Southern California and the Orange County Water District;

the National Water Assessment with the Water Resources Council;

brine disposal studies with EPA; and

studies with States on the applicability of desalting technology to State water problems.

III. TEST BEDS AND TEST FACILITIES:

President's Program	$ 1,050,000
(Carryover)	(174,000)
(New Money)	(876,000)
Committee Increase	1,750,000
Committee Program	2,800,000

Breakdown of Test Facilities Category

(1) Fountain Valley, California Test Facility

Adm. Program -	$ 300,000
Committee Program -	400,000

The Administration program will not support the module operation for an entire year. The Committee increase will enable the accumulation of a full year of data on the VTE-MSF.

(2) Roswell, New Mexico, Test Facility

Adm. Program -	$ 500,000
Committee Program -	1,000,000

The Committee increase will enable the Roswell Facility to operate for the complete year and to handle the expanded program of brackish water membrane component testing as contemplated by Category II.

(3) Wrightsville Beach, North Carolina

Adm. Program -	$ 250,000
Committee Program -	800,000

The Committee increase will enable the Wrightsville Beach Test Facility to handle the full program of developmental testing contemplated for seawater membranes and

freezing process pilot plants.

(4) Yuma, Arizona, Test Facility

Adm. Program - $ -------
Committee Program - 300,000

The Administration program would not have provided for at-site testing on Wellton-Mohawk brines required in support of the Mexican Salinity Control Program.

(5) Geothermal Testing

Adm. Program - $ ---------
Committee Program - 300,000

The Committee increase will furnish support for continued developmental testing of geothermal brines from the test well of the Bureau of Reclamation near Holtville, California.

IV. MODULES:

President's Program.....$ 588,000
(Carryover)..... (-------
(New Money)..... (588,000)

Committee Increase..... 312,000
Committee Program..... 900,000

Breakdown of Modules Expense

(1) Fountain Valley, California

Adm. Program - $ 588,000
Committee Program - 900,000

The Committee increase will enable the VTE-NSF module to operate for the entire fiscal year.

V. ADMINISTRATION AND COORDINATION:

President's Program .....$ 1,065,000
Committee Program..... 2,000,000

This increase will enable the program to operate at the level of 73 persons as compared to 29 at the level of funding established for the President's program. This is the number of positions required to conduct the Committee program.

***

PROPOSED STAFF AMENDMENT - HR 13221 - OSW Approp

AMENDMENT:

Page 1, line 3, strike all after the enacting clause and substitute the following:

"That there is authorized to be appropriated to carry out the provisions of the Saline Water Conversion Act of 1971 (85 Stat. 159) during fiscal year 1975, the sum of $13,910,000 to remain available until expended as follows:

(1) Research expense, not more than $2,300,000;

(2) Development expense, not more than $6,084,000;

(3) Design, construction, acquisition, modification, operation, and maintenance of saline water conversion test beds and test facilities, not more than $2,626,000;

(4) Design, construction, acquisition, modification, operation, and maintenance of saline water conversion modules, not more than $900,000; and

(5) Administration and coordination, not more than $2,000,000.

(b) Expenditures and obligations under paragraphs (1), (2), (3), and (4) of subsection (a) of this section may be increased by not more than 10 per centum and expenditures and obligations under paragraph (5) of subsection (a) of this section may be increased by not more than 2 per centum, if any such increase under any para-

graph is accompanied by an equal decrease in expenditures and obligations under one or more of the other paragraphs.

SEC. 2. In addition to the sums authorized to be appropriated by Section 1 of this Act there are also authorized to be appropriated such additional sums or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law or other nondiscretionary costs."

***

APR 17 1974

ATTACHMENT C

$15.75 Million Alternative
FY 1975 SALINE WATER RESEARCH PROGRAM

Introduction

The research program is geared to the solution of immediate and specific water problems. The program is aimed at obtaining short-term results on high priority items under existing legislative authority. The major thrusts are (a) desalination of sea water by means of membrane, freezing, and other promising processes, (b) the development of new processes and relevant basic data, (c) advancing brackish water desalting technology to increase out-put and lower capital and operating costs, (d) to pursue the effect of desalting methods on geothermal brines, (e) continue on-going cooperative studies with other water resource agencies, and (f) the transfer of desalting technology to the effective treatment of waste effluents. A secondary effort involves the application of separation methods for elimination of organic salts, and other chemical contaminants.

Administration and Coordination - $2,000,000

Administration and coordination activities authorized under the Saline Water Conversion Act of 1971. Required to support the program level ($15,750,000) and staffing level (73 persons) contained in the Committee Program for FY 1975.

Fundamental Research - $800,000

Basic and exploratory water studies and limited investigations into new desalting processes. Research in properties of water, transport of ions in water, the mechanisms of flux and rejection, and laboratory scale work on new separation processes.

Seawater Membranes - $4,200,000

Research $2,000,000 - Continue laboratory testing and evaluation of several specific non-cellulosic and improved composite membranes for application in spiral wound, hollow fine fiber or tubular form, and the design and/or development of a universal seawater pretreatment system.

Applied Research $1,500,000 - Further refinement of one- and two-pass systems for testing of scaled-up units (as opposed to bench-scale models) whose operation will establish preliminary process economics with improved membranes in order to reduce cost of seawater membrane desalting systems. Associated projects include: component development, primarily in instrumentation and controls, and pretreatment investigations.

Facility Support $700,000 - Full operation and maintenance of the Wrightsville Beach, North Carolina, test and evaluation facility to provide logistic support of seawater membrane operational development evaluation. Costs include: facility management, laboratory services, utilities, maintenance, chemicals, and spare parts.

Freezing, Materials and New Processes - $1,350,000

Research $650,000 - Continue laboratory testing and evaluation of eutectic and secondary refrigerant freezing and hydrate processes, thin channel freezing, and modified crystallization processes.

Continue operation of the Materials Test Center at Freeport, Texas.

Applied Research $700,000 (Includes $100,000 freezing share of Wrightsville Beach Test Facility) - Continue operation and testing of the secondary refrigerant test assembly at the Wrightsville Beach, North Carolina, Test Facility.

Brackish Water Membranes - $3,300,000

Applied research through studies and laboratory development of new and improved membranes for increased flux, recovery, and membrane life ($800,000).

Continue test and evaluation of low pressure membrane technology and high recovery membrane systems; continued operation and modification of test units that now have capacities up to 90,000 gpd, and optimize the various components of a multi-stage system that will recover up to 95 percent of the feed water as fresh water to reduce capital and operating costs. Scientific data from this effort would be of considerable importance to the Colorado River International Salinity Control Project in terms of reduced capital and operating costs, as well as increased recovery of brackish water as usable water ($1,200,000).

Full operation and maintenance of the Roswell, New Mexico, facility to provide support for the expanded brackish water membrane component testing ($1,000,000).

Operation and maintenance of the Yuma, Arizona, facility to provide 9-months preconstruction on-site testing of Wellton-Mohawk waters in support of the Colorado River International Salinity Control Project ($300,000).

VTE/MSF (OCWD) Project - $1,300,000

Full year operation and maintenance of the Fountain Valley, California, facility to provide logistic support of the Vertical Tube Evaporator/Multi-Stage Flash Module ($400,000).

Full year management, operation, and maintenance of the VTE/MSF (OCWD) Module at Fountain Valley, California, to provide the necessary operational evaluation of this $4.5 million plant ($900,000).

Geothermal - $300,000

Research on saline water conversion methods for application of such methods and technology on geothermal brines.

Cooperative Studies - $200,000

Continue on-going cooperative studies with other water resource agencies including: pretreatment processes with the Metropolitan Water District of Southern California, and the Orange County, California, Water District; national water assessment with the Water Resources Council; brine disposal studies with the Environmental Protection Agency, and studies with States on the applicability of desalting technology to State water problems.

Waste Water - $2,300,000

Basic waste water studies, including municipal and industrial waste streams, integration of biological, chemical and physical processes so that good quality water can be provided, and so that waste waters do not degrade the environment. Evaluation of instrumentation and methods for detecting, monitoring and eliminating or controlling heavy metals, trace elements and other toxic materials ($950,000).

The agreement between the Office of Saline Water and the Environmental Protection Agency calls for a joint program of research and development for the application of desalting technology to solve the critical water reuse problem. EPA would carry out the demonstration testing phase of the program. Therefore, the program would initiate testing and modification of desalting units on municipal and selected industrial wastes to develop systems which have selected rejection for specific contaminants.

Further investigations, testing, and development of desalting technology for application in energy development programs. This effort includes projects to provide satisfactory quality water for energy production processes as well as in assuring that waste streams do not cause environmental degradation ($1,350,000).

SEAWATER DISTILLATION PROCESSES

Mr. YATES. I notice your statement in your justification, and I quote from page 22:

Seawater distillation processes had reached commercial application in the marketplaces throughout the world.

Is that true? Have you actually reached a point in the distillation of seawater that is economic?

Mr. O'MEARA. Yes, Mr. Yates, you may be surprised to learn there are about 800 desalting plants in operation around the world providing about 350 million gallons of water a day.

Mr. YATES. What is the price?

Mr. O'MEARA. The price will range, depending on the size of the plant and cost of fuel at a given location, all the way from 15 cents a thousand gallons on up to $2.50 thousand gallons. I want to come back and explain that 15-cent price.

We assisted the Government of Saudi Arabia in the construction of a plant at Jidda. This is a 5-million-gallon-per-day desalting plant. If we had built that same plant in the United States and used our economic standards to determine the cost of that water, it would have been around 65 cents to 70 cents a thousand gallons. The reason it comes out to be 15 cents is that in Saudi Arabia, since they have no rivers to dam and no multipurpose projects and their discount rate is different than that discussed this morning, the King has made funds available for that plant in a way that there is no charge for capital.

Mr. YATES. I was just going to say can't we trade the water for some oil?

Mr. O'MEARA. He has made the price of fuel just 5 cents a million Btu for that plant. He thus decided on a price of 15 cents a thousand gallons for the water.

Mr. YATES. Is the United States the leader in this process in the world?

Mr. O'MEARA. Yes, sir, we have been the leader in the development of the distillation technology. We also invented the membrane processes and advanced them beyond anyone in the world.

ISRAEL'S MEMBRANE WORK

Mr. YATES. I was under the impression that Israel was doing good work in this field.

Mr. O'MEARA. They have done good work in this field.

Mr. YATES. As a matter of fact, we are making contributions to that process in Israel.

Mr. O'MEARA. I mentioned earlier that if you compare national budgets the Israelis have put a far greater percentage of their national budget into desalting processes than the U.S. Government.

Mr. YATES. Do they use the same system we use?

Mr. O'MEARA. But based on the total dollars available to them they have a very small program compared to ours. I will tell you that every report that comes out of our office is picked up immediately by the Israel Embassy in quantity, and they are distributed widely in Israel.

Mr. YATES. Do they use the same process we do?

Mr. O'MEARA. Yes. They have done some development work on their own. They have gone down some different avenues than we have and while they have been different, it boils down to engineering trade-offs. There is nothing that has come out of the Israeli program that has been a remarkable breakthrough or anything different than we have.

Mr. YATES. Where else are they working on this?

FOREIGN DESALTING WORK

Mr. O'MEARA. The Japanese have a very aggressive program, but in addition, virtually all of the developed countries are working in this field. By that I mean England, France, Italy, Germany, Russia, Japan, and Israel.

Mr. YATES. And we are still the leader?

Mr. O'MEARA. Yes, sir, I believe we are.

Mrs. HANSEN. We won't be the leader long considering these reductions. This is what disturbs the committee.

Mr. O'MEARA. Madam Chairman, I can't read Spanish but looking at this Mexican report on their desalting activities I would guess that next year's program in Mexico will probably be larger than ours.

Mr. YATES. Thank you.

Mrs. HANSEN. Thank you very much, Mr. O'Meara.

MADAM CHAIRMAN

Mr. O'MEARA. Madam Chairman, you mentioned in the hearings that you have always supported this program and we are fully aware of that and we appreciate that very much. Now we find that we have probably come to our last hearing before what we honestly consider to be one of the great leaders of this subcommittee.

Mrs. HANSEN. Thank you very much.

Mr. O'MEARA. We want to thank you for all your consideration in the past, and wish you good luck in the future. Since your election to the 86th Congress back in November of 1960, you have been more than a representative of your district: you have been a fantastic addition to the traditions of the U.S. Congress and I only wish that I had a better choice of words to say how grateful we are. We wish you all the best in the years ahead.

Mrs. HANSEN. Thank you very much.

Mr. O'MEARA. I can assure you, it has been a pleasure to do business with you.

Mrs. HANSEN. I am looking forward with great anticipation to doing the things I want to do for a change.

Mr. O'MEARA. If we can have our way, they will never get to divert your Columbia River, because it will be cheaper to desalt.

Mrs. HANSEN. That is correct.

Thank you again, Mr. O'Meara. I also want to thank the members of your staff.

LIST OF WITNESSES

	Page
Baker, Richard	632
Banta, H. E	53
Berklund, Curt	412
Bettenberg, W. D	412, 767, 848
Bingham, T. G	746
Campbell, J. P	53
Campbell, W. A	53
Crawford, J. W	640
Day, J. M	640
Deinema, J. W	53
Dickerman, M. B	53
Edwards, Frank	412
Gilbert, A. M	1, 53
Hale, Jubal	632
Hall, W. A	767
Hartman, Dr. H. L	632
Hastey, Edward	412
Horton, J. O	412, 767
Housley, R. M	53
Jorgensen, J. C	767
Josephson, J. P	746
Koop, F. W	767
Long, R. W	53
McGuire, J. R	53
McRorey, R. P	53
Nelson, A. P	640
O'Meara, J. W	848
Resler, R. A	1, 53
Schlick, D. P	640
Thornton, P. L	1, 53
Townsend, C. H	848
Turcott, George	412
Vetterick, Paul	412
Wiles, F. M	640
Youngs, R. L	1, 53

INDEX

B

	Page
Bureau of Land Management	412–632
Administrative provisions	630
Aircraft	630
Alaska Native Claims Settlements Act	414
Construction and maintenance	576
Budgetary decreases	593
Building construction	593
Cost overruns	592
Maintenance programs	594
Pollution abatement progress	593
Recreation facility construction	593
Justification material	434
Management of lands and resources	451
Alaska:	
Acreage managed by	420
Alaska Native Claims Settlement program	566
Cadastral surveys in	566
Other Alaskan land and mineral applications	566
Pipeline program	551
Receipts	449
Survey schedule	571
Allotment management plan progress	567
Appropriations compared to receipts	418
California desert management	559
Cleanup of land program	554
Clearcutting practices	433, 434
Coal leasing	538
Incentives for developing	541
Coal program, coordination with Geological Survey	538
Consumption of world's resources	413
Costs per acre	424
Energy development, interagency coordination in	550
Energy programs	414, 420, 421, 422
Energy related work	548
Conservation and research	537
Monopolistic tendencies in energy production	545
Environmental analysis program	536
Environmental considerations and protective measures	421
Firefighting and rehabilitation	572
Forest funding adjustments	446
Forestry program, fund adjustments in	559
Funding for natural resources	531
General administration	576
Geothermal filings, noncompetitive	547
Geothermal leasing	421
Geothermal rentals	425
Geothermal steam, oil company interest in	544
Geothermal steam potential	548
Impoundment of funds	562
Indian tribes, financial assistance for	555
Investment requirements for non-Federal lands	570
Investments in resources, domestic	424
Log export implementation	432

Bureau of Land Management—Continued
Management of lands resources—Continued Page
Mineral leasing 426
Fair market value 426
Mineral rights on railroad lands 542
Noncompetitive rentals 425
Office of Water Resources Research 551
Offroad vehicle management 553
Oil and gas development:
Geological Survey study on capped wells 428
Incentives for 426, 427, 429
Lease development 429
Production from public lands 428
Oil shale leases 601
Oil spills 534
Oregon and California roads 447
Oregon and California timber prices 446
Outer Continental Shelf:
Adequacy of program request 529
Atlantic Ocean activities 533
Contracts for marine studies 531
Coral reef management 534
Environmental assessment teams 532
Foreign country leasing methods 526
Leasing goal 451
Leasing provisions 525
Marine environmental impacts 535
Receipts 449
Revenues compared to production value 528
Royalty bidding 525, 527
Secondary considerations of leasing 534
Personnel, need for 431
Protection of cultural values 555
Recreation, development, and operation of recreation facilities 626
Recreation use of lands 414
Rehabilitation and protection program 549
Range improvement in Four Corners area 570
Range program, accelerated 567
Receipts 418, 449
Resources on lands of 418
Rivers and trails program 557
Surface rehabilitation and protection 543
Timber cut on BLM lands, annual 433
Upland energy minerals management 537, 538
Utah oil shale land selections 431
Utah Rangeland Development Committee report 568
Wild horse and burro program 563
Wood utilization from timber sales 433
Oregon and California grant lands 602
Organic Act, need for 415
Public Land Law Review Commission, implementation of findings 430
Public Lands Development Roads and Trails 595
Level of 1975 program 600
Range improvements (indefinite) 620
Allotment management plans 624
Grazing fees 624
Revenue and fund losses 626
Statement of the Assistant Secretary 413
Statement of the Director 415

F

Federal Metal and Nonmetal Mine Safety Board of Review 632–640
Area of Board's responsibilities 639
Basis for budget estimate 638, 640
Forest Service 1, 53–411
Acquisition of lands for Cache National Forest 395

Forest Service—Continued	Page
Acquisition of lands for national forest, special act	378
Acquisition of lands for Superior National Forest	394
Acquisition of lands for Uinta National Forest	393
Acquisition of lands for Wasatch National Forest	394
Acquisition of lands to complete land exchanges	378
Administrative provisions	396
Aircraft	398
Alaska, export policy in	125
Alaska forests	87
Arizona watershed program	128
Assistance to States for tree planting	381
Blanchard Springs caverns	130
Brush disposal, expenses for	401
Chippable material salvage of	90
Clarke-McNary Act	112
Coal deposits	70
Coal mining	122
Coal resources	132
Construction and land acquisition	321
Alaska communciations system	362
Allegheny Reservoir, Pa	361
Arcata Laboratory	338
Auburn Laboratory	339
Black River Harbor, Mich	358
Blanchard Spring	343
Boundary Waters Canoe Area	362
Brasstown Bald, Ga	358
Cave Run Reservoir, Ky	342
Communications systems	362
Construction cost estimates	337
Construction for fire, administration, etc	361–363
Contributions by Job Corps	363
Corvallis Laboratory	338, 364
Council Bluffs	340
Day Lake, Wis	359
Double Lake Campground, Tex	356
Flaming Gorge NRA Utah/Wyo	360
Fund reduction	343
Huron-Manistee, Mich	357
Indian Boundary Amphitheater, Tenn	357
Interpretive Facilities, Alaska	359
Jackson Hole, Wyo	357
Lake Celine, Ind	361
Land acquisition	365
Laurel River Reservoir	342
Lava Lands	342
Libby Reservoir, Mont	359
Mount Hood, Oreg., and Wenatchee, Wash	356
Mount Rogers National Recreation Area	341
North Cascades	343
Pollution abatement	354
Princess Campground, Calif	358
Provo, Utah, Laboratory	339
Rampart Reservoir, Colo	359
Recreation—public use areas	355
Reprograming of construction projects	337
Rhinelander, headhouse-greenhouse at	339
Sawtooth National Recreation area, Idaho	355
Spruce Knob-Seneca Rocks NRA, W. Va	358
Stampede Reservoir, Calif	360
Sycamore Flat Campground, North Carolina	356
Timberline Lodge	364
Toledo Bend Reservoir	361
Turquoise Reservoir, Colo	359
Unobligated balances	345

Forest Service—Continued
Construction and land acquisition—Ccontinued Page
Use of recreation areas 344
White Mountain National Forest, N.H 357
Wynoochee Reservoir, Wash 360
Construction and operation of recreation facilities 385
Cooperative range improvements 321
Cooperative work, Forest Service (trust fund) 408
Council Bluffs, impoundment of funds for 118
Court decisions 101
Court suits 62
Eagle Lake, impoundment of funds for 118
Energy shortage and environmental considerations 57
Environmental impact statements 147
Foreign ownership of land 123
Forest fire prevention 402
Forest fire protection 110
Timber destroyed by fire 118
Forest land management 125, 159–263
Air tanker service 258
Balance of trade payments 218
Bicentennial and forestry centennial 254
Cooperative law enforcement 263
Exports, expansion of 218
Exports, restriction on 219
Fighting forest fires 258
Helicopters 258
Forest fire protection 251
Fire as a tool 253
Modular airborne firefighting system 251
Rental of space from GSA 252
Forest insect and disease control 259
Flexibility of funds 260
Genetic breakthroughs 228
Geometronics program 258
Harvest of national forest timber 212, 215
High supply alternative plan 220
Housing starts 210
Land classification 58, 256
Land exchanges 257
Spirit Lake 257
Land line location 257
Land status program 257
Litter cleanup 213
Management costs 120
Minerals management 77, 242
Coal lease 244
Mining 249
Project SEAM 242
Newsprint 230
Rangeland management 234
Funds for range management 239
Report of Utah Rangeland Development Committee 237
Unsatisfactory rangeland 239
Recreational use 231
Blanchard Springs 233
Concessions 231
Dispersed recreation use 232
Mount Hood Lodge 232
Skiers 231
Visitors 233
Reforestation and stand improvement 216, 229
Rental costs 231
Rental of space from GSA 252, 254
Research, decrease in 228
Sales administration and management 210

Forest Service—Continued
Forest land management—Continued Page
Soil and water management 240, 241
Watershed restoration improvement 241
Soil resource inventories 242
Timber inventories 214
Timber Line Lodge 295
Timber management program, accelerated 215
Timber sales program 214, 228
Timber sales versus timber harvest 212
Vandalism 213
Wildlife and fish habitat management 234
Wood fiber shortage 217
Forest protection and utilization 60, 148, 391
Research decreases 157
Forest roads 103
Forest research 263
Arizona Research Ranch 130
Auburn Research Laboratory 134
Berea, Ky 131
Delaware Laboratory 133
Durham, N.H 131
Falcon 295
Fire and atmospheric sciences research 289
Fire retardants on shingles 299
Forest economics and marketing 297
Particle board 297, 299
Forest engineering 293
Forest insects and disease 290
Forest product utilization 290
Forest recreation 289
Forest resources 294
Funds for 287, 288
Hardwood research 286
Insect and disease research 112
Insect problems 112
Research on use of chemicals 114
Supplement funds for insect control 114
Intermountain Laboratory 132
Madison Laboratory 290
Pennsylvania, research in 292
Project SEAM 287
Rhinelander 134
Seattle Laboratory 296
Silviculture research at Olympia and Corvallis 296
Timber and timber management research 286
Tussock moth 296
Wildlife, range, and fish habitat 289
Forest residues 92
Forest roads and trails 365
Bicentennial trail program 371
Big versus small operators 108
Boulder-Grover Road 127
Budget for fiscal year 1975 105
Engineering capacity 372
Federal road construction 105
Funds needed for road construction 108
Multipurpose roads 376
Recreation and all-purpose roads 104, 377
Road construction 373
Road engineering requirements 371
Road standards 374
Roadbuilding by timber operators 106
Roadless area studies 127
Roads closed 375
Supplementing timber purchaser construction 375
Timber purchaser-built roads 104, 374
Trail construction 371
Wilderness Administration 128

Forest Service—Continued — Page

- Forestry incentives program — 88, 122
- Free firewood program — 126
- Geothermal areas — 75
- Grazing fees — 115
- Helicopter sales — 109
- Impoundment of funds — 118
- Job Corps Center — 148
- Justification material — 134, 390
- Landowners, responsibilities of — 121
- Livestock grazing on national forest lands — 118
- Log export limitation — 123
- Log export prohibition — 411
- Long-range plan: "Environmental program for the future" — 1-52, 57, 62
  - Allocation of school sections — 11
  - Balance in program — 12
  - Budget for evolved plan — 19
  - Budget constraints — 43
  - Changes in direction — 20
  - Coalbeds — 73
  - Committee directive — 1
  - Cost estimates — 18
  - Decisionmaking process — 25
  - Desirable system to meet economic needs — 36
  - Distribution of — 63
  - Effective date of plan — 17
  - Energy shortages versus gluts — 12
  - Forest incentive program — 27
  - Forestation and tree improvement — 45
  - Forestry programs and major policy issues — 25
  - Forestry research — 46
  - Funding levels, alternative — 34
  - General economic assumptions — 26
  - Grazing lands — 24
  - High level plan — 33
  - Highlights of plan — 24
  - Human resources development — 48
  - Impact of Forest Service on forest industry — 35
  - Input levels — 49
  - Insects and disease research — 47
  - Inventory of minerals — 51
  - Land use planning — 6, 9
  - Management:
    - Assumptions — 26
    - Quality — 16
    - Range resource — 40
  - Mineral leases — 30, 51
  - Mineral legislation — 9
  - Minerals area management — 64
  - Monongahela court case — 37
  - Multiuse — 34
  - National versus State and local input — 8, 10
  - Ongoing process — 5
  - Population growth and economic demands — 25
  - Priorities — 19, 21
  - Program alternatives, major — 32
  - Project SEAM — 6
  - Public hearings, cost of — 64
  - Public involvement in plan — 5, 7, 41, 48
  - Range revegetation — 40
  - Recreation and wilderness — 38
    - Timberline lodge — 39
    - Wilderness management costs — 43
  - Redraft of plan — 48
  - Reforestation needs — 18

Forest Service—Continued

Long-range plan—Continued — Page

- Report, timing of — 15
- Resources management — 16
- Revised draft — 50
- State and private forestry — 45
- State cooperation — 29
- Strip mining — 29, 31, 49, 50
- Supply level, moderate — 33
- Timber imports — 36
- Timber management — 42
- Wildlife habitat management — 38
- Wood fiber, losses — 22

Methanol production — 94
Metallic ore deposit, major — 66
Mineral leasing and surface resource protection — 83
Mineral material disposal — 84
Mineral patent applications — 79
Mineral reservations and rights outstanding, surface management of — 81
Minerals on national forest, worth of — 77
Mining law compliance and validity determinations — 80
National forest areas — 117
National forest grasslands — 64
Oil and gas fields — 68
Oil shale lands — 73
Overcuts — 100
New York Times wood consumption — 252
Payment to Minnesota (Cook, Lake, and St. Louis Counties) — 403
Payments to counties, national grasslands — 404
Payments to school funds, Arizona and New Mexico — 404
Payments to States — 147
Payments to States, National Forests Fund — 405
Pollution abatement — 116
Project SEAM — 77
Range program — 110

- Accelerated — 59

Recreation — 85

- Fee charges — 85
  - Legislation on camping fees — 87
- Gasoline shortages, impact on recreation — 85
- Mount Whitney — 288

Reduction in funds by the Department — 133
Reforestation — 95

- General Accounting Office report on — 119

Regional boundaries, realinement of — 117
Rental costs from GSA — 120
Restoration of forest lands and improvements — 403
Roads and trails for States, National Forests Fund — 400
State and Private Forestry Cooperation — 300

- Cooperation in forest fire control — 315
- Cooperation in forest management and processing — 320
- Cooperation in forest tree planting — 319
- General forestry assistance — 320

Statement of the Chief of Forest Service — 55
Statement of the Under Secretary of Agriculture — 53
Surface resource protection and management of mining claims — 82
Timber activities — 58, 88
Timber mortality — 109
Timber receipts — 115
Timber survey cycles — 126
Utilization of timber, maximum — 89
Utilization of wood research — 95
Vehicles, passenger carrying — 396
Water on forest lands supplied population — 118

Forest Service—Continued Page
Wilderness and roadless areas 85
Anniversary of wilderness classification 87
Klamath Indian lands 87
Working capital fund 406
Youth Conservation Corps 115, 387

J

Joint Federal-State Land Use Planning Commission for Alaska 746–767
Access for public purposes 751, 753
Assistance to Alaska natives 750, 753
Bristol Bay, closure of 752
Consultant contracts 763
Federal area designations 748
Financing, state share of 763
Foreign fishing impact on Alaska fisheries 751
Inventory and planning policy development 749
Justification material 754
Meeting 760
Membership of Commission 759
Position increase 761
Problems, major 759
Procedures 765
Recommendations to Congress and Federal and State agencies 750
Rental of space from GSA 760
Resource planning team 761
Surface transportation systems 753
Time schedule for Commission work 759
Unobligated balance 760
Videotapes 764

M

Mining Enforcement and Safety Administration 640–745
Administrative Procedures Act 641
Administrative provisions 741
Assessments 656, 720, 742, 743, 744
Coal mine health and safety 656, 668
Assessors 742
Assistance to small operators 739
Coal mine facilities 667, 684
Coal waste embankments 732, 734
Closure of coal mines for noncompliance 736, 738
Decline in coal production 687
Hazardous dam conditions 733
Inspections 720, 721, 722
Modification of regulations for smaller mines 737
Safety record 684
Union program on accident prevention 685
Education and training 657, 728
Federal Metal and Nonmetallic Mine Safety Act 643, 744
Justification material 689
Management changes 689
Metal and nonmetal mine health and safety 657, 688
Front-end loader accidents 725
Inspections 722, 728
Review of standards 726
State agreements 726
Statistics for 724
Objectives of 667
Program administration 741
Secretarial order establishing 658
Statement of the Administrator 656
Technical support 657, 730, 741
Personnel statistics 742

O

Page

Office of Water Resources Research 767–848
Accomplishments 825
Administration 839
Annual allotment program 825
Assistance to States 828
Budget for fiscal year 1975 784
Impact of reduction in 831, 839
California water programs 790
Cooperative studies 786
Coordination and dissemination 829
Energy-related research 767, 844
Environmental impact statements 827
Foreign assistance 837
Fund transfers 830
Gov. Calvin Rampton, statement of 842
Great Lakes work 787
Indians, assistance to 835
Justification material 792
Matching grants program 834
National Water Commission 845
New institutes 832
Offshore drilling 827
Oil shale development 825
Program effectiveness 784
Programmatic structure 783
Regional areas 782
Rental of space from GSA 784
Research coordination 787
Research cost effectiveness 789
Research management 782
Research priorities 834, 838
Research staff 841
Retrieval of research results 789
Scientific Information Center 838
State institutes, impact of budget reduction on 833
State problems and funding 829
Studies, use of 788
Training program 844
Virgin Islands 839
Water research 836
Weather management 836

S

Saline water research 848–904
Accomplishments 850, 856
Administration and coordination 887
Arab water problems 883
Authorization restrictions 883
Brackish water desalting development 886
Colorado River international salinity control project 853, 875
Cooperation with other agencies 859
Cutback in research, impact of 881, 882
Desalted water, cost of 857, 877
Desalting activity in Israel 877, 903
Desalting developments, availability of 855
Desalting program in Japan 854, 856
Dismantling activities 851
Foreign desalting work 904
Fountain Valley module 852
Fundamental research 879
Funding of programs 855
Funding proposed by the committee 88
Future of 857
Geothermal energy 852

Saline water research—Continued Page
Joint United States-Israel project 885
Justification material 860
Materials test center 859
Patents, private or public 878
Priorities of the Office of Management and Budget 884
Redirection of programs 876
Reprograming of funds 875
Saline water modules 887
Saline water test beds and facilities 887
Seawater-desalting research 880
Seawater distillation processes 903
Side benefits from research 886
Staffing 850, 858, 879
Unobligated balances 878
Virgin Islands water supply 885
Water requirements for energy 854
Wrightsville Beach facility 852, 886

○