



159659

Resources, Community, and
Economic Development Division

B-278756

December 18, 1997

The Honorable Don Young
Chairman, Committee on Resources
House of Representatives

The Honorable Helen Chenoweth
Chairman, Subcommittee on Forests
and Forest Health
Committee on Resources
House of Representatives

Subject: Federal Lands: Information About Land Management Agencies'
Wildfire Preparedness Activities

Each year, wildfires on federal lands consume millions of acres of forests. Because wildfire preparedness activities can have a tremendous effect on the number and severity of wildfires, you asked about these activities at five federal land management agencies: the Forest Service within the Department of Agriculture and the Bureau of Land Management, the National Park Service, the Bureau of Indian Affairs, and the Fish and Wildlife Service within the Department of the Interior. Specifically, this report provides information on (1) the amount of money the land management agencies expended on federal wildfire preparedness activities during fiscal years 1992 through 1996; (2) the amount that the federal agencies expended for state and local wildfire preparedness activities; (3) the amount of equipment and personnel the federal agencies loaned to state and local entities for wildfire preparedness activities; and (4) the process the federal agencies used to formulate budget requests for wildfire preparedness activities.

Wildfire preparedness involves the land management agencies' capabilities to provide safe, cost-effective fire management programs through training, planning, staffing, and providing equipment. Preparedness also includes programs to reduce hazardous fuels (flammable materials on the forest floor, such as fallen trees and dry underbrush). Wildfire preparedness activities

159659

require hiring and training personnel, purchasing and contracting for equipment and supplies, and preventing situations that may lead to wildfires. In short, these activities are ones undertaken before the actual outset of a wildfire.

In summary, during fiscal years 1992 through 1996, the federal land management agencies (1) expended about \$1.9 billion on wildfire preparedness activities; (2) provided about \$82.3 million in grants to state and local firefighting organizations; (3) loaned states federal excess property valued at about \$651 million; and (4) used a computerized model based on historical wildfire costs to formulate budget requests for wildfire preparedness activities. Detailed information on these activities is presented in enclosures I through IV.

The information presented was provided to us by the land management agencies for fiscal years 1992 through 1996. As agreed with your offices, we obtained financial data for the most recent 5-year period possible. During our work, fiscal year 1997 data were unavailable.

We performed our work from July through November 1997 in accordance with generally accepted government auditing standards. In order to respond to your request, we obtained financial and other data from the headquarters office of the Forest Service and from the Department of the Interior's National Interagency Fire Center in Boise, Idaho.¹ The financial information that we obtained from the Interior agencies was national in scope, while the data provided by the Forest Service were for individual field units. We did not contact individual field offices about the financial data, but we did contact several Forest Service regional offices to obtain information about their cooperative state grant programs. We did not independently verify the accuracy of the data we gathered.

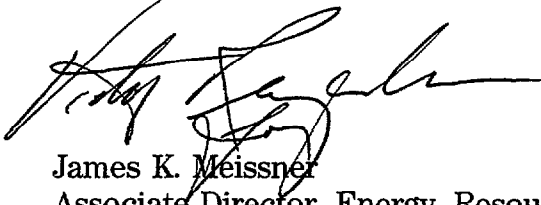
We provided copies of a draft of this report to the Department of the Interior, the Bureau of Land Management, the National Park Service, the Bureau of Indian Affairs, the Fish and Wildlife Service, and the Forest Service. Interior and its agencies concurred with the factual content and provided technical clarifications, which we incorporated into the report. The Forest Service did not have any comments on the draft report.

We are sending copies of this report to the Secretaries of Agriculture and the Interior as well as to the Chief of the Forest Service and the Directors of the Bureau of Land Management, National Park Service, Bureau of Indian Affairs,

¹The Bureau of Land Management maintains and operates the National Interagency Fire Center in cooperation with the Forest Service and the other Department of the Interior agencies. The day-to-day fire management activities of the Interior agencies are conducted from the Center.

B-278756

and Fish and Wildlife Service. We will make copies available to other interested parties upon request. Major contributors to this report were Linda Harmon and John Kalmar, Jr. Please call me on (206) 287-4810 if you or your staff have any questions.

A handwritten signature in black ink, appearing to read "James K. Meissner". The signature is fluid and cursive, with a long horizontal stroke at the end.

James K. Meissner
Associate Director, Energy, Resources,
and Science Issues

Enclosures - 4

AMOUNT OF FUNDS EXPENDED BY THE LAND MANAGEMENT AGENCIES ON
FEDERAL WILDFIRE PREPAREDNESS ACTIVITIES

Table I.1 shows, for each of the land management agencies, by fiscal year, their total expenditures on federal wildfire preparedness activities. Table I.2 shows, by specific category, what activities were funded by the land management agencies. Tables I.3 through I.9 show how much the agencies expended by category, by fiscal year.

Table I.1: Land Management Agencies' Wildfire Preparedness Expenditures, Fiscal Years 1992 Through 1996

Dollars in thousands

Agency	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Forest Service	\$188,525	\$247,678	\$260,200	\$287,018	\$287,906	\$1,271,327
Bureau of Land Management	65,305	68,707	61,493	66,998	66,880	329,383
National Park Service	13,927	15,427	15,344	13,559	19,465	77,722
Bureau of Indian Affairs	25,317	24,230	25,112	24,133	25,704	124,496
Fish and Wildlife Service	12,554	15,244	14,242	13,745	15,320	71,105
Total^a	\$305,628	\$371,286	\$376,391	\$405,453	\$415,275	\$1,874,033

^aThese totals do not include about \$82 million in grants to states for wildfire preparedness activities, which are discussed in enclosure II.

Table I.2: Land Management Agencies' Wildfire Preparedness Expenditures, by Category, Fiscal Years 1992 Through 1996

Dollars in thousands

Expenditure category	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Personnel costs	\$168,518	\$218,180	\$225,104	\$240,232	\$250,674	\$1,102,708
Travel	9,309	10,872	10,827	12,954	10,347	54,309
Transportation	5,052	4,832	5,125	5,314	4,651	24,974
Rent, communications, and utilities	10,172	11,324	13,434	13,443	15,326	63,699
Services, supplies, and printing	87,608	103,211	96,127	106,709	108,703	502,358
Equipment, land, and structures	19,086	17,464	17,242	19,412	18,549	91,753
Grants and claims ^a	3,097	2,809	2,440	3,160	4,216	15,722
Other ^b	2,786	2,594	6,092	4,229	2,809	18,510
Total	\$305,628	\$371,286	\$376,391	\$405,453	\$415,275	\$1,874,033

^aThese totals do not include about \$82 million in grants to states for wildfire preparedness activities, which are discussed in enclosure II.

^bThe Forest Service had expenditures that were not reported to us by the Department of the Interior agencies. These included, among other things, contracts, loans/investments, refunds, and internal transactions. Of these expenditures, internal transactions were the largest single category and represent inter-office expenditures for any type of preparedness expenditure. Together, these expenditures represent only about 1 percent of the Forest Service's total annual expenditures for preparedness, except for fiscal year 1994 when they represented about 2 percent. Because these preparedness expenditures were relatively small in nature compared to the total, we combined them for reporting purposes.

Table I.3: Land Management Agencies' Wildfire Preparedness Expenditures for Personnel Costs, Fiscal Years 1992 Through 1996

Dollars in thousands

Agency	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Forest Service	\$109,361	\$152,554	\$158,152	\$171,806	\$179,138	\$771,011
Bureau of Land Management	35,386	40,107	40,252	40,956	42,329	199,030
Bureau of Indian Affairs	10,099	10,266	10,776	10,683	10,465	52,289
Fish and Wildlife Service	6,052	7,034	7,170	7,337	7,973	35,566
National Park Service	7,620	8,219	8,754	9,450	10,769	44,812
Total	\$168,518	\$218,180	\$225,104	\$240,232	\$250,674	\$1,102,708

Note: Personnel expenditures include salary and benefit costs for full-time employees and salary costs for part-time employees.

Table I.4: Land Management Agencies' Wildfire Preparedness Expenditures for Travel, Fiscal Years 1992 Through 1996

Dollars in thousands

Agency	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Forest Service	\$6,317	\$7,017	\$7,222	\$8,981	\$6,792	\$36,329
Bureau of Land Management	1,383	1,714	1,490	1,890	1,406	7,883
Bureau of Indian Affairs	618	414	465	492	433	2,422
Fish and Wildlife Service	558	636	610	619	572	2,995
National Park Service	433	1,091	1,040	972	1,144	4,680
Total	\$9,309	\$10,872	\$10,827	\$12,954	\$10,347	\$54,309

Note: Travel includes the costs incurred while persons are on travel status, such as per diem, cost of transportation, lodging, and rental vehicles.

Table I.5: Land Management Agencies' Wildfire Preparedness Expenditures for Transportation Costs, Fiscal Years 1992 Through 1996

Dollars in thousands

Agency	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Forest Service	\$1,440	\$1,533	\$1,740	\$2,090	\$1,772	\$8,575
Bureau of Land Management	1,809	1,868	1,842	1,759	1,340	8,618
Bureau of Indian Affairs	1,344	934	1,085	925	852	5,140
Fish and Wildlife Service	79	85	94	145	207	610
National Park Service	380	412	364	395	480	2,031
Total	\$5,052	\$4,832	\$5,125	\$5,314	\$4,651	\$24,974

Note: Transportation of things includes the rental of commercial vehicles, parcel post costs, and transportation of household goods for a change of duty station.

Table I.6: Land Management Agencies' Wildfire Preparedness Expenditures for Rents, Communications, and Utilities, Fiscal Years 1992 Through 1996

Dollars in thousands

Agency	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Forest Service	\$8,086	\$9,222	\$11,697	\$11,719	\$13,644	\$54,368
Bureau of Land Management	1,626	1,652	1,294	1,324	1,257	7,153
Bureau of Indian Affairs	293	238	261	197	216	1,205
Fish and Wildlife Service	77	124	88	129	122	540
National Park Service	90	88	94	74	87	433
Total	\$10,172	\$11,324	\$13,434	\$13,443	\$15,326	\$63,699

Note: Included in rent, communications, and utilities are charges for rent paid to the General Services Administration or commercial real estate operators, charges for telephones and other communication services, postage, computer and copier equipment rental, and utility charges.

Table I.7: Land Management Agencies' Wildfire Preparedness Expenditures for Services, Supplies, and Printing, Fiscal Years 1992 Through 1996

Dollars in thousands

Agency	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Forest Service	\$54,072	\$67,387	\$66,203	\$75,330	\$73,841	\$336,833
Bureau of Land Management	20,039	20,080	13,865	18,909	18,441	91,334
Bureau of Indian Affairs	6,986	7,638	8,847	7,568	9,075	40,114
Fish and Wildlife Service	2,620	4,063	4,108	3,453	3,886	18,130
National Park Service	3,891	4,043	3,104	1,449	3,460	15,947
Total	\$87,608	\$103,211	\$96,127	\$106,709	\$108,703	\$502,358

Note: Services, supplies, and printing include expenditures for, among other things, maintenance contracts on equipment; various contracts for airplanes and helicopters, personal services, and research; office supplies; fuel for vehicles, aircraft, and boats; and commercial printing and reproduction.

Table I.8: Land Management Agencies' Wildfire Preparedness Expenditures for Equipment, Land, and Structures, Fiscal Years 1992 Through 1996

Dollars in thousands

Agency	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Forest Service	\$6,181	\$6,986	\$8,473	\$12,570	\$9,541	\$43,751
Bureau of Land Management	5,028	3,226	2,692	2,150	2,098	15,194
Bureau of Indian Affairs	3,199	2,545	2,218	1,662	1,201	10,825
Fish and Wildlife Service	3,165	3,133	1,876	1,880	2,347	12,401
National Park Service	1,513	1,574	1,983	1,150	3,362	9,582
Total	\$19,086	\$17,464	\$17,242	\$19,412	\$18,549	\$91,753

Note: Equipment, land, and structure expenditures include capitalized and noncapitalized equipment; easements; and buildings and other structures, such as roads.

Table I.9: Land Management Agencies' Wildfire Preparedness Expenditures for Grants and Claims, Fiscal Years 1992 Through 1996

Dollars in thousands

Agency	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Forest Service	\$281	\$385	\$622	\$294	\$372	\$1,954
Bureau of Land Management	34	60	58	11	8	171
Bureau of Indian Affairs	2,778	2,195	1,460	2,606	3,462	12,501
Fish and Wildlife Service	3	169	296	181	212	861
National Park Service	1	0	4	68	162	235
Total^a	\$3,097	\$2,809	\$2,440	\$3,160	\$4,216	\$15,722

Note: Grants and claims expenditures would include cooperative agreements and insurance claims.

^aThese totals do not include about \$82 million in grants to states, which are discussed in enclosure II.

LAND MANAGEMENT AGENCIES' EXPENDITURES FOR STATE AND LOCAL WILDFIRE PREPAREDNESS ACTIVITIES

The Forest Service has two grant programs with states to provide funds for wildfire preparedness activities—Rural Fire Prevention and Control and Rural Community Fire Protection. The Department of the Interior agencies do not have a grant program similar to the Forest Service's but rely on nonreimbursable cooperative agreements between the agencies and the state and local governments for preparedness activities. Table II.1 provides information on the funding for state and local wildfire preparedness activities.

Table II.1: State and Local Wildfire Preparedness Expenditures, by Agency, Fiscal Years 1992 Through 1996

Dollars in thousands

Agency	Fiscal year					5-year total
	1992	1993	1994	1995	1996	
Bureau of Land Management ^a	\$2,798	\$1,001	\$2,400	\$2,772	\$3,112	\$12,083
Fish and Wildlife Service	271	223	232	192	67	985
Forest Service						
Rural Fire Prevention and Control	11,337	11,307	10,960	8,001	11,747	53,352
Rural Community Fire Protection	3,500	3,500	3,500	3,400	2,000	15,900
Total	\$17,906	\$16,031	\$17,092	\$14,365	\$16,926	\$82,320

^aAll costs are related to an agreement between the Bureau of Land Management and the Oregon Department of Forestry for the Oregon and California Grant Lands. Alaska, Idaho, and Montana have preparedness agreements where the Bureau of Land Management provides the service for \$350,000/year, \$17,000/year, and \$5,000/year, respectively.

Neither the Forest Service nor the Interior agencies has preparedness contracts with the states (except as noted in table II.1). Instead, the agencies use grants and nonreimbursable cooperative agreements.

The activities covered by these grants and cooperative agreements include fire prevention, environmental education, training, and developing operational procedures for fighting fires; the agencies do not charge one another for these services. Federal and state fire agencies also work cooperatively through the Wildfire Coordinating Group¹ to establish common standards on a wide variety of elements, such as position qualifications, training, incident command system, dispatching, equipment, communications, fire behavior predictions, fire weather forecast, and operational procedures.

In many parts of the country, federal, state, and local agencies with fire protection responsibilities have worked with the other agencies to determine the most effective mix of protection resources to meet their workload at the least cost. The agencies balance workloads and costs by exchanging protection responsibilities on the basis of the closest forces and optimum mixes of equipment and skills.

The federal land management agencies do not pay for the training of state and local firefighters. Rather, the federal agencies have established training committees that include state fire personnel. These committees schedule and present training courses in which each state receives a share of the training slots. State personnel may attend the national courses, but the states must bear the full cost of the participants' attendance. In the case of the Forest Service, state and local agencies use some of their grant moneys for training course participation.

The Forest Service's Grant Programs

The Forest Service administers the Rural Fire Prevention and Control and the Rural Community Fire Protection grant programs. The two programs are authorized by the Cooperative Forestry Assistance Act of 1978.² Rural Fire Prevention and Control funds are appropriated to the Forest Service, and Rural Community Fire Protection funds are appropriated to the Department of Agriculture's Rural Housing Service, which passes

¹The Wildfire Coordinating Group consists of representatives from each of the federal land management agencies and state foresters.

²The Rural Community Fire Protection program was originally authorized by the Rural Development Act of 1972. The Cooperative Forestry Assistance Act of 1978 repealed this provision of the 1972 act and authorized the Rural Community Fire Protection program under the 1978 act.

them through to the Forest Service. Both grant programs are matching programs; that is, the entities receiving the grants must match them in dollar amounts or in-kind contributions. The Forest Service's Fire and Aviation Management staff allocates the grant funds to the states through a formula that considers factors such as state acreage and acreage to be protected. The states are responsible for monitoring the grant recipients and for sending reports to the Forest Service concerning what has been accomplished under the grants.

Both the Rural Fire Prevention and Control and the Rural Community Fire Protection grant moneys were used to enhance state and local firefighting capabilities. For example, Idaho received \$250,400 in Rural Fire Prevention and Control grants in fiscal year 1996 to prepare, among other things, a statewide fire report and fund dispatchers at two dispatch centers and the state's portion of the cost of a fire retardant aircraft. Similarly, Georgia received \$405,502 in Rural Fire Prevention and Control grants that were used for, among other things, updating state, district, and county strategic fire plans; providing smoke management training to ensure that prescribed burning can continue; and training and equipping Georgia Forestry Commission personnel.

In fiscal year 1996, Idaho received \$23,500 in Rural Community Fire Protection grants. The state used these moneys for, among other things, providing personal protective fire safety equipment to fire districts and training personnel in structural and wildland fire control techniques. Likewise, Georgia received \$22,954 in Rural Community Fire Protection grants to, among other things, conduct 10 Wildland/Urban Interface Fire courses and provide a Rural Fire Protection Basic course to at least 14 local fire departments.

AMOUNT AND TYPES OF EQUIPMENT LOANED TO STATE AND LOCAL ENTITIES
FOR WILDFIRE PREPAREDNESS

Neither the Forest Service nor the Department of the Interior agencies loan personnel to state or local governments. The Forest Service, however, manages the Federal Excess Personal Property program,³ which loans excess federal property to state and local firefighters. Under this program administered by state foresters, excess federal property (generally from the Department of Defense) that can be used directly in firefighting or converted to firefighting use may be loaned to states. The types of loaned excess property range from shovels to helicopters; most are trucks that can be readily converted to tankers or pumpers. Other common items loaned include generators, pumps, fire hoses, breathing apparatus, and personal protective clothing.

During fiscal years 1992 through 1996, the Forest Service loaned excess federal personal property valued at about \$651 million to states for use in wildfire preparedness activities. Table III.1 shows, by year, the total value of the excess federal property loaned by the Forest Service to the states.

Table III.1: Value of Excess Federal Property the Forest Service Loaned to States, Fiscal Years 1992 Through 1996

Dollars in thousands

Fiscal year					5-year total
1992	1993	1994	1995	1996	
\$79,449	\$123,362	\$112,129	\$189,672	\$146,083	\$650,695

According to a Forest Service official, the states have "screeners" who examine lists of excess property published by the General Services Administration for property they may want to acquire. Often, the screeners are working with lists of desired equipment provided to them by local fire departments. When the states identify excess property they want to borrow, the Forest Service acquires it. Title to the equipment passes from the original owning organization to, and remains with, the Forest Service; the states cannot sell the excess property. The states are responsible for removing the excess property, refurbishing it, and keeping track of its location. When a state no longer needs

³The Federal Excess Personal Property program is authorized by section 203 of the Department of Agriculture Organic Act of 1944, the Federal Property and Administrative Services Act of 1949, and section 10 of the Cooperative Forestry Assistance Act of 1978.

the loaned excess property, it is returned to the Forest Service for disposal or re-loaned to another state.

According to the Forest Service, most of the excess property loaned to the states is in poor condition and requires extensive rehabilitation to convert it into firefighting equipment. However, the states may use some of their Rural Fire Prevention and Control or Rural Community Fire Protection grant moneys to rehabilitate the loaned excess property. The cost of conversion is much less than the purchase of comparable equipment.

The loaned excess property may become important firefighting tools for local fire departments. For example, in November 1994 Wyoming state fire personnel transported from the Tooele Army Depot near Salt Lake City, Utah, 31 excess 2-1/2-ton trucks and two air compressors. Within weeks, one local fire department was able to use one of the excess trucks that had been converted into a 1,000-gallon wildland firefighting engine.

Wyoming officials estimate that by participating in the Federal Excess Personal Property program and rebuilding the excess property, they can save from 50 to 70 percent of the cost of new, commercial engines. For example, one Wyoming county built a compressed air foam system on one of the excess military trucks at a cost of \$58,000; purchasing a commercial engine would have cost between \$175,000 and \$200,000.

THE PROCESS USED BY THE LAND MANAGEMENT AGENCIES TO FORMULATE
BUDGET REQUESTS FOR WILDFIRE PREPAREDNESS ACTIVITIES

The land management agencies use Fire Management Plans to prepare annual wildfire budget requests. Fire Management Plans incorporate computerized analytical tools, such as Initial Attack Analyses, FIREPRO, and the National Fire Management Analysis System. Wildfire preparedness activities are one component of the analysis tools. These analytical tools are used in developing annual budget requests for wildfire preparedness activities. The National Fire Management Analysis System was originally developed by the Forest Service in response to a 1978 congressional directive that the Forest Service conduct an economic benefit-cost analysis of its fire program and use that process to support all future national fire budget requests. The Forest Service implemented the National Fire Management Analysis System in 1980, and it has also been adopted by the Bureau of Land Management and the Bureau of Indian Affairs. Similarly, the National Park Service began the development of a fire management analysis system titled FIREPRO in 1982. The Fish and Wildlife Service adopted a modified version of FIREPRO in 1993.

Fire Management Plans

- provide a formal method to integrate fire program and land management planning,
- establish a consistent procedure to evaluate the probable effectiveness and efficiency of fire programs, and
- estimate the probable consequences of alternative fire programs and budgets at the local, regional, and national levels.

The total cost of fighting wildfires on federal lands is the sum of preparedness activities, fuels management, rehabilitation, and suppression expenditures, plus the changes in values to resources, either positive or negative, that result from wildfires. Using 10-year historical data on costs, weather, and actual fire conditions, Fire Management Plans identify the most economically efficient fire protection program; the level which results in the least total costs (cost of preparedness, suppression, and economic losses).

Each individual land management unit (national forest, self-governing Native American tribe) performs analyses using its Fire Management Plans to determine its most efficient program level, including preparedness costs. Individual unit's estimates are aggregated into national totals, and the preparedness totals form the basis for the budget estimate that is sent to the Congress. The Congress appropriates the preparedness funds and the

ENCLOSURE IV

ENCLOSURE IV

Department distributes them to the agencies on the basis of their proportion of the total estimate.

(141083)

Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. VISA and MasterCard credit cards are accepted, also. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

Orders by mail:

**U.S. General Accounting Office
P.O. Box 37050
Washington, DC 20013**

or visit:

**Room 1100
700 4th St. NW (corner of 4th and G Sts. NW)
U.S. General Accounting Office
Washington, DC**

**Orders may also be placed by calling (202) 512-6000
or by using fax number (202) 512-6061, or TDD (202) 512-2537.**

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

For information on how to access GAO reports on the INTERNET, send an e-mail message with "info" in the body to:

info@www.gao.gov

or visit GAO's World Wide Web Home Page at:

<http://www.gao.gov>

**United States
General Accounting Office
Washington, D.C. 20548-0001**

**Bulk Rate
Postage & Fees Paid
GAO
Permit No. G100**

**Official Business
Penalty for Private Use \$300**

Address Correction Requested
