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**FEDERAL WILDFIRE
ACTIVITIES**

**Issues Needing Future
Attention**

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Madam Chairman and Members of the Subcommittee:

Each year, wildfires on federal lands burn millions of acres of forests, grasslands, and desert vegetation. While wildfires are being increasingly recognized as having ecological value in some circumstances, they can adversely affect human lives and property on state and private lands adjacent to federal lands. In an effort to reduce the adverse impacts of wildfires, the Forest Service and the Bureau of Land Management (BLM) spend hundreds of millions of dollars annually preparing for, controlling, and extinguishing wildfires on federal lands.

Today's testimony is based on our recent report for the Subcommittee that described various aspects of the Forest Service's and BLM's firefighting program.¹ That report addressed the process for budgeting for wildfire preparedness, the role of the National Interagency Fire Center, and the types of agreements that the agencies have with state and local firefighting organizations. The report also identified the following issues that could compromise the success of future firefighting efforts unless these agencies take steps to improve the management of their wildfire programs:

- The Forest Service's and BLM's firefighting workforce is shrinking, thus leaving fewer firefighters to handle the workload. Some employees are committed to performing their primary job responsibilities and no longer choose to become qualified to fight wildfires and others cite family commitments as a reason for not fighting fires. Also, many firefighters nearing retirement age are no longer willing or able to fight wildfires. Because fewer employees are qualified to fight wildfires, fewer Forest Service and BLM firefighters will be available to fill critical wildfire management positions in the future and firefighter safety could be compromised.
- The Forest Service and BLM are implementing new radio technology. However, the two agencies are purchasing different radio systems that may not be able to communicate with each other or with the systems used by other firefighting organizations. As a result, field officials are concerned that the new systems may prevent them from communicating with federal, state, and local firefighting organizations and could compromise firefighter safety.

¹Federal Wildfire Activities: Current Strategy and Issues Needing Attention (GAO/RCED-99-233, Aug. 13, 1999).

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- The Forest Service is using an outdated test to measure the physical fitness of its firefighters; the test currently used by BLM is recognized as more reliable. While the Forest Service plans to adopt BLM's test, it has not decided when the test will be implemented.

Madam Chairman, before we discuss the issues needing improvement, we would like to briefly summarize the process used to plan, fund, and coordinate federal wildfire preparedness efforts.

Federal Wildfire Preparedness Efforts

In fighting wildfires, the Forest Service and BLM employ permanent firefighting staff. These staff, located on the national forests and at BLM field offices include, among other things, fire planners, dispatchers, and engine mechanics. The Forest Service and BLM also use employees whose primary job is not firefighting, but are trained to fight fires as a collateral duty, to fight wildfires. In addition to these permanent employees, the agencies hire seasonal firefighting staff (such as firefighting crews and smokejumpers) during fire seasons.

In developing their wildfire preparedness budgets, the Forest Service and BLM use the same computer model that determines, on the basis of historical data such as fire activity, weather, and fire suppression costs, the most efficient funding level for a firefighting organization. Then, the national forests and BLM field offices develop operational plans to show how they plan to allocate the amounts determined to be needed by the budget planning process for such firefighting resources as personnel, supplies, and equipment.

After the national forests and BLM field offices receive their annual funding for wildfire preparedness, they revise their operational plans for the year to reflect the funds actually received. With these funds, the offices decide what firefighting resources will be positioned before the start of the fire season and where these resources will be located. According to agency officials, because the level of funding received is less than the level of funds determined to be needed by the computer modeling process, the national forests and BLM field offices take measures to compensate for the reduced funding.² For example, they have (1) removed fire engines from service, (2) not fully staffed fire engines, (3) reduced the time that fire engines were on-call from 7 to 5 days per week, (4) not hired seasonal firefighters and/or hired seasonal firefighters for less than the entire fire

²For fiscal years 1996 through 1999, the agencies received about 85 percent of the funds they estimated they needed for wildfire preparedness.

season, and (5) placed employees on involuntary unpaid leave or temporarily transferred them to other work locations.

The National Interagency Fire Center (Fire Center) in Boise, Idaho, which is maintained and operated by the federal land management agencies, is the nation's logistical support center for controlling and extinguishing wildfires. As such, it coordinates the mobilization of firefighting supplies, equipment, and personnel at the federal, regional, and local levels.

Wildfires are attacked through three levels of management responsibility—local, regional, and national. Generally, efforts to control and extinguish a wildfire are handled initially by the local agency responsible for protecting an area from fire, whether that area is a national forest, a BLM field office, or a state land management agency. Numerous federal, state, and local firefighting resources, including engines, ground crews, and air tankers carrying retardant, can be used to initially control and extinguish a wildfire. Local agencies may also work together, sharing personnel and equipment, to fight new fires as well as those that escape initial suppression efforts. If a wildfire grows to the point where local firefighting personnel and equipment are not sufficient to suppress it—usually when 65 percent of all available firefighting resources have been committed to other wildfires—the local agency contacts its geographic area coordination center.

When this happens, the geographic area coordination center will attempt to locate additional firefighters, equipment, and supplies within the geographic area and dispatch the resources to the agency that requested assistance. If the needed resources cannot be located, the geographic area coordination center will order additional resources through the National Interagency Coordination Center, located at the Fire Center. The Coordination Center locates the closest available firefighting resources—regardless of agency affiliation or location—and dispatches them to the local agency requesting the resources. In addition to dispatching firefighting resources, the Coordination Center gathers and analyzes information about specific wildfire incidents and the overall fire situation and reports the information to all federal and state land management agencies.

To provide mutual support in suppressing wildfires, the Forest Service and BLM have entered into numerous agreements and other types of cooperative efforts with other federal, state, and local firefighting organizations. We found that each of the three geographic regions we

visited had different types of coordination agreements. Our review of these different types of coordination agreements and discussions with federal and state firefighting officials, however, suggest that no one single type of coordination agreement or coordination process is better than another. Forest Service, BLM, and state officials told us that, except for an occasional disagreement over the reimbursement of firefighting costs, their coordination agreements and processes are working well and they do not see a need for changes. The officials universally agreed that it would be virtually impossible for them to manage their firefighting programs without the coordination agreements.

Firefighting Workforce Is Shrinking

We found that the Forest Service's and BLM's firefighting workforce is shrinking. As a result, fewer qualified firefighters are available to handle the wildfire workload, which could compromise firefighter safety. According to Forest Service and BLM officials, there are several reasons why some employees no longer become qualified to fight fires as a collateral duty.

- First, staff who do not fight fires as a primary duty—such as resource specialists—are committed to carrying out their primary job duties and do not want to spend time fighting fires. Because of downsizing, the Forest Service and BLM do not have staff available to temporarily fill positions when fire-qualified employees are off fighting fires. Therefore, the employees' normal workload will be waiting for them when they return from fire duty.
- Second, many families have dual careers, and the additional income earned from fighting fires would not, in their view, offset the inconvenience and expense involved in, for example, rearranging their schedules and providing for additional child care. In the current environment, many employees are unwilling to abandon family commitments to fight wildfires.
- Third, for many employees, the rate of overtime pay for fighting wildfires is less than their regular base salary rate—thereby negating any financial incentive to fight wildfires. The disparity in wildfire overtime compensation—where a truck driver may make more than a wildfire incident commander who is responsible for managing all firefighting activities—discourages some older, more experienced employees from fighting wildfires.

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- Last, the aging workforce is shrinking the Forest Service's and BLM's firefighting capabilities. Specifically, many older employees who are qualified to fight wildfires are unwilling to do so because it is more difficult for them to keep up with the physical demands placed on firefighters and the satisfaction gained from fighting wildfires no longer exists.

Forest Service and BLM officials are concerned about their shrinking firefighting workforce because developing a cadre of qualified wildfire management personnel takes many years. Coupled with the competing demands and an aging workforce, fewer fire-qualified employees will be available to fill critical wildfire management positions. For example, the average age of BLM's wildfire incident commanders exceeds 50 years of age—the age at which firefighters are eligible to retire. It generally takes at least 17 years of training and wildfire experience before a firefighter is qualified to function as an incident commander.

In our August 1999 report, we recommended that the Chief of the Forest Service and the Secretary of the Interior work together to develop a combined strategy to rebuild their firefighting workforce. Forest Service and BLM officials agreed that a combined strategy should be developed to explore the various options available for increasing the size of their firefighting workforce. The agencies recently contracted with a consulting firm to study workforce issues and the results are due on April 1, 2000.

Lack of Standardized Radios Is a Safety Issue

By January 2005, all federal land management agencies are required by the National Telecommunications and Information Administration to change their radio systems from wideband to narrowband.³ The Department of the Interior decided that its agencies, including BLM, will purchase narrowband digital radios because they believe that the radios have capabilities over and above those of narrowband analog radios, such as the ability to receive and transmit data. The Forest Service, however, decided that it will purchase narrowband analog radios while it studies the merits of narrowband digital radios. The Forest Service has done so because narrowband digital radios are about twice as expensive as narrowband analog radios and narrowband digital technology is still being developed.

Local officials from the national forests and BLM field offices that we spoke with are concerned that changing from wideband to narrowband radios

³Narrowband radio technology allows communications to take place in half the channel space that is required for wideband technology. In analog radios, voice signals are sent over the air in an unaltered form while in digital radios, the voice is converted to a digital format before being sent over the air.

could compromise firefighters' safety in two ways. First, these officials believe that narrowband analog radios are not completely compatible with narrowband digital radios. Consequently, after the conversion, they believe that Forest Service and BLM firefighters may find it difficult to communicate with each other. Second, they believe that state and local firefighters may still be using wideband radios and may not be able to convert their radio systems to narrowband for several years because of the costs involved. These officials believe that narrowband radios cannot communicate with wideband radios; consequently, federal firefighters may not be able to communicate with state and local firefighters unless they use two independent radio systems.

Forest Service and BLM headquarters officials, however, believe that narrowband analog and narrowband digital radios will be compatible for two reasons. First, they said that by changing the frequency setting on narrowband digital radios, narrowband analog radios will be compatible. Second, they believe that a series of standards supported by the telecommunications industry and federal agencies will ensure that after the conversion to narrowband technology, all federal, state, and local firefighters will be able to communicate with each other.

To resolve the radio compatibility issue, the Fire Center is testing the compatibility of narrowband analog and narrowband digital radios during the 1999 wildfire season. Additionally, Forest Service and BLM headquarters officials said that they have begun discussing the need for an agreement that will specify that both agencies purchase only narrowband digital radios beginning in fiscal year 2003. However, while such an agreement would solve the radio compatibility issue between the Forest Service and BLM, the issue of whether narrowband radios will be able to communicate with the wideband radios used by the state and local firefighting agencies and organizations will remain unresolved.

Given the uncertainties surrounding the conversion to narrowband radio technology, we recommended, in our August 1999 report, that the Chief of the Forest Service and the Secretary of the Interior (1) develop and communicate to all firefighters a strategy for converting to narrowband radio technology that ensures that radio communications between all federal, state, and local firefighters will not be affected by the conversion and (2) delay the purchase of narrowband radio equipment until the equipment is fully developed and tested. The Forest Service and BLM agreed with our recommendations.

Agencies Using Different Physical Fitness Tests

Fighting wildfires requires a high level of fitness so that firefighters can safely perform physically demanding work in difficult conditions. All firefighters must meet minimum physical fitness standards for the types of firefighting duties to which they are assigned. While the Forest Service and BLM follow the same fitness standards, they use different tests for determining the physical fitness of their firefighters.

BLM uses a “work capacity test” to qualify firefighters for three levels of firefighting duty—arduous, moderate, and light. For example, to qualify for the most difficult firefighting duty, each firefighter must walk a 3-mile course in 45 minutes or less while carrying a 45-pound pack. Before taking the work capacity test, however, each BLM employee must complete a physical-screening questionnaire designed to identify health risk factors such as age, heart problems, and high blood pressure. On the basis of the results of the screening process, at-risk employees are required to take a physical examination, including an electrocardiogram, before taking the work capacity test.

The Forest Service used the work capacity test, but not the screening questionnaire, to measure a firefighter’s physical fitness until earlier this year, when an employee died while taking the test. Since that time, the Forest Service has used the “step test” to determine the physical fitness of its firefighters. After the 5-minute step test, a firefighter’s pulse rate is taken, and it should not exceed a specified rate based on the firefighter’s age. However, the step test is not as demanding or representative of the physical fitness needed to fight fires as the work capacity test, and the results of the step test can be affected by outside stimulants such as caffeine and tobacco. Consequently, a Board of Review⁴ evaluated the events surrounding the death of the employee and issued its report to the Forest Service.

The work capacity test more typically simulates the actual physical demands on firefighters because it requires them to walk specific distances within specific times while carrying varying amounts of weight to simulate carrying firefighting tools. To ensure that firefighter safety is not compromised by inadequate physical fitness tests, we recommended, in our August 1999 report, that the Chief of the Forest Service issue policy direction as soon as possible on how the work capacity test is to be administered—including the possible use of BLM’s physical screening process. The Forest Service agreed that the work capacity test is the

⁴The Board of Review is a panel of individuals convened by the Chief, Forest Service to review and make recommendations with regard to accident investigation and complaint reports prepared by the Forest Service.

appropriate test to use to determine the physical fitness of its firefighters and that the test, along with an appropriate physical-screening process, is needed. The Chief of the Forest Service approved the Board of Review's recommendations on August 27, 1999 and the Forest Service is currently working with the Department of Agriculture's Office of General Counsel to develop a strategy to implement the Board's recommendations.

Conclusion

Optimizing the success of future firefighting efforts will be difficult for the Forest Service and BLM unless they take steps to rebuild their firefighting ranks; ensure the compatibility of communications systems between federal, state, and local firefighting organizations; and ensure the physical well-being of their fire-qualified employees by using the best physical evaluation methods possible. Our report made recommendations on each of the three issues, and both the Forest Service and BLM concurred with the recommendations. It is important that these agencies expeditiously implement the proposed corrective actions.

Madam Chairman, this concludes our testimony, and we would be happy to respond to any questions that you and the Members of the Subcommittee may have.

Contact and Acknowledgment

For future contacts regarding this testimony, please contact Barry Hill at (202) 512-8021. Individuals making key contributions to this testimony included Linda Harmon, John Kalmar, and Robert Arthur.

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