



Testimony

Before the Task Force on Resources and the Environment,
Committee on the Budget, House of Representatives

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REDUCING WILDFIRE THREATS

Funds Should Be Targeted to the Highest Risk Areas

Statement of Barry T. Hill, Associate Director,
Energy, Resources, and Science Issues
Resources, Community, and Economic Development Division



G A O

Accountability * Integrity * Reliability

Mr. Chairman and Members of the Committee:

It is very sobering to be here today to discuss the status of efforts to reduce the risk of catastrophic wildfires to communities and natural resources in dry, lower-elevation regions of the interior western United States. So far this year, such wildfires have burned over 6.5 million acres of public and private land--more than twice the 10-year national average and more than in any other year in decades. Lives have been lost, over 1,000 homes have been destroyed, and the estimated damage to human property and forest and rangeland ecosystems totals billions of dollars. The costs to the U.S. Treasury to suppress these fires and to rehabilitate and restore burned areas will exceed \$1 billion in this fiscal year alone.

Reducing the future risk of catastrophic wildfires to human lives and property as well as to forest and rangeland ecosystems will require development and implementation of a comprehensive management strategy that includes three components. Two are reactive--suppressing wildland fires after they have become wildfires and rehabilitating and restoring forests and rangelands after they have burned. The third component is proactive--reducing the risk of future fires by removing accumulated hazardous fuels, including small trees, underbrush, and dead vegetation. As requested, our testimony today will focus on the proactive hazardous fuels reduction component. Specifically, we will discuss (1) why conditions on federal forests and rangelands have reached the point that they pose a significant risk to nearby communities and to the ecological sustainability of lands and natural resources, (2) the history and status of efforts by the Department of Agriculture's Forest Service and the Department of the Interior to reduce this risk, and (3) budget-related issues that should be addressed to better ensure that the agencies spend effectively and account accurately for funds appropriated to reduce hazardous fuels. Our comments are based primarily on GAO products issued over the last decade.¹

In summary:

- The media and others have attributed much of the blame for this year's destructive wildfire season to the prolonged drought that has gripped the interior West. However, the Forest Service has observed that, in hindsight, "uncontrollable wildfire should be seen as a failure of land management and public policy, not as an unpredictable act of nature." Past land management practices that contributed to current conditions included harvesting timber by selectively removing the larger, more valuable fire-tolerant trees or removing all of the trees from a site at one time (clearcutting). In addition, millions of acres of forests and wildlands were cleared for agricultural crops and livestock pastures, and grass cover and soil were lost as a result of intensive livestock grazing. Moreover, during most of the 20th century, the federal government's policy was to suppress all fires, and for 75 years, federal land management agencies were highly effective in implementing this policy.

¹ See app. I for relevant GAO products on hazardous fuels reduction.

- The federal government’s approach to reducing hazardous fuels has evolved over time in response to new information and events. From the 1950s to the 1970s, land managers within Interior experimented with allowing fires ignited both by lightning and by the managers themselves to burn, under controlled conditions. By 1972, both Interior and the Forest Service had formally adopted the policy of using fire as a tool to reduce the buildup of hazardous fuels. Until recently, both agencies continued to emphasize prescribed fire as the tool of choice in reducing the accumulation of hazardous fuels. However, in the past several years, land managers have increasingly recognized that in many areas, the volume of accumulated fuels has increased to the point that thinning and mechanical treatments must be used before fire can be reintroduced into the ecosystems.
- Both the Congress and the administration are now prepared to fund an aggressive campaign to reduce hazardous fuels. It is, therefore, imperative that the Forest Service and Interior act quickly to develop a framework to spend effectively and to account accurately for what they accomplish with the funds. For example, according to the Forest Service, priority for treatments to reduce hazardous fuels should be given to areas where the risk of catastrophic wildfires is the greatest to communities, watersheds, ecosystems, or species. However, currently neither the Forest Service nor Interior knows how many communities, watersheds, ecosystems, and species are at high risk of catastrophic wildfire, where they are located, or what it will cost to lower this risk. Therefore, they cannot prioritize them for treatment or inform the Congress about how many will remain at high risk after the appropriated funds are expended. In addition, rather than allocating funds to the highest-risk areas, the Forest Service allocates funds for hazardous fuels reduction on the basis of the number of acres treated. Similarly, both the Forest Service and Interior use the number of acres treated to measure and report to the Congress their progress in reducing the threat of catastrophic wildfires rather than using the number of acres treated in the highest-priority areas or reductions in areas at high risk of long-term damage from wildfire.

The Increasing Risk of Uncontrollable Wildfires Reflects an Unintended Consequence of Past Land Management and Public Policy

The media and others have attributed much of the blame for this year’s destructive wildfire season to the prolonged drought that has gripped the interior West. However, the Forest Service has observed that, in hindsight, “uncontrollable wildfire should be seen as a failure of land management and public policy, not as an unpredictable act of nature.”²

More than a century ago, most forests in the interior West and their associated species were fire-adapted and some—known as short-interval, fire-adapted ecosystems—relied on frequent, low-intensity fires to cycle nutrients, check the encroachment of competing vegetation, and maintain healthy conditions. However, before the turn of the last

² *Course to the Future: Positioning Fire and Aviation Management*, U.S. Department of Agriculture, Forest Service (May 1995).

century, these short-interval, fire-adapted ecosystems and species--such as ponderosa and other long-needle pines--began to be replaced by fire-intolerant ecosystems and species--such as Douglas and other firs. These changes resulted mostly from the nation's increased demand for fiber and food. As a result, (1) the larger, more valuable fire-tolerant trees were removed by selective timber harvesting or all of the trees from a site were removed at one time (clearcutting); (2) millions of acres of forests and wildlands were cleared for agricultural crops and livestock pastures; (3) grass cover and soil were lost as a result of intensive livestock grazing; and (4) burning by Native Americans was curtailed to accommodate other land uses. In addition, during most of the 20th century, the federal government's policy was to suppress all fires, and for 75 years, federal land management agencies were highly effective in implementing this policy.

As a result of these human activities, the composition and structure of the forests changed from open, park-like stands of approximately 50 large, older-aged, and well-spaced fire-tolerant trees per acre to dense "dog-hair" thickets of more than 200 mostly small, fire-intolerant trees per acre. Unnaturally dense forests cause individual trees to compete for limited quantities of water, and during drought conditions, weakened trees become susceptible to insect infestations and disease outbreaks. Such trees die in unnaturally high numbers, adding to hazardous fuel loads.

The composition of many rangelands has also changed. Native grass species, including Idaho fescue and bluestem, have been replaced by invasive plant species, such as cheat grass, that fuel and thrive on wildland fires. These exotic species follow fire wherever it goes, are opportunistic, and repopulate a burned landscape faster than native species. Cheat grass grows earlier, quicker, and higher than native grasses and then dies, dries, and becomes fuel for the next year's fires.

As the composition and structure of public forests and rangelands in the interior West were changing, so too was their interface with human structures and other property. Communities have developed alongside and in these forests and rangelands, resulting in a patchwork of homes interspersed among public lands. These areas are collectively referred to as the "wildland-urban interface."

The Federal Government's Approach to Reducing Hazardous Fuels Has Evolved Over Time

The federal government's approach to reducing hazardous fuels has evolved over time in response to new information and events. From the 1950s to the 1970s, land managers within the Department of the Interior experimented with so-called "prescribed fire programs." Under these programs, fires ignited by lightning as well as by land managers themselves are allowed to burn, under controlled conditions, so that the ecological benefits of fire can be reintroduced into fire-adapted ecosystems.

By 1972, both Interior and the Forest Service had formally adopted the policy of using fire as a tool to reduce the buildup of hazardous fuels. From then until 1988, federal land managers allowed thousands of prescribed fires to burn in wildlands. This changed in 1988, when a number of fires started by lightning in and around Yellowstone National

Park burned out of control, resulting in a controversy over what the media termed the government's "let burn" policy. In 1989, an interagency review team reaffirmed the benefits of fire and tasked federal land managers to (1) re-evaluate the use of management-ignited fires and other methods for reducing hazardous fuels and (2) develop fire management plans for each of their land units before allowing a prescribed fire to burn. However, some land managers continued to subscribe to the policy of suppressing all fires, and some land units were slow to develop the required plans.

During the early 1990s, both the Forest Service and Interior emphasized prescribed fire as the tool of choice in reducing the accumulation of hazardous fuels. As recently as in its fiscal year 1997 budget justification, Interior made no mention of other methods to reduce accumulated hazardous fuels, such as thinning dense stands of trees and mechanically removing underbrush. However, in the past several years, land managers have increasingly recognized that in many areas, the volume of accumulated fuels has increased to the point that thinning and mechanical treatments must be used before fire can be reintroduced into the ecosystems.

The Forest Service and Interior Must Develop a Framework to Spend Effectively and to Account Adequately for What They Accomplish With Funds Appropriated to Reduce Hazardous Fuels

An aggressive campaign to reduce accumulated fuels will require money. However, before this fire season, neither the administration nor the Congress assigned a high funding priority to reducing the threat of catastrophic wildfires. Both the Congress and the administration are now prepared to fund an aggressive campaign to reduce hazardous fuels. It is, therefore, imperative that the Forest Service and Interior act quickly to develop a framework to spend effectively and to account accurately for what they accomplish with the funds.

A Lack of Funds Has Been a Limiting Factor

For a number of years, both the Congress and the administration have been aware of the increasingly grave risk of catastrophic wildfires as well as the need to aggressively reduce hazardous fuels. However, until recently, neither had assigned a high funding priority to reducing the threat.

In a 1994 report, the National Commission on Wildfire Disasters stated that:

"The vegetative conditions that have resulted from past management policies have created a fire environment so disaster-prone in many areas that it will periodically and tragically overwhelm our best efforts at fire prevention and suppression. The resulting loss of life and property, damage to natural resources, and enormous costs to the public treasury, are preventable. If the warning in this report is not

heeded, and preventative actions are not aggressively pursued, the costs will, in our opinion, continue to escalate.”³

The Commission observed that: “The question is no longer if policy-makers will face disastrous wildfires and their enormous costs, but when.” To mitigate this risk, the Commission recommended, among other things, that federal land management policies, programs, and budgets place a high priority on reducing hazardous fuels in high-risk wildland ecosystems “for at least a decade or more.”

Similarly, in 1995, the administration undertook a comprehensive interagency review of wildland fire policy. On the basis of the review, which was summarized in a 1995 statement,⁴ the Departments of Agriculture and the Interior predicted serious and potentially permanent environmental destruction and loss of private and public resource values from large wildfires.

In April 1999, we reported that 39 million acres on national forests in the interior West are at high risk of catastrophic wildfire and that the cost to the Forest Service to reduce fuels on these lands could be as much as \$12 billion over the next 15 years, or an average of about \$725 million annually. We observed that this was more than 10 times the \$65 million appropriated for reducing fuels in fiscal year 1999, and that the agency, contrary to its earlier plans, had requested the same amount for fiscal year 2000. We also observed that funding to address the increasingly grave risk of catastrophic wildfires may be too little too late.

In December 1999, the Forest Service estimated that it would need up to \$825 million a year and almost \$12 billion over 15 years to reduce fuels on 40 million acres nationwide.⁵ However, the agency’s fiscal year 2001 budget justification, submitted to the Congress 2 months later, requested \$75 million.

Interior has not, to our knowledge, developed similar cost estimates. However, the Department spent about \$34 million in both fiscal years 1999 and 2000 to reduce hazardous fuels. It requested \$52 million for these activities in fiscal year 2001, even though, according to Interior, more than half of the 95 million acres of federal wildlands identified as requiring periodic burning or other fuel treatment are on lands managed by the Department.

The Congress and the Administration Agree That Funds Should Be Increased To Reduce Hazardous Fuels

The Congress and the administration now agree that money should be made available to begin an aggressive campaign to reduce hazardous fuels. The Congress is considering

³ *Report of the National Commission on Wildfire Disasters* (1994). The Commission was established on May 9, 1990, by the Wildfire Disaster Recovery Act of 1989 (PL 101-286).

⁴ *Federal Wildland Fire Management Policy and Program Review*, Department of the Interior and Forest Service, Department of Agriculture (Washington, D.C.: 1995).

⁵ *Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy* (Draft), Forest Service (Dec. 1999).

appropriating an additional \$240 million—about \$120 million to both the Forest Service and Interior—in fiscal year 2001 to reduce hazardous fuels in high-risk wildland-urban interfaces. Similarly, for fiscal year 2001, the administration is now requesting an additional \$115 million for the Forest Service and an additional \$142 million for Interior.⁶ Thus, between \$367 million and \$395 million may be available in fiscal year 2001 to reduce hazardous fuels. Moreover, the Forest Service estimates that up to an additional \$325 million a year could be made available from within its existing budget to fund hazardous fuels reduction activities and research.

Accountability Must Now Become A Priority

With the Congress and the administration now prepared to double or triple the Forest Service's and Interior's funding for reducing hazardous fuels and with up to five times the current fiscal year's appropriation already available from within the Forest Service's existing budget for these activities and related research, we believe that the Forest Service and Interior must act quickly to develop a framework to spend effectively and to account accurately for what they accomplish with the funds.

For example, according to the Forest Service, priority for treatments to reduce hazardous fuels should be given to areas where the risk of catastrophic wildfires is the greatest to communities, watersheds, ecosystems, or species. However, currently neither the Forest Service nor Interior knows how many communities, watersheds, ecosystems, and species are at high risk of catastrophic wildfire, where they are located, or what it will cost to lower this risk. Therefore, they cannot prioritize them for treatment or inform the Congress about how many will remain at high risk after the appropriated funds are expended. According to the report on managing the impact of wildfires released by the administration last Friday, regional and local interagency teams will be assigned the responsibility for identifying communities that are most at risk.

Moreover, rather than allocating funds to the highest-risk areas, the Forest Service allocates funds for hazardous fuels reduction to its field offices on the basis of the number of acres treated. Thus, the agency's field offices have an incentive to focus on the easiest and least costly areas, rather than on those that present the highest risks but are often costlier to treat, including especially the wildland-urban interfaces. Similarly, both the Forest Service and Interior use the number of acres treated to measure and report to the Congress their progress in reducing the threat of catastrophic wildfires. For instance, they report that they have increased the number of acres treated to reduce hazardous fuels from fewer than 500,000 acres in fiscal year 1994 to more than 2.4 million acres in fiscal year 2000. However, they cannot identify how many of these acres are within areas at high risk of long-term damage from wildfire.

The Forest Service and Interior note that reducing the threat to communities, watersheds, ecosystems, and species can often take years and that annual measures of progress must, therefore, focus on actions taken. We agree, but believe that they must be

⁶ *Managing the Impact of Wildfires on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000*, U.S. Departments of Agriculture and the Interior (Sept. 8, 2000).

able to show the Congress and the American public that these actions, such as the number of acres treated, occur within the highest-priority areas. Furthermore, over time, they should be able to show reductions in areas at high risk of long-term damage from wildfire.

Finally, although we have not examined this issue as thoroughly at Interior, our work to date at the Forest Service has shown that, over time, the link between how the Congress appropriates funds and how the agency spends them has weakened as the Forest Service's field offices have been required to address issues and problems—such as hazardous fuels reduction—that are not aligned with its budget and organizational structures. Forest Service field offices must now combine projects and activities from multiple programs and funding from multiple sources to accomplish goals and objectives related to reducing hazardous fuels. We have observed that the agency could better ensure that the up to \$325 million a year that may already be available from within its existing budget to fund hazardous fuels reduction activities and research will be used for these purposes by replacing its organizational and budget structures with ones that are better linked to the way that work is routinely accomplished on the national forests. We have also observed that the Forest Service's research division and state and private programs should be better linked to the national forests to more effectively address hazardous fuels reduction as well as other stewardship issues that do not recognize the forests' administrative boundaries.⁷ However, according to the Forest Service, it has no plan to replace its program structure with one that is better linked to the way that work is routinely accomplished on the national forests.

In closing, we are faced with a pay-me-now or pay-me-later situation in which paying me now is likely the more cost-effective alternative. However, restoring fire-adapted ecosystems and protecting the communities that have developed alongside and in these ecosystems will require that the resources for reducing the threat of catastrophic wildfires be well spent. To do so will require that the Forest Service and Interior clearly identify not only how they spend funds appropriated to reduce hazardous fuels but also what they accomplish with these funds.

Mr. Chairman, this concludes my formal statement. I will be pleased to respond to any questions that you or other Members of the Committee may have.

Contact and Acknowledgment

For future contacts regarding this statement, please contact Barry Hill on (202) 512-8021. Individuals making key contributions to this testimony were Charles S. Cotton and Chester M. Joy.

⁷ *Forest Service: Actions Needed for the Agency to Become More Accountable for Its Performance* (GAO/T-RCED-00-236, June 29, 2000).

Appendix I

Relevant GAO Reports and Testimonies on Reducing Hazardous Fuels on Federal Lands

Federal Fire Management: Limited Progress in Restarting the Prescribed Fire Program (GAO/RCED-91-42, Dec. 5, 1990).

Western National Forests: Catastrophic Wildfires Threaten Resources and Communities (GAO/T-RCED-98-273, Sept. 28, 1998).

Western National Forests: Nearby Communities Are Increasingly Threatened by Catastrophic Wildfires (GAO/T-RCED-99-79, Feb. 9, 1999).

Western National Forests: A Cohesive Strategy Is Needed to Address Catastrophic Wildfire Threats (GAO/RCED-99-65, Apr. 2, 1999).

Western National Forests: Status of Forest Service's Efforts to Reduce Catastrophic Wildfire Threats (GAO/T-RCED-99-241, June 29, 1999).

Fire Management: Lessons Learned From the Cerro Grande (Los Alamos) Fire (GAO/T-RCED-00-257, July 27, 2000).

Fire Management: Lessons Learned From the Cerro Grande (Los Alamos) Fire and Actions Needed to Reduce Fire Risks (GAO/T-RCED-00-273, Aug. 14, 2000).