WILDLAND FIRE MANAGEMENT

Actions by Federal Agencies and Congress Could Mitigate Rising Fire Costs and Their Effects on Other Agency Programs

Statement of Robin M. Nazzaro, Director
Natural Resources and Environment
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What GAO Found

The sharply rising costs of managing wildland fires have led the Forest Service and Interior agencies to transfer funds from other programs to help pay for fire suppression and, according to agency officials and others, may also be reducing the total funds available to agency programs unrelated to fire. GAO reported in 2004 that from fiscal years 1999 through 2003, the Forest Service and Interior transferred over $2.7 billion from nonfire programs to help fund fire suppression. Although agencies received additional appropriations to cover about 80 percent of the transferred funds, GAO found that the transfers led to canceled and delayed projects and strained relationships with nonfederal partners. Moreover, some of the canceled or delayed projects, such as constructing new facilities, were intended to improve the agencies’ capabilities to fight fires. Since 2004, funding transfers have continued, with the agencies’ transferring funds in fiscal years 2006, 2007, and 2008. Furthermore, federal and state officials have expressed concern that rising fire management costs are reducing the total funds available to the agencies’ nonfire programs.

As GAO has reported, there are several steps the agencies could take, and actions Congress could consider, that could mitigate the rising costs of wildland fire management and its effect on the agencies’ other programs.

- Although the agencies have, among other actions, improved decision-support tools for helping officials select appropriate strategies for fighting individual wildland fires, the agencies continue to lack both an agencywide strategy for containing fire suppression costs and a broader long-term wildland fire management strategy that identifies options, along with associated funding, for reducing excess vegetation and responding to fires—what GAO has termed a cohesive strategy.

- The agencies could develop a better method of estimating the suppression funds requested, as GAO recommended in 2004. Better estimates in a given year could reduce the likelihood that the agencies would need to transfer funds from other accounts, yet the agencies continue to use an estimation method with known problems. The Forest Service told GAO it analyzed alternative methods for estimating needed suppression funds but determined that no better method was available. Because the agencies had to transfer funds in each of the last 3 years, however, a more accurate method for estimating suppression costs may still be needed.

- In addition, Congress may wish to consider establishing a reserve account to fund emergency wildland firefighting, which could reduce the need for the agencies to transfer funds. The advantages and disadvantages of several alternative funding approaches were discussed in GAO’s 2004 report. Congress considered at least two bills in 2008 proposing establishment of a reserve account, but neither bill passed. One of those bills was reintroduced in March 2009.

What GAO Recommends

GAO previously recommended that the Forest Service and Interior take several steps to help contain the rising costs of managing wildland fires and address the problems associated with transferring funds to fight fires. Although the agencies have made some progress, they have been slow to implement several key recommendations. GAO also previously identified alternative funding approaches Congress could consider, which could reduce the need to transfer funds from nonfire accounts.

View GAO-09-444T or key components. For more information, contact Robin M. Nazzaro at (202) 512-3841 or nazzaror@gao.gov.
Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the funding of wildland fire suppression activities and federal agencies’ management of wildland fires. Our nation’s wildland fire problems have worsened in the past decade. Uncharacteristic accumulations of fuels, due in part to past fire suppression policies, and severe regional weather and drought have contributed to higher-intensity fires and longer fire seasons. At the same time, continued development in and near wildlands, an area often called the wildland-urban interface, has placed more homes at risk. Together these factors have contributed to more than a doubling of appropriations for wildland fire management activities—from an average of $1.2 billion annually during fiscal years 1996 through 2000 to more than $2.9 billion annually during fiscal years 2001 through 2007. Five federal agencies—the Forest Service within the Department of Agriculture and the Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service within the Department of the Interior (Interior)—are responsible for managing wildland fires on federal lands.

Rising fire costs have challenged the agencies’ abilities to meet their other land management responsibilities. We reported in 2004, for example, that the agencies often had to transfer funds from other programs to help cover increasing fire suppression costs. While such transfers allowed the agencies to fund emergency fire suppression activities and help protect natural resources and communities, we reported that the transfers also resulted in canceled and delayed projects, strained agency relationships with state and local partners, and difficulties in managing programs.

In this context, my testimony today discusses (1) the budgetary and programmatic effects of the increasing cost of fire management activities and (2) steps the agencies could take to help contain wildland fire expenditures and steps they could take, and Congress could consider, to reduce the need to transfer funds from other programs. To evaluate these issues, we reviewed reports we have issued since 2004 discussing federal
agencies' management of wildland fires, as well as recent agency documents about funding transfers occurring since 2004.¹

Background

The federal wildland fire management program has three major components: preparedness, suppression, and fuel reduction. To prepare for a wildland fire season, the agencies acquire firefighting assets—including firefighters, engines, aircraft, and other equipment—and station them either at individual federal land management units (such as national forests or national parks) or at centralized dispatch locations. The primary purpose of these assets is to respond to fires before they become large—a response referred to as initial attack—thus forestalling threats to communities and natural and cultural resources. The assets the agencies use for initial attack are funded primarily from the agencies' preparedness accounts. In the relatively rare instances in which fires escape initial attack and grow large, the agencies respond using an interagency system that mobilizes additional firefighting assets from federal, state, and local agencies, as well as private contractors, regardless of which agency or agencies have jurisdiction over the burning lands. Federal agencies typically fund the costs of these activities from their wildland fire suppression accounts. To reduce the potential for severe wildland fires, lessen the damage caused by fires, limit the spread of flammable invasive species, and restore and maintain healthy ecosystems, the agencies also reduce potentially hazardous vegetation that can fuel fires. They remove or modify fuels using prescribed fire, mechanical thinning, herbicides, certain grazing methods, or combinations of these and other approaches. The agencies fund these activities from their fuel reduction accounts.

The agencies develop budget requests about 2 years before the fiscal year for which funds are requested. They use several different processes and systems to develop these requests. For preparedness and fuel reduction, the agencies have recently begun implementing a tool known as fire

¹These previous performance audits were conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provided a reasonable basis for our findings and conclusions based on our audit objectives.
program analysis.\textsuperscript{2} For suppression, the agencies have historically used a 10-year rolling average as the foundation for their budget requests.\textsuperscript{3} The year-to-year variability in the number, location, and severity of fires, however, complicates the accurate estimation of needed suppression funds, which often results in appropriated funds\textsuperscript{2} being insufficient to cover actual suppression expenditures. In this event, the agencies are authorized to use funds from their other programs to pay for emergency firefighting activities.

Federal appropriations to the Forest Service and Interior agencies to prepare for and respond to wildland fires, including appropriations for reducing fuels, have more than doubled, from an average of $1.2 billion from fiscal years 1996 through 2000 to $2.9 billion from fiscal years 2001 through 2007 (see table 1). Adjusting for inflation, the average annual appropriations for these periods increased from $1.5 billion to $3.1 billion (in 2007 dollars). The Forest Service received about 70 percent and Interior about 30 percent of the funds appropriated.

\textsuperscript{2}Our recent review of the fire program analysis tool identified several shortcomings that need to be addressed; see GAO, \textit{Wildland Fire Management: Interagency Budget Tool Needs Further Development to Fully Meet Key Objectives}, GAO-09-68 (Washington, D.C.: Nov. 24, 2008). The agencies have also developed other systems to help them allocate fuel reduction funds among the federal agencies; see GAO, \textit{Wildland Fire Management: Better Information and a Systematic Process Could Improve Agencies’ Approach to Allocating Fuel Reduction Funds and Selecting Projects}, GAO-07-1168 (Washington, D.C.: Sept. 28, 2007). At the time of our 2008 report, the agencies had yet to decide how they would use the information from these different systems to develop their budget requests and allocate their fuel reduction funds.

\textsuperscript{3}The agencies calculate a simple rolling or moving average by computing average annual expenditures over a 10-year period and updating the average each year, using expenditures from the most recent 10 years. Each year’s value receives equal weight in the average. The moving average is generally considered to be a lagging indicator of current costs.
### Table 1: Forest Service and Interior Wildland Fire Appropriations, Fiscal Years 1996 through 2007

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>Nominal</th>
<th>Inflation-adjusted*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>$772.4</td>
<td>$984.2</td>
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<tr>
<td>1997</td>
<td>1,432.1</td>
<td>1,793.3</td>
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<td>1998</td>
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<td>1,381.7</td>
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<tr>
<td>1999</td>
<td>1,159.3</td>
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<tr>
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<td>2001</td>
<td>2,859.9</td>
<td>3,344.7</td>
</tr>
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<td>2,238.8</td>
<td>2,569.0</td>
</tr>
<tr>
<td>2003</td>
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<td>3,560.2</td>
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<tr>
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<td>3,541.6</td>
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<tr>
<td>2005</td>
<td>2,929.8</td>
<td>3,144.0</td>
</tr>
<tr>
<td>2006</td>
<td>2,701.4</td>
<td>2,775.4</td>
</tr>
<tr>
<td>2007</td>
<td>3,047.0</td>
<td>3,047.0</td>
</tr>
</tbody>
</table>

Source: GAO analysis of Congressional Research Service data.

*We adjusted the appropriations dollars for inflation, using the chain-weighted gross domestic product price index with fiscal year 2007 as the base year.

Increases in the size and severity of wildland fires, and in the cost of preparing for and responding to them, have led federal agencies to fundamentally reexamine their approach to wildland fire management. For decades, federal agencies aggressively suppressed wildland fires and were generally successful in reducing the number of acres burned. Rather than eliminating severe wildland fires, however, decades of suppression—and the attendant accumulation of brush, small trees, and other vegetation—have disrupted ecological cycles and, in some forests and grasslands, have intensified fires. Increasingly, the agencies have recognized the role fire plays in many ecosystems and the role fire can play in the agencies' management of forests and watersheds. The agencies worked together to develop a federal wildland fire management policy in 1995, which for the first time formally recognized the essential role of fire in sustaining natural systems. This policy was subsequently reaffirmed and updated in 2001. Two important implications of the policy are the agencies’ recognition of (1) their need to reduce accumulated vegetation that could fuel intense wildland fires and (2) the inappropriateness of continued attempts to suppress all fires.
Funding Transfers Have Delayed or Canceled Projects and Strained Relationships with the Agencies’ Nonfederal Partners

We reported in 2004 that rising wildland fire suppression costs had led the Forest Service and Interior to transfer funds from other agency programs to help fund suppression activities. The Forest Service transferred funds from numerous programs, including construction and maintenance; the national forest system; and state and private forestry programs, which provide grants to states, tribes, communities, and private landowners for fire and insect management, among other purposes. Interior primarily transferred funds from its construction and land acquisition programs. We reported that the agencies had transferred more than $2.7 billion from these other programs from 1999 through 2003, and that the agencies received additional appropriations to cover, on average, about 80 percent of the funds transferred.

Although the agencies received additional appropriations to cover most of the transferred funds, we found that the transfers had caused the agencies to cancel or delay some projects and fail to fulfill certain commitments to their nonfederal partners. We reported, for example, that funding transfers delayed planned construction and land acquisition projects, which in some cases led to higher project costs due to revised budget and construction plans or higher supply and land acquisition costs. In one instance, the Forest Service delayed purchasing a 65-acre property in Arizona it had planned to acquire for approximately $3.2 million in 2002; it was able to purchase the property about a year later, but the cost of the property had increased by $195,000. Also, although funds were transferred to help the agencies suppress wildland fires, among the delayed projects were ones to reduce fuels to lower the fire risk to communities, construct new firefighting facilities, and provide firefighting training courses.

Transferring funds to help pay for fire suppression also affected the agencies’ abilities to fulfill commitments they had made to their nonfederal partners, including states, communities, and nonprofit organizations. In 2003, for example, the Forest Service transferred $50 million, only $10 million of which was reimbursed, from its Forest Land Enhancement Program. Managed by state forestry agencies, this program provides funds to help private landowners improve the health of forestlands. We reported that this transfer raised concerns about the program’s viability, which, if borne out, might cause some private forest owners to sell their land for

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development, leading to habitat fragmentation—one of the primary threats the Forest Service has identified to the nation’s forests. In addition, federal land acquisition projects are often facilitated by nonprofit organizations, which purchase land from private owners and then sell it to federal agencies. Delays caused by transferring funds can, therefore, lead to higher costs for those organizations. We reported a case in South Carolina, for example, where the Forest Service delayed purchasing a property for 1 year, which led a nonprofit organization to incur about $300,000 in interest costs. Such delays may lead some nonprofits to reconsider working with the agencies. We reported that one organization had 22 projects delayed in 2002 and 21 projects delayed in 2003 because of funding transfers; a representative from that organization told us that if funds continued to be transferred, it would likely invest its funds elsewhere rather than work with the Forest Service and Interior.

Since 2004, funding transfers to help pay for fire suppression have continued, with the agencies transferring funds in fiscal years 2006, 2007, and 2008. These transfers may have caused problems for the agencies’ nonfire programs similar to those we reported in 2004. An August 2008 memo from the Chief of the Forest Service, for example, stated that fire transfers that year would effectively rescind or delay grants to nonfederal partners and stop work on construction, research, and natural resource projects.

Moreover, although we have not evaluated the impact of rising fire costs on funding for the agencies’ nonfire programs, federal and state officials have expressed concern that rising fire costs are reducing the total funds the agencies receive for their other programs. The Chief’s August 2008 memo also stated that because the agency must fund the expected cost of managing fires out of its total available funds, all other Forest Service activities “have experienced a steady decline in funding.” A similar concern was expressed in a letter written by five former Forest Service Chiefs and in a statement before this Subcommittee last year by the National Association of State Foresters.
Several of our previous reports, including our 2004 report on fire-related funding transfers, identified steps the agencies could take, and actions Congress could consider, which could help address the rising cost of wildland fire management and its effect on the agencies’ other programs. Reducing the overall cost of fire suppression could help the agencies mitigate the effects of fire costs on their nonfire programs and avoid the need to transfer funds. We issued a number of reports in recent years that examined different aspects of the agencies’ wildland fire management programs, including a testimony before this Subcommittee in February 2008 in which we highlighted several key recommendations that, if implemented, could help the agencies contain the overall costs of managing wildland fires. Among other recommendations, we discussed the need for the agencies to

- develop a cohesive strategy that identifies options and associated costs to reduce potentially hazardous vegetation and address wildland fire problems. Despite our repeated calls for a cohesive wildland fire strategy, the agencies have yet to develop one. In 1999, to address the problem of excess fuels and their potential to increase the severity of wildland fires and cost of suppression efforts, we recommended that a cohesive strategy be developed to identify available long-term options for reducing fuels and the associated costs. By laying out various potential approaches for addressing wildland fire, estimated costs associated with each approach, and the trade-offs involved, such a strategy would help Congress and the agencies make informed decisions about effective and affordable long-term approaches to addressing the nation’s wildland fire problems. Six years later, in 2005, we reiterated the need for a cohesive strategy and broadened our recommendation’s focus to better address the interrelated nature of fuel reduction efforts and wildland fire response. In January 2009, agency officials told us they were working to create such a cohesive strategy, although they had no estimate of when the strategy would be completed.

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Establish clear goals and a strategy to help contain wildland fire costs. In 2007, we reported that the agencies were taking a number of steps intended to help contain wildland fire costs, including improving decision-support tools for helping officials select strategies for fighting wildland fires, but that they had not clearly defined cost-containment goals or developed a strategy for achieving those goals—steps that are fundamental to sound program management. Agency officials identified several documents that they argued provide clearly defined goals and objectives constituting their strategy to contain costs. In our view, however, these documents lack the clarity and specificity needed by officials in the field to help manage and contain wildland fire costs. We therefore continue to believe that our recommendations for developing clear goals and a strategy for containing costs, if effectively implemented, would help the agencies better manage their cost-containment efforts and improve their ability to contain wildland fire costs.

Since our testimony last year, the agencies have continued to take steps intended to help improve their management of wildland fires. They have, for example, been reviewing their guidance for implementing the federal wildland fire management policy. Senior agency officials told us they expect to revise the guidance this year to allow agency officials more flexibility in selecting strategies for managing wildland fire incidents, which could help reduce the costs of managing some fires. We are currently reviewing the agencies’ actions aimed at addressing the shortcomings we previously identified and expect to report on the status of these actions later this year.

Better estimates of the costs of suppressing fires in a given year would also reduce the likelihood that the agencies would need to transfer funds from other accounts. We recommended in 2004 that the agencies improve their methods for estimating annual suppression costs, but the agencies continue to use a 10-year suppression cost average as the foundation of their budget request. Interior, in commenting on a draft of the 2004 report, stated it believed that the current method for predicting costs was a “reasonable and durable basis for suppression budgeting.” The Forest Service, however, concurred with our recommendation. A Forest Service official told us in 2008 that the agency had analyzed alternative methods for estimating needed suppression funds but determined that no better method was available. While we recognize that the accuracy of the 10-year average is likely to improve as recent years with higher suppression costs are included in that average, the need to transfer funds in each of the last 3 years suggests that the agencies should continue to seek a more accurate method for estimating needed suppression costs.
In addition to the actions we believe the agencies need to take, Congress may wish to consider legislating alternative approaches to funding wildland fire suppression that could help reduce the need for the agencies to transfer funds. As we reported in 2004, for example, Congress could establish a reserve account dedicated to funding wildfire suppression activities, which the agencies could access when their suppression accounts are depleted. If such an account is established, Congress could provide either a specified amount (known as a definite appropriation) or as much funding as the agencies need to fund emergency suppression (known as an indefinite appropriation); Congress could also determine whether any funds it provides would be available to the agencies only for a single fiscal year or also in future years.

Each of these approaches has advantages and disadvantages. Establishing a reserve account with a definite appropriation would provide the agencies with incentives to contain suppression costs within the amount in the reserve account, but depending on the size of the appropriation and the severity of a fire season, suppression costs could still exceed the funds reserved, and the agencies might still need to transfer funds from other programs. An account with an indefinite appropriation, in contrast, would eliminate the need for transferring funds from other programs but would offer no inherent incentives for the agencies to contain suppression costs. Furthermore, both definite and indefinite appropriations could raise the overall federal budget deficit, depending on whether funding levels for other agency, or government, programs are reduced. In 2008, Congress considered at least two bills—the Federal Land Assistance, Management, and Enhancement Act and the Emergency Wildland Fire Response Act of 2008—that proposed establishing a wildland fire suppression reserve account, although neither bill became law. The Federal Land Assistance, Management, and Enhancement Act was reintroduced in March 2009. The administration’s budget overview for fiscal year 2010 proposes a $282 million reserve account for the Forest Service and a $75 million reserve account for Interior to provide funding for firefighting when the appropriated 10-year average is exhausted.

Mr. Chairman, this concludes my prepared statement. I would be pleased to answer any questions that you or other Members of the Subcommittee may have at this time.

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7S. 561, 111th Cong. (1st sess., 2009); H.R. 1404, 111th Cong. (1st sess., 2009).
For further information about this testimony, please contact me at (202) 512-3841 or nazzaro@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Steve Gaty, Assistant Director; David P. Bixler; Ellen W. Chu; Jonathan Dent; Carol Henn; and Richard P. Johnson made key contributions to this statement.

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